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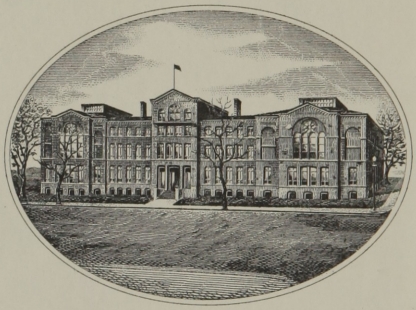

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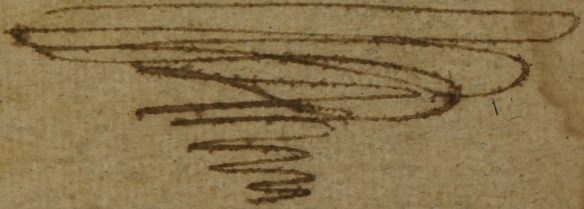


C. J. Blackburn ~~Esq~~

Books Sept 9th 1817

C. J. Blackburn 1817

1817

[Brown, John]

THE

ELEMENTS OF MEDICINE;

OR, A

TRANSLATION

OF THE

ELEMENTA MEDICINÆ BRUNONIS.

C. J. Blackburn

WITH LARGE

NOTES, ILLUSTRATIONS, AND COMMENTS.

BY THE AUTHOR OF THE ORIGINAL WORK.

24270

THE SIXTH EDITION.

FAIRHAVEN:

PRINTED BY JAMES LYON,
AT VOLTAIRE'S HEAD.

PREFACE

TO THE

ORIGINAL WORK.

BY the author of this work more than twenty years were wasted in learning, teaching, and diligently scrutinizing every part of medicine. The first five past away in hearing others, studying what he had heard, implicitly believing it, and entering upon the possession as a rich and valuable inheritance. *His mode of employment* the next five years, was to explain more clearly the several particulars, to refine and give them a nicer polish. During the next equal space of time, because no part of it had succeeded to his mind, he became cold upon the subject, and, with many eminent men, *even* with the vulgar themselves, to deplore the healing art as altogether uncertain and incomprehensible. *All this time passed* away without *the acquisition of* any advantage, and of that, which of all things is the most agreeable to the mind, the light of truth; and so great, so precious, a portion of the fading and short-lived age of man was lost. It was only betwixt the fifteenth and twentieth year *of his studies*, that, like a traveller in an unknown country, wandering in the shade of night, after losing every trace

of his road, a very obscure gleam of light, like that of the first break of day, dawned upon him.

Thirteen years ago*, when he was going in the thirty-sixth year of his age, he fell into his first fit of the gout. For many years before he had lived well, with the exception of having confined himself to a diet more sparing than usual, a few months before the arrival of the disease†. In about six weeks the disease finished its course, and did not return till six years after, and not even then, but in consequence of unusual low living for several months‡. He was in the vigour of his age, and, excepting the taint of the gout, and some debility, brought on by his unusual abstinence, his habit was good. The disease, according to an old theory among physicians, was said to depend upon plethora and excessive vigour; vegetable aliment was enjoined, wine was forbidden, and the careful execution of *that plan of cure* was promised to be rewarded with no return of the disease. A whole year past in a strict adherence to this regimen. In the course of that space of time, *instead of never having a return of the disease*, he experienced no less than four fits, most violent, most painful, and of a very great duration: *In short*, the whole year, except fourteen days, was divided between limping and excruciating pain.

If an over-proportion of blood and excess of vigour was the cause of the disease, *according to the general theory just now mentioned*, it became next with him a subject of

* *Four years must be added now, it being that time since the second volume of the Elementa was published, that is, seventeen years since the author's first fit of the gout. At this very time from hard walking in very hot weather, to inspect the beauties and majesty of Hampton-Court, he had a slight attack, which gave him no sort of trouble, never hindered him from business, and which he repeled in less than thirty-six hours.*

† *It was about six months.* ‡ *Between five and six.*

enquiry, how such distressing symptoms were to be explained; his reflections were, why the disease had not made its *first* appearance twelve or fifteen years before, *at a time* when there was *in reality* more blood and vigour in the system*, and why it only came on after an abatement of diet both considerable in degree and duration; why so great an interval of time, during which he had returned to his usual full diet, had intervened betwixt the first fit and the recent ones; and, why the disease had twice, almost instantaneously, come on after the change of *full nourishing* diet into a sparing one. At last the solution of this question was made out by the interposition of one of greater magnitude, in the following interrogatories: What is the effect of food, drink, and similar supports of life? They produce strength. What is their effect afterwards? Always less and less. What is it towards the end of life? They are so far from giving any more strength, that they evidently prove weakening. Nay, the very same powers, by which life was at first supported, at last put an end to it, commonly through the intervention of disease.

As diseases first and death after, in general happen in the way *that has been just now* explained, not from want, but an over-abundance of the supports of life, he found, however, that the cause was debility, and saw that it was not debilitating†, but strengthening, powers that were to be thought upon as remedies. To this sort of

* *The blood is made from the food, and is in proportion to the quantity, quality, and completeness of its digestion. Now before each of his last fits for the time specified in the text, as well as during the whole course of the attacks of the second year, his food had been almost solely vegetable, and, therefore, was not suited to produce enough, much less an excessive quantity, of blood, and the digestion was also more imperfect.*

† *according to the common practice of evacuation and starving.*

debility he thought proper to give the name of indirect. Such for two years was the ſucceſs of his invigorating plan*, that at the end of that *ſpace of time* he only underwent a very ſlight fit, which did not amount to a fourth part of any of the former oneſt. Now, no phyſician will deny, that the recurrence of ſuch a diſeaſe *as the gout*, which had made four attacks in one year, would have been more frequent than in that proportion the next two years, had the ſame method of cure been continued; nor will any one think the addition of two fits every year too much. The mild fit was four times leſs in degree than the more violent ones. Multiply, therefore, twelve by four, and, according to that computation, the proportion of alleviation of the diſeaſe will amount to a reduction of eight and forty to one. As during the firſt year, he made uſe of vegetable food alone, ſo, during theſe two years, his only food was of the land animal kind, and of the moſt nutrient quality. *Of the latter*, his choice was directed to the beſt in kind, *without any other precaution than* being ſparing in the quantity he uſed‡. A young gentleman, who lived with him, and had laboured under a very ſevere aſthma, in conſequence of *ſubmitting to the ſame* treatment, ſuffered only one fit at the end of the *ſame* two years, inſtead of *experiencing* one every day, *as he had done upon the common treatment.*

Afterwards, to remove an opinion, that had been often inſiſted on, of the gout not depending upon debility, becauſe inflammation accompanied it; little doubting that the inflammation itſelf depended on debility, he ſubjected the queſtion to experiment. He invited ſome

* *which he immediately after the laſt mentioned reflections and queries carried into execution*;

† *the fit that happened at the thirty-ſixth year of his age, and the four ſevere ones, that attacked him about ſix years after, all within the courſe of the ſame year.*

‡ *He found moſt kinds of fiſh, whether from the ſea or freſh water, nearly as debilitating as vegetable matter, when ſolely or chiefly relied upon for a meal.*

friends to dinner, and by the use of certain stimulants used in their presence*, recovered the most perfect use of that foot, with which, before dinner, he could not touch the floor for pain. By this fact, he saw that *not only the gout itself*, but the inflammation accompanying it, was asthenic†. And he found, afterwards, such inflammations affecting the throat in the putrid, in the gangrenous sore throat, and the joints in rheumatalgia, or that rheumatism which depends upon debility, and is improperly denominated chronic rheumatism‡, and supposed, if there be any truth in that supposition to attack the brain in the end of typhus, to be also asthenic.

As the gout affects the alimentary canal, and especially the stomach, and proceeds in its course with distressing circumstances similar to those *that happen* in dyspepsia§; being desirous to know if there was any affinity betwixt it and them, he observed that they, as well as it, depended on debility, and yielded to stimulant remedies. Nay, he afterwards found for certain, that all the spasmodic, all the convulsive, diseases of the same canal‖, and nearly all the diseases of children, were of the same stamp.

Continuing his investigation of the same spasmodic and convulsive diseases, when they occupy the organs of voluntary motion; he discovered that their nature was also the same *in kind*, but *only* greater in degree; as *they are exemplified* in the spasms and pains, *that occur* in various parts of the external surface of the body, and in epilepsy¶, and in tetanus themselves. And by that means he discerned, that a vast number of affections,

* *These are mentioned in Dr. Jones's Enquiry.*

† *that is, depending on debility.* ‡ *The word rheumatism, as implying a similarity of the disease to the true acute rheumatism, should be rejected, and this term, taken from Sauvage, substituted in its place.* § *or indigestion.*

‖ *or, first passages, comprehending the passage to the stomach, that organ itself, and the intestines below it;*

¶ *or the falling sickness,*

in which, upon the supposition of their being inflammatory, no limits had been set to the use of the lancet, *instead of arising from an over proportion of blood and excessive vigour, or any other such cause,* depended upon an under-proportion *of that fluid,* and other causes of debility, and were to be cured, not by bleeding, nor any other evacuations*, but by filling the *vessels,* and restoring the strength *of the whole system.*

At first, for the purpose of removing fits of the gout, he went no farther than the use of wine, another strong drink of *a* similar *operation,* and nourishing food, that is, seasoned meat, and kept the use of the more powerful remedies in reserve. But, of late†, his surprising success in the use of the latter, has enabled him to find in opium, and certain other stimuli, the secret of repelling the fits of the gout as often as they returned, and, at the same time, re-establishing the sound healty state, a secret that has hitherto been so much wanted and despaired of. This he has often effected both in himself and in other persons. It is now going the third year, and near the end of it‡, since he has always been able to prevent all return of the disease.

Taught by similar instances of actual practice, he found for certain that bleeding discharges, which are called hæmorrhages, do not depend on plethora and vigour, but upon penury of blood and debility arising from any other source, and therefore did he reject them from the number of sthenic diseases§, among which they had been arranged in the first edition of the text book, reserving a place for them among the asthenic diseases in the second volume of that work. For he saw, that

* *such a vomiting, purging, sweating, blistering, glistering, &c.* † *that is, now, for many years past.*
‡ *now the seventh,* § *Sthenic diseases, as will be afterward explained, are such as depend upon an excessive application of the several powers that otherwise produce health.*

bleeding, various *other* evacuations, abſtinence, cold, and ſedatives, as they are called, proved hurtful; and that the ſtimulant plan of cure alone, was ſalutary. Even wine and brandy, which had been thought ſo hurtful *in thoſe diſeaſes*, he found the moſt powerful of all other remedies in removing them. Upon finding that a certain fact; he learned, that in all the diſeaſes, in which others had thought there was abundance of blood, there was a deficiency of it, and that from the defect of that and of other ſtimulants, the *real* cauſe of *the diſeaſes*, was debility; and ſtimulants, given in proportion to the degree of the cauſe, the proper remedies.

In conſequence of the light that thus beamed in from the practice, he found, that the cauſe and cure of fevers, both intermittent and continued, was the ſame as thoſe already mentioned.

Gradually led, as it were by the hand of nature, around the whole circle of aſthenic diſeaſes*, he thoroughly perceived, that they all depended upon the ſame cauſe, that is, debility, that they were all to be removed by the ſame kind of remedies, to wit, ſtimulants†, and that neither their cauſe nor their cure differed but in degree.

With reſpect to ſthenic diſeaſes, the nature of either the cauſe or cure of which nobody had obſerved; he had long ago underſtood that inflammation in them, as well as the other ſymptoms, were not as had been univerſally believed by Syſtematics, the cauſe, but the effect: and that the inflammation aroſe from the cauſe, i. e. the diatheſis‡, and not even from it, unleſs very violent. In fine, he experienced in his own perſon, that catarrh was not produced by cold according to the common opinion, but by heat, and the other known ſti-

* *diſeaſes of debility.* † *Wherever the word ſtimulant is uſed without a particular qualification of its degree, the degree is underſtood to be greater than that required in the healthy ſtate, as will afterwards more fully be explained.* ‡ *or habit.*

muli, and was removed by cold and other debilitating powers. By which discovery he was led to form a proper judgment of the catarrhal symptoms in the measles: In which he found, that a very great man who had improved the cure of sthenic diseases, but never attained to any knowledge of the asthenic, had been misled, by the alexipharmic physicians. And, as these symptoms are the most dangerous part of the disease, he was right in supposing, that the proper cure of them very much interested that of the whole disease. The consequence of which was, that it came out a demonstrated fact, that the refrigerating antiphlogistic plan of cure was of equal service in the measles and small-pox.

In sthenic diseases he illustrated the cause, enlarged the plan of cure, enriched the knowledge of both, explained and reduced the whole to a certain principle; he distributed all general diseases into two forms, a sthenic and an asthenic one*. He demonstrated that the former depended upon excess, the latter upon deficiency of exciting power; that the former were to be removed by debilitating, the latter by stimulant, remedies; that the hurtful powers which excited either, were the remedies of the other, and the contrary; and that they acted by the same operation with the powers which produce the most perfect health, differing from them only in degree. He extended the same doctrine to plants. He laid down a principle which is illustrated and confirmed by all the parts of the detail, and *itself* reflects illustration and confirmation upon every one of them. *Lastly*, he put the question, whether the medical art, hitherto conjectural, incoherent, and in the great body of it false, was not at last, reduced to a demonstrated science, which might be called the science of life†.

* *Sthenic signifies an excess, asthenic a defect, of invigorating power.* † *That question has been answered in the affirmative by every one who had been at due pains to understand the doctrine.*

PREFACE

TO THE

TRANSLATION.

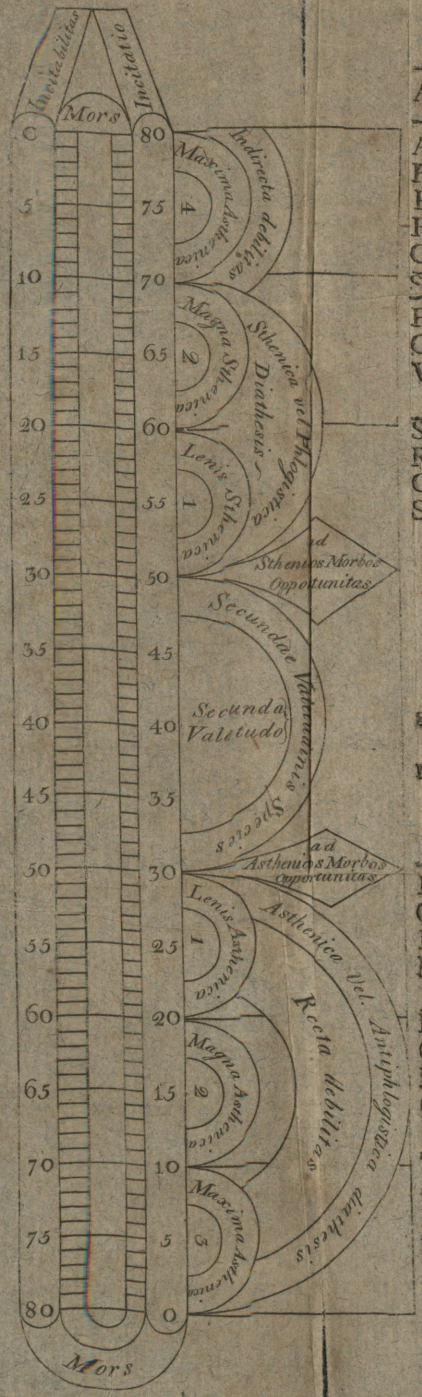
A PRESSING, and very general, demand for an Engliſh tranſlation of the Elementa Medicinæ, made ſeveral years before the publication of the ſecond edition of that work, and ſucceſſively repeated with an encreaſing importunity ever ſince; a deſire of ſpreading the knowledge of a doctrine, which had exhibited ſo many indubitable proofs of its importance and utility to mankind: an ambition, not quite extinguiſhed by advancing years, domeſtic cares, and a declining ſtate of health, to get the better of the keeneſt, and moſt univerſal, perſecution, that ever was raiſed againſt a uſeful and extenſive diſcovery; the neceſſity for a tranſlation in the preſent decaying ſtate of the knowledge of the Latin language; the danger of the doctrine coming before the public from adventurers unequal to the taſk; and ſome other circumſtances, partly of a private, partly of a domeſtic nature, with which it would be impertinent to trouble the reader; all theſe at laſt prevailed with the author to ſubmit, for once, to a taſk, otherwiſe not deſirable that of tranſlating his own work. Such a taſk ſeemed more naturally calculated to lay the foundation of the commencing fame of an ingenious pupil. But, as no one of many, whoſe literature and knowledge of the ſubject completely qualified them for the undertaking, wiſhed to ſuperſede the occaſion for his engaging in it himſelf; and as the courage of ſeveral perſons of a different deſcription kept not pace with their affectation or intereſtedneſs, it is to be hoped the public will not be diſpleaſed to receive the work from the author himſelf. This preformance is intended for the uſe of three ſets of

readers; those who do not readily enter into a thought conveyed in pure Latin, and who, therefore, might wish to be possessed of a translation for the sake of comparing it with the original, and, thereby, of acquiring, renewing, or improving their knowledge of the latter; those who are only acquainted with such Latin, as has prevailed in modern times, and, lastly, those, who either cannot, or will not be subjected to the trouble of reading Latin at all, and who, surely, may, often be better employed.

Both this, and the original work, are intended not for the exclusive use of medical readers, but also for that of the public at large, it being evident, that, without even the exception of the professional knowledge of each individual, that of his own health is preferable to all others. And such an acquisition becomes valuable in proportion to its justness and solidity. The public are presented with a work, that claims the merit of having reduced the doctrine and practice of medicine to scientific certainty and exactness. With respect to the form, in which it is delivered, it is stripped of that jargon of numerous, unmeaning or misleading terms, and all that mystery either in style or matter, that has hitherto rendered the pretended healing art impenetrable to the most intelligent and discerning, and locked it fast in the schools. No terms are admitted but the few that necessity imposed, and these are every where defined. The style is simple, and suited to the simplicity of the subject. In the language and composition, as far as the thoughts which are new throughout, and that restraint, which is inseparable from exactness of translation, permit, clearness is every where preferred to elegance and diffusion to brevity.

The author, in prefixing his name to both forms of his work, has thrown the guantlet to its numerous, but anonymous, opposers. They are, therefore, called upon, now or never, to disprove it, and the judicious and candid part of mankind to judge between the parties.

INCITABILITATIS ET INCITATIONIS SERIES.



ADVERSA VALETUDO vel MORBI.		CAUSÆ. NOXÆ.	CAUSÆ. JUSTA.	MORBORUM CURATIO.
Apoplexia. Paralysis. Pestis. Febris Malign. Cynanche Typhoides.	Variola confluens. Hydrothorax. Phthisis. Dysenteria contagiosa, &c.	Nimia magnorum stimulorum vis, ut calor, exercitatio, victus, sanguinis abundantia, gravis animi adfectus, contagio, et similia.	Indirecta debilitas.	Medendi consilium est incitationem sustentare. Remedia sunt vehementes stimuli, ut electricitas, opium, æther, spiritus Gallicus, vinum, moschus, cortex peruvianus, serpentaria, camphora, jusculæ lautæ et similia.
Synocha. Phrenitis. Cynanche inflammat. Variola.	Rubeola. Peripneumonia. Dysenteria. Mania, &c.	Eædem, ac supra dictæ, sed non ea vi incumbentes, qua indirectam debilitatem creent, sed majore quam infra.	Aucta vel magna incitatio.	Medendi consilium incitationem imminuere; quod fit, magnos stimulos subducendo, exiguis vel deficientibus utendo; scilcet, frigido cubiculo, animi tranquilitate, sanguinis missione, alvi purgatione, parco victu, et similibus.
Synochus. Rheumatismus. Catarrhus. Scarlatina.	Miliaria. Varicella. Ophthalmia, &c.	Eædem, ac supra dictæ, sed non ea vi incumbentes quam nam sthenicam creent, sed majore quam in secunda valetudine.	Aucta minus incitatio.	Hic consilium incitationem, ita ut supra, sed modice magis, minuere.

A 30° ad 50° in serie secundæ valetudinis species jure notatur, quia, nisi in 40°, absoluta valetudo non contingit: In magna enim stimulorum, quotidie incumbentium, varietate; cujusmodi cibus et potio et adfectuum animi vis, paulo gravius agentia sunt, raro medium punctum attingitur, plerumque intra 30 et 50° variat incitatio.

Febres intermittentes. Colica simplex. Dyspepsia. Hypocondriasis.	Hysteria. Epistaxis. Menorrhœa. Amenorrhœa, &c.	Hæ noxæ sunt stimulorum, secundæ valetudini necessariorum, subductio, et potestatum, quæ, licit stimulent, non satis id faciunt, abusus.	Imminuta incitatio vel recta debilitas.	Medendi consilium est incitationem augere; remedia vehementes stimuli, quales ad indirectam debilitatem medendam adhibentur, hoc tantum differentes, quod a parva eorum hic vi incipiendum, et paulatim ad majorum adscendendum.
Rheumatalgia. Cholera. Epilepsia. Chorea.	Rachitis. Hæmoptysis. Scrophula, &c.	Sunt stimuli deficientes soli, ut frigus, parcus cibus, nec ex bona materia, metus, et similia.	Imminuta incitatio vel recta debilitas.	Consilium his idem, ac modo dictum, sed cum cautiore stimulorum usu.
Typhus. Colica Pictonum. Podagra. Tetanus.	Scorbutus. Diabetes. Hydrops. Icterus, &c.	Sunt stimuli deficientes soli.	Imminuta incitatio vel recta debilitas.	Idem etiam consilium, scilicit augere incitationem et iisdem quoque stimulis, sed etiam cautius administrandis.

JOANNI BRUNONI, M. D. *Hanc tabulam, ut suæ in præceptorem reverentiæ monumentum dicat illius amicus et discipulus,* SAMUEL LYNCH

THE

ELEMENTS

OF

MEDICINE.

THE FIRST AND REASONING PART.

CHAP. I.

1. MEDICINE is the ſcience of preſerving the good, and of preventing and curing the bad health of animals.

2. The application of the ſame principle to vegetables, ſhould be named Agriculture.

3. Good health conſiſts in a pleaſant, eaſy, and exact uſe of all the functions.

4. Bad health conſiſts in an uneaſy, difficult, or diſturbed exerciſe of all or any of the functions. The latter reſpects diſeaſes.

5. Diſeaſes are either extended over the whole ſyſtem, or confined to a part; the former merit the appellation of Univerſal, the latter that of Local.

6. The former are always univerſal from their firſt commencement, the latter in their courſe, and that but ſeldom. The former are always, the latter never, preceded by predispoſition. The originality of the former proceeds from an affection of the principle of life, of the latter from local injury. The cure of thoſe is applied to the whole body, of theſe to the injured part.

7 To the province of the Phyſician belong all the univerſal, and as many of the local, as firſt affect a part, and, in conſequence of that, at laſt injure the reſt of the body with ſome reſemblance to the univerſal ones.

8. Predisposition to disease is that state of the body, that recedes from health, and approaches to disease in such a manner, as to seem still within the boundaries of the former, of which, however, it is only an insidious and deceiving resemblance.

9. These *three* states* constitute the life† of animals; to which that or vegetables is not dissimilar, but more imperfect.

CHAP. II.

10. IN all the states of life, man and other animals differ from themselves in their dead state, or from any other inanimate matter in this property alone; that they can be affected by external agents, as well as by certain functions peculiar to themselves, in such a manner, that the phænomena peculiar to their living state, that is, their own functions, can be produced. This proposition comprehends every thing that is vital in nature, and therefore *at least*, applies to vegetables.

11. The external agents in general, are reducible to heat, diet‡, other matters taken into the stomach, the blood, the fluids secreted from the blood, and air. *How* poisons and contagions come under the same view shall afterwards be mentioned.

12. The functions of the system itself, producing the same effect, are muscular contraction, sense, and the energy of the brain in thinking, and in exciting passion and emotion. "While these affect the system in the same manner as the other agents; so, with respect to their origin, they arise both from the other and from themselves."

13. The result of withholding either the property distinguishing living from dead matter, or the operation of either of the two sets of powers, is the non-existence of life. Nothing else is necessary to life.

* *Of health, disease, and predisposition.* † *Or living state.*
‡ *Consisting of food, drink, and condiment.*

14. The property, by which both ſets *of powers* act, ſhould be named Excitability; and the powers themſelves, Exciting powers. By the word "body" is meant both the body ſimply ſo called, and alſo as endued with an intellectual part, a part appropriated to paſſion and emotion, or to the ſoul; the appellation commonly given to it *in medical writings* is ſyſtem*.

15. The common effect, produced by the exciting powers, is ſenſe, motion, mental action, and the paſſions. Which effect being one and the ſame, it muſt, therefore, be granted, that the operation of all the powers is alſo one and the ſame (A).

16. The effect of the exciting powers, acting upon the excitability, is to be denominated Excitement.

17. Since, of the ſame exciting powers, ſome act by evident impulſes, and the identity of the effect of others infers the ſame mode† of operation; and ſince they have all a certain activity in them, they ought not to be denominated ſtimulant, or ſtimuli.

a. Stimuli are either univerſal or local.

b. The univerſal ſtimuli are the exciting powers, ſo acting upon the excitability, as always to produce ſome excitement over the whole ſyſtem. And their appellation of univerſal is convenient to diſtinguiſh them from the local.

c. The local ſtimuli act only on the part to which they are applied; and do not, without previouſly producing an affection in it, affect the reſt of the body.

CHAP. III.

18. WE know not what excitability is, or in what manner it is affected by the exciting powers. But, whatever it be, either a certain quantity, or a certain energy

* *No diſquiſition is here meant to be entered into, as religion is no where interfered with, but left to its proper guardians.* † *Or ratio.*

of it, is assigned to every being upon the commencement of its living state. The quantity, or energy, is different in different animals, and in the same animal at different times. It is partly owing to the uncertain nature of the subject, partly to the poverty of common language, and likewise to the novelty of this doctrine, that the phrases of the excitability being abundant, encreased, accumulated, superfluous; or weak, not well enough sustained, not well enough exercised, or deficient in energy, when enough of stimulus has not been applied; sometimes tired, fatigued, worn out, languid, exhausted or consumed, when the stimulus has operated in a violent degree; or being at other times in vigour, or reduced to one half, when the stimulus has neither been applied in excess nor defect, will be employed in different parts of this ensuing work. Both upon this, and every other subject we must abide by facts; and carefully avoid the slippery question about causes, as being in general incomprehensible, and as having ever proved a venomous snake to philosophy.

19. As there is always some excitability, however small, while life remains, and the action of the exciting powers in one degree or another is never wanting, the conclusion from the *fact* is, that they are all endowed with more or less of stimulant power, and that this must be either excessive, in due proportion, or deficient. A great quantity of blood stimulates in excess, and, therefore, produces the diseases that depend upon too much stimulus; but an under proportion of blood, though debilitating *in its effect*, and inducing the diseases that depend upon debility as their cause, must still be understood to be stimulant; but only so much more weakly stimulant, as the penury is more considerable: The same conclusion applies to all the other exciting powers, unless that poisons, contagions, and some few other powers, might to some seem exceptions. But,

20. Poisons either do not produce the universal diseases, which make our present subject; or, if they do,

by operating the ſame effect as the ordinary exciting powers, their mode of operation muſt alſo be allowed to be the ſame (A).

21. Some contagions accompany diſeaſes depending on too much ſtimulus*; others thoſe that conſiſt in debility†. If both theſe are the product, not of contagion alone, but, by a conjoint operation, alſo of the hurtful powers that uſually depend upon ſtimulus, which is a fact aſcertained: the effect, therefore, in this caſe being the ſame, the concluſion is unavoidable, that their cauſe is alſo the ſame, and the mode of operation of both the ſame. It muſt, therefore, be admitted that the operation of contagions is ſtimulant‡. It makes for the ſame concluſion, that no remedies, but thoſe that cure diſeaſes, depending upon the operation of the uſual hurtful powers, remove thoſe that have been ſuppoſed to be induced by contagions. Finally, the great debilitating energy, *obſervable* in certain contagions, does not more prove a diverſity of action *in them*, than *it does* in *the caſe of* an equal or greater degree of debility, ariſing from cold§.

d. It might appear to ſome, that a certain matter of food, not ſufficiently nouriſhing, and therefore, *of* hurtful *tendency*: as alſo that emetics, and purgatives, and ſedative paſſions, as they are called, might be thought to belong to the number of *powers*, the operation of which might ſeem ſo many exceptions from the ordinary ſtimulant operation.

e. In general all vegetable matter, when depended upon alone for nouriſhment, is hurtful, at laaſt, to thoſe who have been accuſtomed to better, and that by a debi-

* *As the ſmall pox and meaſles.* † *As the petechial typhus fever, the plague.* ‡ *This is all that is contended for at preſent; the degree of their ſtimulus will be afterwards conſidered.* § *At the freezing point, or below it, man, and ſimilar animals of warm blood, could not live a ſecond in a denſe medium, ſuch as that of water; but the animals of cold blood can.*

litating operation; and yet even it, since it supports life, however incommodiously, longer than *a total* want of food, must, of course, be stimulant. But, if asthenic diseases arise from vegetable food, and not, to a certain degree, from want; that circumstance must be owing to a certain change produced in the system, by which the sum total of stimuli is rendered less fit to act upon the excitability. That such is the case, is proved by the most stimulant matter of food losing part of its stimulus by continued use, and requiring the substitution of another in its place.

f. In the same manner is the operation of emetics and purgatives to be explained, as diminishing the sum total of excitement; which depends partly on an agreeable relation *that the exciting power bears* to the excitability, or on an agreeable sensation. That it is sometimes the relation, sometimes the sensation, that acts *in this case*, is evident from the hurtful effect of things most grateful to the sense, as in the examples of the legumina, and other articles of vegetable food; and by the salutary effect of disagreeable things, as the several forms and preparations of opium: both which produce their effect, the former by a debilitating, that is, an insufficiently stimulant, the latter by a considerably stimulant, operation (B).

g. The sedative affections, as they are called, are only a lesser degree of the exciting ones. Thus fear and grief are only diminutions*, or lower degrees, of confidence and joy. The news of money gained produces joy, and grief arises from the loss of it. Here then no opperation of a nature contrary to stimulant takes place; it is nothing but a dimination, or inferior degree, of stimulant operation. The subject of the passions admits of the same reasoning in every respect as that of heat†; and in the

* *Not passions different in kind.*

† *The doctrine of cold as an active power, and, opposite to heat, is now universally rejected, and considered as only a dimunition of heat.*

ſame manner all the bodies in nature, that ſeem to be ſedative, are debilitating, that is, weakly ſtimulant; owing their debility to a degree of ſtimulus greatly inferior to the proper one.

22. Since the general powers produce all the phænomena of life, and the only operation, by which they do ſo, is ſtimulant; it, therefore, follows, that the whole phænomena of life, every ſtate and degree of health and diſeaſe, alſo conſiſt in ſtimulus, and are owing to no other cauſe.

23. Excitement, the effect of the exciting powers, the true cauſe of life, is, within certain boundaries, produced in a degree proportioned to the degree of ſtimulus. The degree of ſtimulus, when moderate*, produces health; in a higher degree it gives occaſion to diſeaſes of exceſſive ſtimulus, in a lower degree, or ultimately low, it induces thoſe that depend upon a deficiency of ſtimulus, or debility. And, as what has been mentioned, is the cauſe both of diſeaſes and perfect health; ſo that which reſtores the morbid to the healthy ſtate, is a diminution of excitement in *the caſes of* diſeaſes of exceſſive ſtimulus, and an encreaſe *of the ſame excitement* for the removal of diſeaſes of debility. Both which *intentions* are called Indications of Cure.

24. This mutual relation obtains betwixt excitability and excitement, that the more weakly the powers have acted, or the leſs the ſtimulus has been, the more abundant the excitability becomes; the more powerful the ſtimulus of the agents has been, the excitability becomes the more exhauſted.

25. A mean ſtimulus, affecting alſo a mean or half conſumed excitability, produces the higheſt excitement. And the excitement becomes leſs and leſs, in proportion as either the ſtimulus is applied in a higher degree, or the excitability more accumulated. Hence the vigour of youth, and the weakneſs of childhood and old age. Hence,

* *Of a middle kind.*

within a more moderate space of time, a middle diet gives vigour, and debility is the effect of its being either too full or too sparing.

26. While that is the case, every age, every habit, if the excitement be properly directed has its *due degree* of vigour *accommodated to it*. Childhood, and that weakness, which an abundant excitability produces, admits of little stimulus, *but*, upon less than the middle proportion becomes languid, upon more is oppressed. Old age, and that frailty, which is occasioned by a deficiency of excitability, requires a great deal of stimulus, becomes enfeebled less, and overset by more. The reason for the latter is, that the excitability, without which no vital action is produced, does not exist in that degree, by which vigour of the functions is produced; while the former is to be explained from the exciting or stimulant power, without which the excitability is of no effect, not being applied in that degree, which is requisite to the vigour that it should give. The impotency of stimulus may rise to such a degree, as to produce death from its extreme under proportion. On the contrary, the exhaustion of excitability may go so far, as to extinguish life by the extreme excess of stimulus.

27. The circumstances, under which excitement is propagated, have two confining boundaries.

28. The one of these circumstances is, exhaustion of the excitability from violence of stimulus. For all the stimulant powers may carry their stimulant energy to that degree, under which no excitement will arise. The reason for which is, that the body becomes no longer fit to receive the operation of stimulus; another expression for which is, that the excitability is consumed.

29. The termination* of excitement, form the exhaustion of the excitability by stimulus, may be either temporary or irreparable, and may arise either from a short continuance of a high degree of stimulus, or a long

* *Or cessation, or extinction.*

application of one, the exceſs of which is more moderate. Both circumſtances come to the ſame thing; the high degree of ſtimulus compenſating for the ſhortneſs of its application, and the ſhortneſs of its application for its greater moderation in degree*. The effect of the former is ſudden death; of the latter a more gradual death preceded by diſeaſes. And though a moſt exact meaſure of excitement were kept up, yet death at laſt, however late, ſubtervenes.

30. Ebriety, debauch in eating and drinking, ſweat, langnor, heat either *operating* alone, or overcoming the effect of cold, dulneſs in mental exertion from exceſſive thinking, or ſinking of the ſpirits in conſequence of violence of paſſion, finally, ſleep; all theſe are the conſequences of a ſhort application of a high degree of ſtimulus, operating an exhauſtion of excitability. The long continuance of a more moderate exceſs in the force of ſtimulus, is followed by the frailty of old age, predispoſition to diſeaſes of debility, as well as thoſe diſeaſes themſelves. The ultimate termination of both is death.

31. When the excitability is waſted by any one ſtimulus, there is ſtill a reſerve of it, capable of being *acted upon* by any other. Thus a perſon, who has dined fully; or is fatigued in body, or tired with intellectual exertion, and therefore under a great diſpoſition to ſleep, will be recruited by ſtrong drink; and, when the laſt has produced the ſame ſleepineſs, the more diffuſible ſtimulus of opium *will arouſe him* (c). Even after opium fails, and leaves him heavy and oppreſſed by the ſame propenſity, a ſtimulus ſtill higher and more diffuſible, if there be any ſuch, will have the ſame effect. A perſon fatigued with a journey will be roufed by muſic to dance and ſkip; and he will be enabled to run after a

* *A force of ſtimulus as ſix, operating for a ſpace of time as one; and a force of ſtimulus as one, operating for a ſpace of time as ſix, will produce the ſame effect in wearing out the excitability.*

flying beauty, if her flight encourages him with the hope of overtaking her.

32. The waste of excitability, first exhausted by stimuli, and then recruited by new ones, is most difficultly repaired; because the more a stimulant operation has been employed, that is the more the stimuli has been applied; there remains the less access to fresh stimuli, by the operation of which the failure of excitement may be removed.

33. The reason of the difficulty is, that no means of reproducing the healthy state, that is, the proper *degree* of excitement, is left; but the very circumstance that occasioned the waste, that is, already an excess of a stimulant operation, not admitting of more stimulus.

34. Such, in fine, is the nature of the same loss of excitement, that it rushes to instant death unless proper measures be taken to preserve life by a great stimulus, but less than that which occasioned it, and then by a still less, till by means of the moderate stimulus, that is suitable to nature, or a somewhat greater, life may at last be preserved. The difficult cure of drunkards and gluttons, already affected with diseases, sufficiently evinces, that the same consideration applies to all the exciting powers that stimulate in excess*.

35. The excitability, thus exhausted by stimulus is debility, which should be denominated indirect, because it does not arise from defect, but excess of stimulus†.

36. Through the whole progress to indirect debility, the second impression of every stimulus has less effect than the first, the third less than the second, and so forth to the last, which gives no more excitement and the effect takes place in proportion to the degree or duration

* *This proposition applies to the most difficult part of the practice for the cure of diseases, that is those that depend upon a certain species of debility which in the very next paragraph will be denominated indirect.*

† *Like another, debility, by and by spoken of.*

of *the ſeveral impreſſions*, though every one always adds ſome excitement. The inference from this propoſition is, that, before the eſtabliſhment of indirect debility, and, when it is now upon the eve of being eſtabliſhed, the ſtimulus which produces it, ſhould be withdrawn; a debilitating power ſhould be applied, as in giving over drinking wine at the end of an entertainment, and ſubſtituting water in its place, and applying refrigeration to a perſon who has been expoſed to an exceſſive degree of heat*.

37. The ſame progreſs to indirect debility is retarded by diminiſhing the excitement from time to time, and proportionally encreaſing the excitability, and thereby giving more force to the action of the ſtimuli. Take for example, cold bathing from time to time, lowering the diet from time to time, and a ſimilar abatement of all the *other* ſtimulant powers.

b. If cold ſometimes ſeems to ſtimulate, it produces that effect, not as actual cold, but either by diminiſhing exceſſive heat, and reducing it to its proper ſtimulant temperature (D), or by rendering the body acceſſible to air, or by accumulating the excitability diminiſhed by exceſſive ſtimulus, and communicating energy to the ſtimulus of the exciting powers, now acting too languidly. An inſtance of this operation of cold occurs in the Torrid Zone, where actual cold is ſcarcely to be procured, in the uſe of refrigerants, as they are called, in fevers, and in the contraction, by means of cold, of a ſcrotum previouſly relaxed by heat. Nay, the effect goes ſo far, that ſthenic diſeaſes may ariſe more certainly

* *A convaleſcent, from a diſeaſe of debility, was preſcribed wine, but not to carry it to exceſs. A hiccup was the ſignal, by which he was to underſtand, that he had carried that ſtimulous too far. He deſiſted, and ended his jollity with two or three tumbler glaſſes of water; which prevented the eſtabliſhment of the indirect debility into which he was about to fall.*

from cold, alternating with heat, and either preceding or following it, than from pure heat

38. The other condition *or circumſtance*, limiting excitement, is, an energy of the exciting powers too ſmall, and therefore inſufficient to produce excitement. As this caſe ariſes from a deficiency of ſtimulus, and an abundant excitability, it ought to be diſtinguiſhed from the other, which ſuppoſes an abundance of the former, and deficiency of the latter. The ſame diſtinction is required alſo for the purpoſe of practice. All the exciting powers may fall ſo ſhort of ſtimulant force, as to produce that effect. They all, therefore, equally ſerve to illuſtrate and confirm this *propoſition*.

39. In this caſe, the excitability is abundant, becauſe, in conſequence of the ſtimuli being withheld, it is not exhauſted. Thus, in the cold bath, the excitement is diminiſhed, becauſe the ſtimulus of heat, and, therefore, the ſum of all the ſtimuli, is deficient; and the excitability, as being leſs exhauſted by ſtimulus, encreaſed(E). The ſame concluſion applies to famiſhed perſons, to water drinkers, to thoſe who are in a ſtate of refrigeration from other cauſes, to thoſe who have ſuffered evacuations of any kind, to thoſe who have *neglected the ſtimulus of exerciſe, and* given themſelves up to indolence, to thoſe who have neglected the uſe *of that ſtimulus, which* exerciſe of the mind affords, and to perſons in low ſpirits. The effect of withdrawing any ſtimulus is the more liable to produce direct debility, the more any perſon has been accuſtomed to a higher operation of it(F). Take, for an example, the gout, and many other diſeaſes, under the ſame circumſtances, affecting ſome, and ſparing others(G).

40. As, during the encreaſe of excitability, the excitement decreaſes, and in proportion to the encreaſe of the former; ſo that that proceſs may go all the way to death, is a fact from which nature exhibits no exception. It is confirmed by the effect of all the debilitating powers mentioned above; every individual of which, as often as it proves urgent, has a rapid tendency to death.

41. The defect of any one ſtimulus, and the proportional abundance of excitability, is, for the time, compenſated by any other, and often with great advantage to the ſyſtem. So a perſon, who has dined inſufficiently, *and therefore not well enough ſtimulated*, is recruited by a piece of good news. Or, if during the courſe of the day, he has not been ſufficiently invigorated by the ſtimulant operation of corporeal or mental exerciſe, and conſequently likely to paſs a ſleepleſs night, he will be laid aſleep by a doſe of ſtrong liquor. When the latter is not at hand, opium will ſupply its place. The want of the venereal gratification is relieved by wine, and the want of the latter is made amends for by *the uſe of* the former, each baniſhing the languor occaſioned by the want of the other. The ſame concluſion applies to the uſe of ſtimuli, for which we have an artificial, rather than a natural, craving. The long for ſnuff, when it cannot be got, is gratified by the practice of chewing tobacco; and, when any one is languid for want of tobacco, ſmoaking ſupplies the place of it. Nay, when the functions, as they often are, have undergone a temporary leſion, and on account of that, there is no acceſs to the uſe of certain accuſtomary and natural ſtimuli; the ſubſtitution of others, leſs accuſtomary, and leſs natural, ſupports life, till the deſire for the natural ſtimuli is reſtored, and theſe are now in a condition to ſupport the natural vigour as uſual, and the health *finally* eſtabliſhed(H).

42. As, in this manner, the ſuperabundance of excitability, proportioned to the deficiency of ſtimulus, may through all the degrees from its ſmalleſt to its greateſt quantity, be worn out to a certain extent, by one ſtimulus, and then another, and the danger *of its morbid* accumulation awarded, till the ſum of it be brought down to that, which is ſuitable to health; ſo, the more abundant the *ſame* excitability is, that is the more ſtimuli are withdrawn, or the greater penury of the moſt powerful ſtimuli is; the leſs recourſe can be had to that mediocrity of excitabilty on which the vigour of life depends; and

the weakneſs may go to that pitch, the excitability arrive at that degree of abundance, that the *loſs of* excitement may at laſt become irreparable. This propoſition is both illuſtrated and confirmed by the uſe of every debilitating power; as is exemplified by cold, famine, thirſt, and *the progreſs of* fevers.

43. This ſuperabundant excitability proceeds with ſuch rapidity to death, that the only means of reſtoring health, is firſt to encounter it with a very ſmall *doſe of* diffuſible ſtimulus, *a doſe* ſcarcely exceeding the ſcanty* proportion of ſtimulus, that occaſioned it; then, after waſting a part of the ſuperabundance, to proceed to ſomewhat a ſtronger doſe *of the ſtimulus*; and in that manner to be conſtantly taking off whatever ſuperfluity ſtill remains, till at laſt the ſalutary mediocrity is regained. This ſtate is the converſe of that debility, which ariſes from a worn-out excitability (1), and the danger of death occaſioned by it. *To give examples*, a famiſhed perſon is not immediately to be gratified with a full meal; a perſon afflicted with a long duration or high degree of thirſt, is not immediately indulged with a large draught: but the former ſhould be given bit by bit, the latter drop by drop, then both of them gradually more plentifully. A perſon benumbed with cold ſhould gradually receive the cheriſhment of heat. Every perſon, thoroughly penetrated with grief, ſorrow, or any high dejection of mind, ſhould have good news gradually communicated to him. The news of the ſafety of the Roman ſoldier, who ſurvived the diſaſter of his countrymen at Cannæ, ſhould have been communicated to the mother in a round-about way, at firſt as having no better foundation than doubtful report, then as being ſomewhat more to be depended on, afterwards as having ſtill a greater appearance of certainty, finally, as not admitting a ſhadow of doubt: and laſt of all, before her ſon was introduced to her, the woman ſhould have been

* *Or under-proportioned.*

at the same time fortified* both by other stimuli, and a glass of Falernian wine.

44. Since all life consists in stimulus, and both the over-abundance and deficiency of it is productive of diseases, and in *exact* proportion to the over-abundance or deficiency; it follows, that the remedies of both these deviations from the *proper* standard should be accommodated to their degree; and that a high sum total of stimulus, through the course of the disease, should be applied to a high degree of debility, or, what comes to the same thing, to a very abundant excitability; but, that the quantity to be applied at any *particular* time should be in the same proportion small that the excitability is abundant.

45. The debility arising from defect of stimulus, merits the appellation of DIRECT; because it happens in consequence of no positive hurtful power, but from a subduction of the necessary supports of life.

46. Through the whole course of direct debility, every deficiency of stimulus is encreased by a second, the second by a third, the third by a fourth, till the effect at last comes to be a cessation of any further excitement. This last, therefore, is never to be lessened and the debility encreased, with the view, forsooth, that in consequence of encreasing the excitability, the addition of a new stimulus may act more strongly. For, as often as that is put in practice, the morbed state is encreased; and, if the debility should happen to be great, any *further* encrease of it may induce death, but *never* encrease the strength. For, while great debility, and, indeed, at pleasure, may, *in that way*, be produced; *any* excitement to be obtained from a stimulus to come after, is confined within narrow boundaries (K). Take for an example, cold bathing in dropsy, in the gout, in fevers (L), in persons who, previous to this, have undergone refrigeration, and in every sort of debility. And who

* *Had a part of her abundant excitability taken off.*

would treat *the cases of* famine, of deep sorrow, of weakness of the mental function, of languor from inactivity, of penury of blood, *which are all cases of direct debility*; who would treat them by superinducing *more* direct debility, with a view to his gaining some advantage from the very scanty stimulus, *that can be admitted?* The accumulation of excitability, applies only to the predisposition, to indirect debility, or sthenic diathesis.

47. With respect to every sort of debility, *it is to be observed, from all that has been said upon both forms of debility*, that, as indirect debility is never to be cured by direct, so neither is the latter by the former, nor either by the other, in the vain hope of obtaining benefit from the after employment of any stimulus (M).

CHAP. IV.

Of the Seat and Effects of Excitability.

48. THE seat of excitability in the living body*, is medullary nervous matter, and muscular solid; to which the appellation of nervous system may be given. The excitability *is* inherent in it, *but* not different in different parts of its seat. This fact is proved by the production of sense, motion, the mental function, and passion†, immediately, instantaneously, and not in a series of successive operation (A).

i. Different exciting powers are applied to different parts of the nervous system, one at once to them all; but *the mode* of their application is such, that, wherever they are applied, every one immediately affects the whole excitability.

49. Every one of the same powers always affects some part more than any other, *in which respect* one power

* *Called system by medical writers.*

† *That is all the functions which distinguish living animal systems.*

affects one part *more than any other*, another another, *with the same* inequality. The affected part is generally that to which any of the powers is directly applied.

k. And besides that, the more excitability has been assigned to any part from the beginning *of the living state*, that is, the more vivid and sensible it is, the operation upon it of each exciting power, whether acting with due force, or in excess, or in defect, and through all the interminate degrees *of its action*, becomes more powerful*. Thus the brain and alimentary canal possesses more vivid excitability, that is, more propensity to life, than other enternal parts; and the parts below the nails, than other external parts. Again, while the fact just now related is such, as it has been stated, the affection of the part bears no proportion to that diffused over the whole body.

50. An estimate may be formed of the degree of affection in the part more affected *than any other*, and of that which is diffused over the whole body, by comparing the affection of the former with as many lesser affections, taken together, as equal the number of parts in all the rest of the body. Suppose the greater affection of a part† to be as 6, and the lesser affection of every other part to be 3, and the number of the parts less affected to amount to 1000‡; then *it will follow, that* the ratio of affection, confined to the part, to the affection of all the rest of the body, will be as 6 to 3000. This estimate, or something very like to it, is proved by *the effect of* the exciting hurtful powers, which always act upon the whole body (B) and by *that of* the remedies, which always remove the

* *That is to say, if the exciting power acts with that force which produces health, the degree of its action is greater upon the given than any other part, as also when its action is either greater or less than that of the middle salutary degree.* † *As the inflammation of the lungs in peripneumony, the inflammation of the foot in the gout, the effusion of water into a general or particular cavity in dropsy.*

‡ *Which is keeping greatly within the truth.*

effect of the hurtful powers from the whole body*, in every general diſeaſe (c).

51. In this way temperature affects the ſurface of the body; diet the ſtomach, and the reſt of the ſame canal; the blood and other fluids their reſpective veſſels; labour and reſt the veſſels again, and fibres of the muſcles: paſſion and exertion in thinking, the brain; all theſe affect the part mentioned, each that upon which its action is exerted, more than any other equal part.

52. Inſtances of a greater excitement of a part than *of the reſt of the body*, are found in ſweat in a perſon in health flowing firſt from the brow under exerciſe, in checked perſpiration, in inflammation or an affection analogous to it in diſeaſes, in head-ache and delirium. Proofs of a leſſer excitement in a part, are exceſſive perſpiration and ſweat not occaſioned by labour or heat, eſpecially when it is cold and clammy, profuſion of the other excretions, ſpaſm, convulſion, partial palſy, weakneſs or confuſion of intellect, *and again* delirium.

53. As the operation of the general powers, whether exciting in exceſs, in due proportion, or in defect, is directed to ſome one part a little more, than to any other equal part; *it is next to be obſerved*, that it muſt be of the ſame kind in that part as in the reſt, and as well as the general *operation*, be either in exceſs, or in juſt proportion or deficient, but never of an oppoſite nature. For as the exciting powers are the ſame, and the excitability every where the ſame, it is impoſſible that the effect ſhould not be the ſame. The excitement, therefore, is never encreaſed in a part, while it is diminiſhed in the general ſyſtem—nor diminiſhed, while the general excitement is increaſed. There is no difference here, but one of degree; nor can different effects flow from one and the ſame cauſe.

* *Here too I throw the gauntlet. Find a ſingle remedy which removes the diſeaſe by an operation confined to the lungs. There is not one.*

l. For thou on account of the great ſenſibility of certain parts, (for inſtance, the ſtomach (D), and the forcible energy of the exciting powers, either in ſtimulating or debilitating, exerted on them, theſe parts run ſooner than moſt others either into direct or indirect debility, or into a great encreaſe of excitement; that however is only *a matter* of ſhort duration, and it is not long before the reſt of the functions are hurried into the ſame eſtate. Thus, nauſea, vomiting, diarrhœa, and other ſimilar ſymptoms, produced by ſtrong drink and opiates; as well as the ſame affections apparently, and the gout, chelic, gripes, and other ſimilar ſymptoms, occaſioned by abſtinence and water drinking; likewiſe good appetite and the removal of the turbulent ſymptoms of the ſtomach and inteſtines, which we have mentioned, taking place in the convaleſcent ſtate, in conſequence of a proper adminiſtration of food, drink, and diffuſible ſtimulants: *all theſe* are ſhortly followed by a ſimilar ſtate of the reſt of the body, and the eſtabliſhment of indirect debility is the conſequence of the firſt caſe; that of direct debility *ſucceeds* to the ſecond, and health over all is the termination of the laſt.

54. A part, therefore, is the ſeat of no general affection; the whole body is the ſeat of them all; becauſe, with the inequality *above* related, the whole excitability is effected in them all.

55. Neither is the affection of the more ſuffering part the firſt; and afterwards propogated over the ſyſtem; for this good reaſon, that, as ſoon as the excitability is affected any where, it is alſo and immediately affected every where. Both facts are confirmed by the operation of every exciting power, affecting the whole body as quickly as any one part; by general morbid affections appearing equally ſoon over all the ſyſtem as in any part, and for the moſt part ſooner (E). Therefore,

56. Every affection of a part, however formidable, *occuring* in general diſeaſes, is to be conſidered as only a part of the affection inherent in the whole body, and the

remedies are not to be directed to a part, as if the whole diſeaſe lurked there, and was thence to be taken off only, but to the whole body, to all which it belongs (r).

CHAP. V.

Of contraction and its effects.

57. THE entire and vigorous contraction with which muſcular fibres are endowed, is in proportion to the degree of excitement upon which it depends*. This is proved by all the phænomena of health and diſeaſe, and by the operations of all the exciting powers and of all remedies. Force and propenſity to motion are the ſame. We muſt judge from facts, not from appearances. Conſequently, tremor, convulſion, and every affection comprehended under it, are to be imputed to debility as their cauſe. The hurtful exciting power is a ſtimulus uncommonly irritating to the part.

58. The degree of contraction, that conſtitutes ſpaſm, is not an exception from this *propoſition*. It is a continued and deficient function, rather than a great and exact one; and in ſo far as it is a great contraction, it depends upon the local ſtimulus of diſtention, or of ſomething reſembling diſtention, it conſiſts in diminiſhed excitement, is devoid of force, and removed by ſtimulant remedies. The appearance of ſymptoms, which is ever miſleading, is never to be truſted in forming any judgement. Take now both the fact and the explanation of it.

59. As the degree of contraction, in ſo far as it is a ſound function, is connected with force; from that we are to hold is as a certain and demonſtrated fact, that the denſity of muſcular fibres conſidered as ſimple ſolids, is proportioned to the degree of their contraction.

* *It has already been proved, that all the functions depend upon excitement, and therefore contraction among the reſt.*

60. It must therefore be admitted, that excitement is the cause of density. And the density is rendered greater and greater by the excitement in proportion to the degree of the latter: Which it is easy to preceive through all the intermediate degrees *of strength*, from *the highest*, *or that* which takes place in madness, and the density corresponding to it, to *the lowest*, or that debility which is discerned in the article of death, in death itself, and after death, with a laxity corresponding to it. That this is the fact, is proved by the weakness of the same fibres in their dead, and their strength in their living state; the only cause of which difference, we know for certain, is excitement (A).

61. Hence the cavities of the vessels, through their whole tracts, over the whole body, are diminished in *a state of* strength, and encreased in weakness. This is the true cause of diminished perspiration*.

CHAP. VI.

The forms of Diseases and Predisposition.

62. EXCITEMENT, the effect of the exciting powers, when *of a* proper *degree*, constitutes health; when *either* excessive or deficient, *it proves the occasion of* disease, and, of predisposition previous *to the arrival of disease*. The state both of the simple solids and fluids follows that of health as constituted by the excitement, and a given state†.

m. The first cause of the formation of simple solids, and the sole one of their preservation after, is the excitement. Under the direction of the excitement, the

* *And not any of the hypothetical ones, as constriction from cold, or spasm, which are to be considered afterwards.*

† *This proposition overturns the principal systems that have ever appeared in the profession of medicine. But more of it after.*

living solids produce the blood from an external matter taken into *the system*, keep it in motion, from its mixture, secrete from it various fluids, excrete them; absorb others, and circulate and expel them from the body. It is the excitement alone, thro' its varying degrees, that produces either health, diseases, or the return of the sound state. It alone governs both universal and local diseases. Neither of which ever arise from faults of the solids or fluids, but always either from encreased or diminished excitement. The cure of neither is to be directed to the state of the solids or fluids, and only dimunition or the encrease of excitement. But,

63, Affections peculiar to parts, or organic maladies, being foreign from this place of the work, in which the treatment of the general state of the body is only considered, must be passed over at present.

64. That the excitement governs all life is proved by the exciting powers, acting always by stimulating, and thereby producing excitement; it is proved by the greater or smaller activity of the functions being proportioned to the force of the exciting powers; it is proved by the effect of the remedies, which always oppose deficient, to excessive, and excessive, to deficient excitement, in *effecting* the cure of diseases

65. The notion of health and disease being different states, is disproved by the operation of the powers which produce them, and those that remove them, being one and the same

66. The general diseases, arising from excessive excitement, are called sthenic (A); those that originate from a deficient excitement, asthenic. Hence there are two forms of diseases, and both are always preceded by predisposition.

67. That the origin of diseases, and predisposition *just now* mentioned, is the only one and true, is proved by the same powers which produce any disease, or predisposition, also producing the whole form of diseases to which it belongs; and by the same remedies, which

cure any diſeaſe, or predispoſition, alſo curing all the diſeaſes and predispoſitions of its reſpective form (B). Betwixt theſe oppoſite ſets of diſeaſe and predispoſition, perfect health is the mean, leaning to neither extreme.

68. The exciting powers, which produce predispoſition to diſeaſes, or theſe diſeaſes themſelves, ſhould be denominated aſthenic, or ſtrictly ſtimulant. Thoſe that pave the way to aſthenic diſeaſes, or produce the latter, ſhould be called aſthenic, or debilitating. The ſtate of the body producing the former or the predispoſition to them, is to be called Aſthenic Diatheſis; that which occaſions the latter, with the predispoſition peculiar to it, recieves the new term of Aſthenic Diatheſis. Each of theſe diatheſis are a ſtate of the body, the ſame with predispoſition and diſeaſe, varying only in degree. Diſtinguiſh the powers that raiſe both the diatheſis to the degree* of diſby the term exciting hurtful powers. The ſthenic diſcaſe, in which the pulſe is turbulently affected, ſhould not be denominated fevers or febrile diſeaſes, but, for the ſake of diſtinguiſhing them from the aſthenic diſeaſes that diſturb the pulſe, to which fever is a proper name, they ſhould be called Pyrexies.

CHAP. VII.

The Effect of both the Diatheſis, and of the moſt perfect Health itſelf.

69. THE common effect of the ſthenic hurtful powers upon the functions, is, firſt to encreaſe the functions then partly to impair them, but never by a debilitating operation (A). The effect, in common to the aſthenic hurtful powers, upon the ſame *functions*, is to diminiſh them, in ſuch a manner, as ſometimes to exhibit an appearance, but a falſe one†, of encreaſing them.

* *Or full meaſure.*

† *Spaſm and convulſion, ſuppoſed to ariſe from encreaſed influx of the nervous power, are both occaſioned, and cured, by the ſame powers, as all the other ſymptoms.*

70. If the juſt degree of excitement could be conſtantly kept up, mankind would enjoy eternal health. But two circumſtances prevent that. Such is the nature of the ſthenic diatheſis, that it waſtes the ſum total of excitability aſſigned to every being upon the commencement of its living ſtate, and, thereby ſhortening life often by the interpoſition of diſeaſes, ſooner or later induces death. Which is one cauſe of mortality.

71. The aſthenic diatheſis is hurtful by not ſupplying that degree of excitement, which is neceſſary to life, and thereby allowing the ſtate of life to approach more nearly to that in which death conſiſts. Which opens another gate of death to mankind.

72. Further diſeaſes and death are the conſequences of the change of either diatheſis into the other. Either diatheſis, by means of the hurtful powers producing the other, when theſe are employed as remedies (B), may, either from accident, inadvertence, or deſign, be completely converted into the other; and when that has been done, and oppoſite remedies *to thoſe, that in this manner* proved hurtful, are employed; it may, *by a contrary exceſs*, be turned back to the ſame ſtate from which it ſet out (C). This obſervation will be found of the greateſt conſequence in the cure of both prediſpoſition and diſeaſes (*). What is wanting to a further illuſtration of it ſhall be given afterwards. An illuſtration of the change of ſthenic diatheſis into aſthenic is *found in* hydrothorax ſucceeding peripneumony. Again, the immoderate uſe of ſtimulants may convert any aſthenic affection into a ſthenic one; as when a violent cough, a catarrh, or an inflammatory ſore throat, are induced in conſequence of the cure of the gout, though proper in kind, being carried to exceſs in degree.

* *It muſt never be forgot, that we are nothing in ourſelves, but, while we have any excitability remaining in proper capacity to be acted upon, we entirely depend on the exciting powers acting on it.*

. Though excitement governs all the phanomena of life; yet the ſymptoms of diſeaſes, which either in exceſs or deficiency produces, do not of themſelves lead to any proper judgment reſpecting it; on the contrary, their deceiving appearance has proved a ſource of infinite error.

72. From all that has hitherto been ſaid, it is a certain and demonſtrated fact, that, life is a* forced ſtate, that the tendency of animals every moment is to diſſolution; that they are kept from it†, by foreign powers, *and even by theſe* with difficulty and only for a little; and then, from the neceſſity of their fate, give way to death,

CHAP. VIII.

Of Prediſpoſition.

73. Prediſpoſition is a middle ſtate betwixt perfect health and diſeaſe. The powers, producing it, are the ſame with thoſe which produce diſeaſe.

74. The period of prediſpoſition will be ſhorter or longer, according to the greater or leſſer force of the hurtful powers *that have induced it*; and the interval between health and actual diſeaſe will be more quickly or ſlowly got over.

75. That prediſpoſition neceſſarily precedes diſeaſes, is evident from the fact of its ariſing from the ſame exciting powers, acting upon the ſame excitability, from which both health and diſeaſe ariſe, and of its being an intermediate ſtate betwixt them both. And, as the excitement of health differs much from that of diſeaſe; it is not, therefore, to be ſuppoſed, that the former immediately mounts up to the latter, and ſkips over the boundaries of prediſpoſition: nay, the contrary is certain and beyond a doubt.

* *not a natural, but,*
† *not by any powers in themſelves, but,*

76. Contagious diſeaſes are not an exception from this obſervation; becauſe, whether the matter of contagion act by a ſtimulant or a debilitating operation, its operation is the ſame with that of the ordinary powers, that is to ſay, its cauſe is the ſame (A.) If, as it ſometimes happens, no general affection follows the application of contagion, if no undue exceſs or defect of excitement is the conſequence; in that caſe, the affection is altogether local and foreign from this place.

77. If poiſons communicate any ſort of morbid affection without prediſpoſition, ſuch an affection, for that very reaſon, is not to be conſidered as a general diſeaſe, as alſo for this additional reaſon, that *the affection* is neither removed nor relieved by the uſual cure of general diſeaſes; and the diverſity of the effect proves, that both the cauſe and exciting hurtful power are different from the general ones. In one word, ſince prediſpoſition and diſeaſe are the ſame, varying only in degree, the unavoidable concluſion is, that whatever, with a given force, produces the latter, *the ſame*, with a leſſer force, will produce the former. The only cure of moſt poiſons is their early diſcharge from *the ſyſtem*. And if, as often happens, others, by wounding an organ neceſſary to life, are not curable, but fatal; the effect of both is foreign from our preſent ſubject, and to be referred to local diſeaſes.

78. The only thing to be regarded in the powers producing either prediſpoſition to general diſeaſes, or thoſe diſeaſes *in their full force*, is the degree of the former* compared with *that of* the latter†, or of the individual powers compared with one another; for the purpoſe of diſcerning the degree of hurtful power that each poſſeſſes, and the degree of curative means to be employed in order to remove the hurtful effect (B).

* *thoſe that produce the prediſpoſition,*
† *thoſe that produce the diſeaſe,*

79. The knowledge of prediſpoſition is of great importance; as enabling the phyſician to prevent diſeaſes*, comprehend the true cauſe of them founded in prediſpoſition, and to diſtinguiſh them from local affections, which are widely different from them (C).

80. As the prediſpoſition, to diſeaſes, and the diſeaſes themſelves, are the ſame ſtate; a great criterion, by which general diſeaſes may be diſtinguiſhed from local ones, will be *found in this ſingle circumſtance*, that general diſeaſes are always, local never, preceded by prediſpoſition (D).

81. As the affection of a part is always the original ſource of local diſeaſes, and as the diſtinctions, we have related, are eſtabliſhed upon the ſolid baſis of truth; it follows, that the following diſorders muſt be rejected from the number of general diſeaſes, how great ſoever their reſemblance to them may be, and however much they may conceal their own nature. Whatever affections, then, ariſe, from any ſtate of a part, from ſtimuli, from debilitating circumſtances (neither of which laſt produce any commotion in the whole body, or only do ſo in conſequence of the force of the local cauſe), from compreſſion of a part, from obſtruction from other diſeaſes†, and not from the exciting powers which produce general diſeaſes (E); all theſe muſt be rejected from the number of general diſeaſes; and *that for the moſt ſolid* reaſons; to wit, their differing from them in the hurtful powers that produce them in their *true* cauſe (F), in their cure (G), and in every *eſſential* reſpect, agreeing with them in nothing, but in a deceitful and deceiving *ſuperficial* appearance.

* *from his acquaintance with the powers that lead to them.*
† *whether general or local,*

CHAP. IX.

The general Diagnosis.

82. THE violence and danger of universal diseases is in proportion to the degree of excessive excitement* or its indirect or direct deficiency (A); as is proved by all that has been said above: consequently, their principal variety turns upon this variation of the degree of excitement.

83. The only diagnosis (B) of any importance is that, by which general diseases are distinguished from local, or symptomatic affections, throwing the whole system into disorder, with a certain resemblance to universal diseases. To execute which, *the following marks* are to be understood *to suffice for* the detection of every general disease; first, its being preceded by a diathesis, and this followed by one similar to it, and removed by an operation of the remedies of an opposite nature to that which occasioned the disease: while on the contrary, local affection is distinguished, first, by the affection of a part, and the disorder of the system† being such as may be traced back to that affection; and by the absence of the diathesis of the disease which *the local affections* resemble, or only its accidental presence.

84. In order to attain to this useful knowledge learn what is necessary from anatomy; waste no time in superfluous study in it; peruse the works of the illustrious Morgagni; dissect subjects; distinguish remaining effects from causes that have passed away; examine diligently very many bodies of those who have been hanged or have died of wounds, and are otherwise sound; compare these diligently with the bodies of persons who have

* *The excess is contained between* 40, *the point of health in the table, and* 70.

† *not arising from any change in the excitement, but*

died by lingering and often repeated diſeaſe; compare every particular with the whole; guard againſt the raſhneſs of forming opinions, and, if you can, you will be among a very few, who have ever been able to do ſo; never expect to diſcover the cauſe of diſeaſe *in dead bodies*; be circumſpect in forming a judgment.

85. As internal local affections are often a certain taint that remains after general diſeaſes have paſſed away, it is therefore a matter of ſound judgment *to underſtand*, that there is leſs or more reaſon to ſuſpect the former, in proportion as the latter have ſeldomer or oftener preceded them.

CHAP. X.

The general Prognoſis, or general Judgment of the Event.

86. SINCE the powers producing ſthenic and aſthenic diatheſis, always act upon a part with more force than any other equal part; it follows, therefore, that the danger of diſeaſe during the prediſpoſition, and of death during the diſeaſe, ariſe in proportion to the degree of diatheſis, or to the importance of the part eſpecially affected. But, its degree being given, the more equal the diatheſis is, the more ſafe it is. Nor does it ever fall heavy upon an organ neceſſary to life, without inſtant danger. And hence it is, that peripneumony, appoplexy, phrenitis, eriſipelas, and the gout, when the two latter affect the head with violence, are chiefly formidable.

87. Local and ſymptomatic affections ought to be diſtinguiſhed from general diſeaſes, and the remarks made in the 83. 85. tranſferred to this place.

CHAP. XI.

88. THE indication for the cure of ſthenic diatheſis is to diminiſh, that for the cure of the aſthenic diatheſis,

is to encreaſe the excitement, and to continue to encreaſe it, till that degree of it, which conſtitutes the mean betwixt its extremes, and which is ſuited to good health, be replaced. This is the only indication of cure that univerſal diſeaſes admit of.

89. As both diatheſis ariſe from an operation of the exciting powers, the ſame *in kind*, but varying in degree, ſo they are both prevented and removed by an action of the remedies, alſo the ſame *in kind*, but oppoſite in degree, to that which produced them. As their cauſe, ſo is alſo their plan of cure, confirmed by an induction of proof*, drawn from the whole courſe of facts and phanomena (A). The ſame debilitating remedies, which remove any one ſthenic diſeaſe, remove the whole *form of diſeaſes*: the ſame ſtimulant means, which cure any one aſthenic diſeaſe, remove all the reſt (B). Are not palſey, in ſo far as it is curable (C), and dropſy, in ſo far as it is a general affection (D), as well as the gout, and fevers, both relieved and removed by the ſame remedies? And are not peripneumony, the ſmall-pox, the meaſles, rheumatiſm, and catarrh, removed by the ſame remedies†? But all theſe remedies in the aſthenic caſe encreaſe, in the ſthenic diminiſh, the energy of life. In both caſes the operation is a common one *over all*, nor is there any diverſity but in degree.

90. The remedies, therefore of ſthenic diatheſis are powers, exciting by a weaker ſtimulus, than that which is ſuited to health; and are in this work to be denominated, for the ſake of brevity, Debilitating or Antiſthenic Remedies.

91. The remedies of aſthenic diatheſis are powers, exciting with more force, than ſuits the beſt health; to be named here in the practice ſtimulants or ſthenic, for the more convenient diſtinction of them from the other remedies.

* *not one or two, but*

† *to wit, evacuants, cold, and ſtarving.*

92. Theſe are to be employed with more or leſs freedom in proportion to the higher or lower degree of *each* diatheſis, and of the local affection depending upon it. And ſuch a choice of each ſhould be made in ſuch a way as that the moſt powerful may be adapted to the moſt violent caſe. But the cure of any diſeaſe of conſiderable violence, and ſcarce of any at all, is never to be entruſted to any one remedy. The uſe of ſeveral remedies is preferable to that of one; becauſe, thereby, their direct energy is applied to the ſyſtem to a greater extent, and the excitability is more completely and more equally affected. The perſon, who means that his remedies ſhould go to a particular part*, is equally wiſe, as *any one would* be, who, by cropping a twig, expects to eradicate a tree. What remedies are *of* general, what *of* local *operation*, ſhall next be mentioned.

93. General remedies are thoſe, which, acting upon the excitability, by an operation diffuſed over the whole body, reproduce the ſtate of health.

94. Local remedies are theſe, which act by a ſimilar operation on a part, and by an operation confined to that, reſtore the ſound ſtate.

95. Since every univerſal diſeaſe, every predispoſition, depends upon encreaſed or diminiſhed excitement, and is removed by the converſion of that into the degree *which conſtitutes* the mean betwixt both; for that reaſon in order both to prevent and cure diſeaſes we muſt always uſe the indication propoſed, and ſtimulate or debilitate; never lay by, nor truſt to the ſuppoſed powers of nature, which have no real exiſtence.

96. In the indication of cure, the only regard to be had to morbific matter, is to allow time for its paſſing out of the body. For whether it acts, like all other exciting powers, ſometimes by a ſtimulating†, ſometimes by a

* *and there, from a local operation, and not by an affection of the excitability, ſerve the purpoſe.*

† *as in the ſmall pox and meaſles.*

debilitating operation*, or whether *its action consist in* only giving the peculiar form of its respective disease, and, thereby, adding a local affection to a general one; in either case there is no room for a new indication.

97. For if the disease, as a general one, be properly managed, every eruption, and its consequences, every species of inflammation, every species of ulceration, give way to the happy effect of the general plan of cure. And, when a contrary event takes place in consequence of a bad method of cure, the local symptoms are proportionally aggravated. This is proved in the small pox long ago, and in the measles lately (E), but, with equal certainty; it is proved by the plague, *at least*, as often as it has been treated with any judgment, and by remedies proper in kind and administered in due proportion, it is proved by the malignant, or gangrenous sore throat (F), and by other cases of typhus, with a similar affection of a part. In the two last, the danger to life depends upon the degree of the general affection, without which there is no occasion for *any* apprehension from the local. And the same proposition is so true, with respect to the *three* former, that, though the *contagious* matter has been applied, yet, without the general hurtful powers preceding, no true general disease arises, the danger increases in proportion to their violence, and the whole cure depends upon the general remedies. These are *so many* facts, that show, that no matter, whether of a contagious nature or not, contributes towards the cause of the general disease, which it accompanies or distinguishes, or, if it contributes any thing, that in that it differs not from any usual hurtful powers.

98. As, both in overabundant and deficient excitement, the sound perspiration is diminished during the predisposition, and suppressed in the course of the disease (which has been already hinted, and will more fully be demonstrated afterwards;) it is, therefore, proper that it

* *as in contagious fevers and the plague,*

ſhould be carefully ſuppoated and kept up, for the purpoſe of diſcharging every hurtful matter from the body. But neither does that ſuggeſt a new indication of cure; ſince the only means of affecting it are thoſe, which otherwiſe remove both the diatheſis in proportion to their force, and which are not ſerviceable as local, but as general remedies (G).

99. When any one, who during the former part of his life had lived luxuriouſly, has now, at an advanced age, either from intention or compulſion, abated a good deal of his uſual indulgence, and *yet* preſerves ſome appearance of an abundance of fluids and of vigour; he muſt not, therefore, as is commonly done, be ſuppoſed to labour under plethora* and exceſſive vigour; on the contrary, unleſs there be a recent and evident cauſe for it, which is poſſible, he muſt be held for one who labours under indirect debility; and ſo much the more, if, to hurtful powers already too invigorating, in the number of which are all thoſe which fill the veſſels, directly debilitating powers have ſucceeded: And it is not a debilitating or aſthenic plan of cure, which would encreaſe the direct debility, nor one too ſthenic†, which would encreaſe the indirect debility, the principal part of the cauſe, and, conſequently, encreaſe the force of the diſeaſe: But it is a middle method, which is commonly called tonic, that ſhould be purſued (H).

100. Since to the degree of diſeaſes (under which, to make few words, let prediſpoſition alſo be comprehended), the degree of curative force ſhould be accommodated; in the indication, therefore, of cure, regard ſhould be had to age, ſex, habit, conſtitution, climate, ſoil, in fine, to the operations of all the exciting powers in general, of all the hurtful ones in particular, of all the remedies, whether they have previouſly been adminiſtered properly, or improperly.

* *or an over proportion of blood,* † *or ſtimulant.*

101. The subjects of direct debility are women, under inanition*, those who have had an insufficient share of stimulus; those who have a delicate set of solids; those who have been accustomed to moisture, whether from the climate or soil; finally, all persons in a languid state, without a preceding vigorous one, either from the powers that produced their diseases, or from the mode of cure employed to remove these.

102. On the contrary, the persons in whom indirect debility is prevalent are adult males; those who have are full and over stimulated, and so much the more, the longer the latter has been the case; those who have formerly had vigorous habits; those who have been overheated, whether with moisture, without it, or from whatever source; in one word, all, whose former vigour, either from the ordinary hurtful powers, or improper methods of cure, is now converted in *a state of langour.*

103. In the cure of indirect debility, whatever be its degree, from whatever sort of excessive stimulus it has arisen; of the stimulus, which is to be employed as the chief remedy, not much less than that, which produced the disease, should at first, be used: and then less and less, till the disease is cured.

104. When the first part of the cure is completed, and convalescent now can use the more permanent and natural stimuli, he should gradually be confined to them, and drop the use of the more diffusible; with this distinction, that if he has been in the habit of using a considerable deal of stimulus, he may be indulged in something extraordinary in that way for some time (1).

105. The cure of the hurtful effect of any stimulus should first be set about by changing it for a lesser one, this for a still lesser; and the intention of cure should be always to pass from the use of the more violent and diffusible, which nature in her sound state rejects, to that of the more durable, and more suitable to nature when un-

* *or an empty state of the vessels,*

oppressed, till the healthy state can at last be upheld by the usual supports (x).

106. In the case of indirect dibility, when the view is to restore vigour, a debilitating plan of cure should be avoided; because no sort of debility is to be cured by another, nor any degree of it by any degree of another. It is only in the progress to indirect debility*, that directly debilitating powers are suitable for the purpose of supporting the vigour, in that case, in danger of being worn out (y): such as cold bathing, lowering the diet, weak drink, and a similar abatement in the use of the other stimuli.

107. For the cure of direct debility, we should begin with the smallest degree of stimulus, and then rise to the use of a greater and greater, till the morbid abundance of excitability be gradually worn off, and the health at last restored.

108. When the disease arises from the want of any one stimulus, the return to its use should be gradual, and facilitated by other stimulants more powerful *than itself*.

109. Also in this part of the general method of cure, debilitating, either directly or indirectly should be abstained from; both for the reason formerly given, and also, because the stimulant plan of cure, which is the only proper one, when carried to excess, converts the sthenic diathesis† into the asthenic‡, and the latter into death§. For which reason, while, on the one hand, the debilitating powers, mentioned before, are to be avoided; it must, on the other, not be forgot, that the force employed in the cure should be accomodated to the degree of morbid state. The thirst, which is occasioned by debility, is increased by draughts of cold water, is hurried on to‖ nausea and vomiting; is quenched by pure

* *Betwixt* 40 *and* 70. † *that between* 40 *and* 70.
‡ *between* 70 *and* 80. § *at eighty.*
‖ *the higher symptoms of*

wine, or ſpirit, which prevent the troubleſome ſymptoms that would otherwiſe follow. Pure wine* encreaſes the thirſt, which proceeds from a ſthenic cauſe, and excites the ſame troubleſome ſymptoms, which cold water does in the other caſe; cold water ſates it, and prevents the future tumult.

110. Since, therefore, the ſame powers excite all the phaenomena of life, and produce ſometimes an exceſs, ſometimes a juſt proportion, ſometimes a deficiency, of life, according to the various degrees in which they are applied; and ſince the ſame obſervation extends to the ſame powers, when they are applied as remedies of diſeaſes; let it, therefore, be a univerſal rule, never unguardedly to convert either diatheſis into the other. And, as every diſeaſe, that debilitating powers remove, is ſthenic, every one, that is cured by ſtimulant means, aſthenic; the knowledge of that may furniſh the proper means of caution againſt miſtake.

* *which is one of its principal cauſes.*

THE

SECOND PART.

CHAP. I.

Of the hurtful powers, which produce either Diatheſis, Sthenic, and Aſthenic.

111. THE powers producing the ſtate of the body, upon which the prediſpoſitions, to ſthenic or aſthenic diſeaſes, or thoſe diſeaſes themſelves, depend, that is, that produce the ſthenic or aſthenic diatheſis, are thoſe which were mentioned before*.

The hurtful powers producing both Diatheſis.

112. Heat, which is neceſſary to the production, the growth, and vigour of animals and vegetables, as alſo to the form of the elements† from its actions upon the ſurface of the animal body, directly ſtimulates the whole; an effect which it alſo exerts upon vegetables. From this action of heat there is no exception when it keeps within a certain range of ſcale: but when it is either deficient, where it takes the name of cold, or exceſſive, its

* 11. 12. † *In a certain degree of diminiſhed heat water freezes; but if ſuch a diminution of it could be found as to freeze air, the whole fabric of the univerſe would ruſh into diſſolution.*

effect varies*. This ſtimulus, in a moderate degree, produces its effect in due proportion, in a degree above that the exceſs of its action in ſuch is to produce more or leſs of ſthenic diatheſis.

113. Becauſe the action of heat is encreaſed ſomewhat more upon the ſurface than in the internal parts, where the temperature is nearly ſtationary, it, therefore ſtimulates more in the former than in the latter. Hence, in the phlegmaſiæ†, the inflammation is always external. The ſame agent encreaſes the tone of the muſcular fibres every where, and conſequently their denſity‡. Hence, as the diameters of all the veſſels are diminiſhed, ſo thoſe of the extreme veſſels every where, and eſpecially in the ſkin, where a greater force of the cauſe is *exerted*, are often entirely effaced. But actual ſuppreſſion *of the perſpiration* is incompatable with prediſpoſition, and ariſes only from the diatheſis, when it ariſes to the juſt meaſure of diſeaſe§.

114. Hence in the meaſles and ſmall-pox, the irritating matter, together with perſpirable, is detained. And not only in theſe, but all other ſthenic diſeaſes, the perſpiration is ſuppreſſed, the excitement both upon the ſurface and in the reſt of the body is encreaſed, and catarrh particularly induced (A).

115. Heat, in extreme exceſs, whether it acts hurtfully by its duration or intenſity, conſtantly debilitates by diminiſhing the tone, and producing laxity inſtead of denſity. Which effect is ſomewhat greater upon the ſkin, to which the direct energy of heat is applied, than in the interior parts, in which there is little change of

* *As ſhall be ſhown by and by.* † *diſeaſes with inflammation of a part.* ‡ *See Chap.* 5. *Which produces a ſuppreſſion of perſpiration by ſome imputed to conſtriction from cold, by others to conſtriction from ſpaſm; both erroneouſly.*

§ *The perſpiration is diminiſhed during the prediſpoſition; but the condenſing power is not ſufficient to ſuppreſs it, till it attains the degree of producing the diſeaſe.*

temperature. Hence arifes fweating as in the torrid zone; hence the diameters of all the veffels, and particularly of the perfpiratory veffels are enlarged. Hence proceed the colliquative fweats in fevers, and a fimilar ftate of the belly. Hence, alfo, corruption of the fluids, and not from a ftate of them directly produced by corrupting powers (B)

116. The fame power in the violent meafles, in the confluent fmall-pox, in fevers, and in every kind of aſthenic* diſeaſe, in which the perfpiration is deficient, does not leſſen the deficiency†, though it expands and enlarges the veffels, but, on the contrary, encreafes it‡.

117. Cold, inimical to animals, vegetables, and the elements, weakens the reſt of the ſyſtem, and ſtill more the ſurface, the temperature of which it almoſt only diminiſhes, *and it produces that effect* always by a direct operation, always in proportion to its degree. Cold equally as exceſſive heat, produces atony and laxity of the veffels, gangrene, and the other effects of exceſſive heat§.

118. That theſe effects of the extremes of temperature ariſe from debilitating not generating putrefaction, from an affection of the excitement, not of the fluids, plainly appears from this; that other exciteing hurtful powers, ſuch as a famine, an overabundance of blood, as in the caſe of thoſe who die of peripneumony, and fimilar hurtful powers, which neither have been, nor can be, believed to affect the fluids by any direct operation upon them (C), produce not the ſymptoms of corruption, and all the reſt of the ſymptoms, and the ſame ſtimulants, which remove the latter, remove the former. Nay, the ſuppoſed antiſeptics, ſuch as wine, Peruvian bark, acids and other things of that kind, are either en-

* *or diſeaſe of debility,* † *that is, does not encreaſe the perſpiration,* ‡ *i. e. diminiſhes perſpiration,*

§ *In Siberia the phænomena of cold on the human body very much reſemble thoſe of heat.*

tirely destitute of that operation, or they neither are given, nor can be given, in that quantity, by which they can have any tendency to affect the mixture of the fluids: In fine the effects of inanimate matters upon one another are never, with any propriety, transferred to living systems. Though, then, the fluids are frequently corrupted, the corruption is the effect of weak vessels not giving a sufficient mixture or diffusion to them, but is never the cause.

119. The disagreeable sensation both of cold and of heat in extreme, is also hurtful, by diminishing the sum total of stimulant operation, which, in so far as it is agreeable, is serviceable by stimulating*.

120. As cold is naturally so debilitating, and all debilitating powers diminish excitement, it is therefore never of service but in sthenic diseases, that is, in those which are in their progress towards indirect debility†; because the excitability, already too abundant, can never be rendered more abundant, nor, when too much wasted, rendered more accumulated, without an aggravation of the disease‡: excitability admitting of less stimulus in proportion as it is either more abundant, or more ultimately wasted. When the debility is moderate, a mistake of this kind is less evident; but in a high degree of debility of either sort, a violent disease, or even death itself, may be the consequence of the smallest encrease of debility (D).

121. As cold as well as excessive heat relaxes, a fact that is seen in the cure of the small pox, and of every sthenic disease, from that we are to understand, that the property of cold in constricting§ inanimate matter does not extend to living matter‖. The diminution of the

* *See note* * *par.* 21. † *See* 106. ‡ 46, 47.
§ *or condensing.* ‖ *It has been alledged, that the diminution of the bulk of the body by cold, furnished an argument in favour of its being an astringent to it, as it certainly is a condensor of dead matter.*

bulk of the surface* arises from debility of the vessels, not sufficiently propelling the fluids, and filling the vessels. In this way does cold produce asthenic diathesis.

122. But, as always less and less excitement arises in proportion as stimulant operation has been applied, till at last no more at all is added; cold†, as well as any other directly debilitating power, may according to various degrees of it, produce health, and all the degrees of sthenic diathesis (E); *in the following way, however, only.* It stops the waste of excitability, makes the body more susceptible of stimulant operation, checks the progress to indirect debility, and stems the latter. But it only effects that by checking the career of heat and other stimuli, which accelerate indirect debility, and by keeping the excitement within the boundaries of vigour. And hence vigour in cold countries, when the body is defended by *clothes, the shelter of* a house, *the warmth of* a fire, *as well as* by its own proper motion. Hence also the bracing, by cold, of parts that have been relaxed by excessive heat. Lastly, hence a remedy for the corruption of the fluids, *which consists in* invigorating the vessels, not correcting the degeneracy of their contents. This effect of cold upon the surface, which is nearly the only part of the system subject to refrigeration, is somewhat greater than in the internal parts.

123. The debilitating effect of temperature, and therefore also its hurtful tendency, is encreased by moisture.

124. Of the articles of diet, the only food in danger of being too stimulant, is flesh and land-animal food, used in great quantity. Meat too salt, and hardened, especially when it has now begun to spoil, is an exception.

125. The same thing is to be said of condiment; of which a very small portion, upon account of its high degree of stimulus, is sufficient.

* *or shrivelling of the skin,* † *on that footing of action,*

126. Spirituous or vinous drink, in which the alkahol is always dilated, ſtimulates, more quickly, and more readily, than ſeaſoned food, and its ſtimulus is in proportion to the quantity of alkahol that it contains.

p. But there are ſtimuli, which poſſeſs an operation as much quicker, and more powerful*, than theſe juſt now mentioned, and which are the agreeable *and proper ones* in health, as their operation is of ſhorter duration. To theſe the name of diffuſible is to be given. They rank above ſtrong drink in the following order:

q. Next to ſtrong drink, and immediately above it, *ſtands* muſk, above it volatile alkali; higher than this æther; and the higheſt of all, as far as experiments have yet reflected light upon the ſubject, is opium (F).

r. Theſe according to their degree, poſſeſs the property of converting the aſthenic diatheſis into a ceſſation of all diatheſis in health; this into ſthenic diatheſis, the ſthenic diatheſis into direct debility, and the laſt into death: all which they accompliſh with as much more eaſe and promptitude, as they are more powerful than the reſt of the ſtimuli (G).

127. The ſtimulus of the articles of diet, not excluſive of the diffuſible ſtimuli, ſhould be denominated direct, becauſe it acts directly and immediately upon the excitability of the part to which it is applied. The direct ſtimulus, at leaſt ſo far as it regards the food, is aſſiſted by another, depending upon a diſtention of muſcular fibres, on which account, for the ſake of diſtinction, the latter ſhould be called Indirect. As the latter is afforded by the bulk of animal and vegetable food, ſo the former is produced by a relation of the ſtimulus to the excitability. The indirect acts upon the living ſolids in ſo far as they are to be conſidered as ſimple; the direct acts upon them as living only. From a long and habitual exceſs in food and drink, at laſt indirect debility ariſes and the group of diſeaſes depending upon it (H).

* *than that of the articles of diet.*

f. All theſe ſtimuli have alſo a tendency to produce aſthenic diatheſis.

128. All vegetable food*, and too ſparing a uſe of animal, as alſo meat too ſalt, and deprived of its native juices by keeping, when better nouriſhing matter is withheld, conſtantly weaken, and thereby produces aſthenic diatheſis through all its degrees. Hence *ariſes* that remarkable imbecility both of body and mind, which diſtinguiſhes the Gentoos, who follow the Brahminan ceremonial of religion. Hence the diſeaſes of the poor every where (I); hence ſcrophulat, fevers‡, epilepſy, cough with profuſe expectoration and hæmorrhage, and the whole band of aſthenic diſeaſes. The direct debility *ſowing* from this hurtful power, affects the ſtomach ſomewhat more than any other equal part§; *the conſequences of which affection are* loſs of appetite, ſtomach ſickneſs, vomiting, very looſe belly, and ſimilar diſturbances of the firſt paſſages.

t. But *while improper aliment produces ſuch effects*, theſe will alſo be induced by an ultimate exceſs in *the uſe of* food *conſiſting* of the proper material; which muſt be inferred from the univerſal effect of all the other ſtimulant powers, *when their operation has been puſhed to the ſame exceſs* (K). The mean betwixt the extremes of the hurtful powers, in ſo far as diet is concerned, is abſtinence(L).

129. The withholding alſo of the uſe of condiments, which, without animal food‖, are not ſufficient to give ſtrength, gives an additional weakneſs.

* *taken in any quantity*,

† *Scrofula, though ſuppoſed hereditary, produces its worſt effects, not from that circumſtance, but the method of management, both for the prevention and cure.*

‡ *Various particular, and ſometimes ſpecific cauſes, have been aſſigned for the production of fevers; but it ſhall be proved, that, whatever debilitates in a high degree, is adequate to that effect.* § *Chap.* IV.

‖ *as in the caſe of the Gentoos, who make uſe of a great deal of condiment with their vegetable aliment.*

130. Strong drink, and the diffusible stimuli, are never necessary to young and strong people, upon account of their rapid tendency to indirect debility, from their high stimulant power; nor are they even safe. But, in persons who have been accustomed to them, in the *case of those who are* advanced in age, and of those who are weak from that or any other circumstance, cold, watery, acid, or fermenting drink, has a great influence directly, and excess in the use of strong drink indirectly, in producing asthenic diathesis.

u. If the diffusible stimuli, after they have been employed, are too quickly withdrawn, they, in the same manner as the more durable, allow the excitability to accumulate, and direct debility to come on, and consequently may be said to produce asthenic diathesis. But asthenic diathesis is never the consequence of withdrawing their operation at least worth speaking of, but when that has been habitual. And all the hurtful effects which they have most untruly, to the great detriment of mankind, been said rather than are now said, to occasion, arise not from themselves, but from the want of knowledge how to manage them. And as this operation of diffusible stimulus ought to be supported by that of a durable; at the same time, it must not be confounded with debilitating powers. What disturbances, during the operation of opium, will not a breath of cold *air*, affecting the body create? And how easily, as well as quickly, are they all removed, by carefully covering up the body? (M).

x. Both the other diffusible stimuli, as well as opium, and the more durable one of strong drink, by an indirectly debilitating operation, produce asthenic diathesis.

131. A further stimulus is an abundance of chyle and blood; by this the excitement is encreased every where, and particularly in the blood-vessels, and *encreased* in degrees proportioned to its degree of abundance. The quality of the blood, at least, as a cause, is of no effect; it is the quantity only that is. The quantity, by *its a*

tion of diſtending the muſcular fibres of the veſſels, acts with a conſtant impulſe (N). The doctrine of plethora, ſo noted *in the* medical ſchools, is only applicable to ſthenic diatheſis, and takes place in proportion to its degree (O).

132. The effect of diſtention* is encreaſed by the velocity of the blood, both as ariſing from other ſources, and eſpecially from that motion of the body which its own muſcles perform, a motion, which, by compreſſing the veins, carries the blood more quickly back to the heart.

133. Nothing is more effectual than theſe two *laſt mentioned ſtimuli*, in producing ſthenic diatheſis, and the diſeaſes depending upon it. Thoſe diſeaſes are violent in proportion to the over proportion of the blood, and the rapidity of the force with which it flows; a fact, that is proved by all the exciting powers, all the ſymptoms of thoſe diſeaſes, and, eſpecially, the pulſe of the arteries; it is alſo proved by the great efficacy of bleeding, purging, abſtinence from food, and reſt, in the cure of the diſeaſe (P).

134. While an over proportion and velocity of blood is a chief cauſe of ſthenic diatheſis; there is nothing more powerful in producing the aſthenic, than that penury of blood which the greateſt celerity of motion accompanies. Hence, the ſmallneſs, weakneſs, and quickneſs of the pulſe; Hence the excitement is diminiſhed every where, and in preference to other equal parts, in the whole ſanguiferous ſyſtem, and that in exact proportion to the penury.

y. From this ſtate of the veſſels ariſes the diſcharge of blood from the lungs, from the uterus, from the anus, or around the anus, from the urinary paſſages, and through the perſpiratory pores. Hence ariſe diſturbances of the ſtomach, want of appetite, loathing of food, and, therefore, upon account of want of nouriſhment,

* *that we have been deſcribing.*

and the langour of the digeſtive organs, always leſs and leſs blood ariſes in the ſyſtem. So great a penury of blood is the principal origin of bleeding diſeaſes; which never happen but in the aſthenic ſtate. The ſame *penury of blood* acts in ſuch a manner, and chiefly effects its own veſſels, becauſe, according to a law ſo often mentioned its dibilitating energy chiefly falls upon them. In ſthenic diſeaſes, that have advanced to their height, or a little beyond it, a few drops of blood from the noſe, or a dropping of blood from the ſame, or any other part, demonſtrate only a prediſpoſition to indirect debility, but not an eſtabliſhment of it, and that the matter ſtill remains within the operation of exceſſive ſtimulus (Q).

2. Thus it is not an exceſs in the quantity of blood, but laxity and atony from its deficiency, that upholds the affair of bleeding diſcharges; which proceed *in their courſe*, not with *any* effort*, but a diminution of tone: They are all aſthenic, and the aſthenic diatheſis, as far as it depends upon them, conſiſts in direct debility.

a. But, as every other exciting hurtful power may be converted into indirect debility, ſo, alſo may an over-proportion of of blood. For the veſſels, ultimately diſtended, and beyond all bounds, may†, by the exceſs of *that* ſtimulus, exhauſt their own excitability, and, thereby, put an end to their excitement. Upon which the forcible contractions are converted into languid ones, or *ſuch as could* ſcarce *be called* contractions at all; the diameters formerly effaced, are converted into an extremely patulous ſtate. The finer parts of the fluids flow through the patulous extremities of the arteries, wherever they find an outlet, and carry with them, ſometimes ſerum, ſometimes red blood.

In the aſthenic, diatheſis *as well as the ſthenic*, it is not the quality of the blood, but its quantity, which is to be found fault with, *and the fault in quantity here* is deficiency. The deficient quantity produces the ſymptoms

* *or active impulſe.* † *under the high ſthenic diatheſis.*

of the pulſe, that have been mentioned above, by not ſufficiently diſtending the veſſels, and giving them ſufficient excitement. Plethora, which has been thought to belong to this form of diſeaſes only, has abſolutely no exiſtence in it. The ſtate of the veſſels, with reſpect to the quantity of blood in them, that is pleaſant and ſuitable to health, is the mean betwixt the extremes that have been ſpoken of.

135. This ſtate* is the chief origin of aſthenic diſeaſes, of which the ſo very hurtful effects of evacuation, eſpecially bleeding, as well as vomiting, purging the belly, and every other *mode of diminiſhing the bulk and quantity of fluids*, give full proof. This proof *has of late* received *a further* confirmation, in the *ſingular* ſucceſs of *the cure by* other ſtimulants firſt, and then by every mode of filling the ſyſtem(R).

136. The different fluids ſecreted from the blood in different ways, are, by the diſtention which they give to their reſpective veſſels, alſo underſtood to ſtimulate. In that reſpective the milk and ſeed, by the abundance of each in its reſpective veſſels, and likewiſe the perſpirable fluid, have the chief effect, the commotion of the ſecretory organ(S), by means of excitability, which is one and the ſame undivided property over all, is eaſily diffuſed over the whole body, and, when it riſes to exceſs, is capable, with other powers that communicate an exceſs of excitement, to produce ſthenic diatheſis.

137. The ſame *ſecreted* fluids, when they do not ſufficiently diſtend their reſpective veſſels, when they communicate enough of excitement, make no inconſiderable part of the hurtful powers, that conſtitute aſthenic diatheſis.

* *of the blood and veſſels, that we have been deſcribing, that is, penury of blood, and atony and laxity of the veſſels, chiefly from direct, ſometimes from indirect debility; though the latter caſe is exceedingly rare.*

b. For which reaſon vomiting, purging, and every other evacuation, are powerful inducers of aſthenic diatheſis, which they effect in proportion to the debility that attends their operation. The ſame thing is to be ſaid of exceſs in venery, which is partly an indirect, partly a direct, always a great, debilitating power(T).

c. Sometimes the ſecretory veſſels ſeem ſo crammed with a colluvies of fluids, that ind rect debility may poſſibly ariſe from that ſource, as is exemplified in that overflowing of bile, which diſtinguiſhes the yellow fever (U). Here too the debilitating effect, by means of the excitability, tends to diffuſe the diatheſis over all.

From this ſource, ariſe, a languid action of the extreme veſſels (X), a ſlow, then, no motion of the fluids, a ſtagnation and corruption of them. A diminution, or temperary deſtruction of excitement, over this large ſpace in the ſyſtem (Y), by means of the ſame excitability, communicates debility to the reſt of the body; and, in conjunction with other hurtful powers that give not enough of excitement, produces aſthenic diatheſis.

d. The various ſorts of geſtation*, and of exerciſe and labour, by rouſing the muſcles into contraction, and thereby accelerating the motion of the blood in the veins towards the heart, while the valves prevent its taking a contrary direction, greatly promote excitement in all the veſſels, and, therefore, over the whole ſyſtem; and *the effect* may go ſo far as to produce ſthenic diatheſis.

e. As nothing contributes more to health than moderate and frequently repeated exerciſe, and its exceſs acts in the manner it has *juſt now* been deſcribed; *at the ſame time* a degree of it, *either* greater or leſs, than the ſalutary degree, by its weakening effect, the former in waſting the excitability, the latter in with-holding a neceſſary ſtimulus; that is the one by debilitating indirectly, the other directly, produces aſthenic diatheſis.

* *as riding on horſeback, going in a carriage, uſing a hobby, ſailing.*

138. Thinking, which acts more upon the brain, to which it is immediately applied than upon any other equal part of the syſtem*, encreaſes excitement over the whole body (z). Straining and thinking whether in a high degree for once, or often repeated in a leſſer degree, or habitual may alone prove hurtful; *but*, in conjunction with other powers alſo hurtful from their exceſs of ſtimulus, may become more ſo, and amount to a degree equivalent to the production of ſthenic diatheſis.

139. An evident cauſe of aſthenic diatheſis is that ſtate of the intellectual function, in which exceſs in thinking, by waſting the excitability, ends in indirect debility; or that deficient, weak, vacant ſtate of mind, uncapable of keeping up a train, which produces the ſame hurtful effect by direct debility. This faulty ſtate of the mind contributes greatly to weaken *the ſyſtem*†.

140. Violent paſſions of mind, as great anger, keen grief, unbridled joy, going to ſuch a pitch as to deſtroy excitability, have the ſame effect as exceſſive thinking, and admit of all the ſame reaſoning.

141. A force of paſſion riſing to the height of exhauſting the excitability, induces that aſthenic diatheſis, which is occaſioned by indirect debility, and diſeaſes of that ſtamp. Hence epilepſy‡, hence apoplexy, and that when the mind has been ſcrewed up to the height of paſſion, often fatal.

142. On the contrary, when there is a deficiency of paſſion, as in melancholy, grief, fear, terror, deſpair, which are only lower degrees of joy, aſſurance, and hope, and imply no more than a diminution of exciting paſſions, not emotions *of a nature* oppoſite to thoſe, and

* *It may often be remarked by phyſicians, that their patients, after every other proper part of cure has been executed, are never completely reſtored to their healthy ſtate, till they are again engaged in their uſual occupations both of mind and body.* † *Vide Chap.* IV. *Part* I.

‡ *or the falling ſickneſs,*

poſitive; their tendency is to produce the aſthenic diatheſis, which depends upon direct debility. The immediate production of this is loſs of appetite, loathing of food, ſickneſs at ſtomach, vomiting, pain of the ſtomach*, looſe belly without pain, the ſame with pain, indigeſtion†, cholic, the gout, and fevers.

143. The *exerciſe of* the ſenſes, when it is agreeable, has a very great effect in exciting the whole body, and in producing emotions, which, together with the hurtful powers mentioned above, may eaſily contribute to the production of ſthenic diatheſis. Thoſe emotions are exemplified in drinking, dancing, in agreeable entertainments where the eye is dazzled with the ſplendour of the diſhes, of the company, and all the objects around.

144. The energy of the ſame *exerciſe of the ſenſes*, when it is exceſſive, and carries the effects, juſt now mentioned, too far, produces indirect debility. On the contrary, when the ſenſes are either in part deſtroyed, or in part dulled, or diſagreeably affected (2 A), the mind *is* dejected, and the whole body thrown into *a ſtate* of languor and direct debility. And, in both caſes, eſpecially when there is a concurrence of other debilitating hurtful powers the aſthenic diatheſis ariſes.

145. The effect of the air‡, independent of its qualities, as they are called, or its properties, and its uſe in ſupporting reſpiration, is leſs obvious to obſervation§; at the ſame time it cannot be doubted, that its application to the whole ſurface of the body is a ſtimulus not to be diſpenſed with. The air is ſeldom applied in a pure ſtate: it is commonly blended with foreign matters that diminiſh its force of ſtimulus; and, while its ſalutary ſtimulus depends upon its purity, at the ſame time it is uncertain whether ever its purity goes ſo far as to ſtimulate in exceſs, and thereby produce ſthenic diatheſis.

* *called cardialgia by ſyſtematics* † *called dyſpepſia,*
‡ *upon the human body,*
§ *than the other powers that have been ſpoken of,*

The baloons, lately invented, by which men get above the clouds, would ſerve excellently to throw light upon that matter, if it were not for the cold *that* accompanies this progreſs. Be that as it may; ſince we never live in the pureſt air, and yet live commodiouſly enough, it is, therefore, credible, that too pure an air has a tendency to ſtimulate in exceſs, and, therefore, produce ſthenic diatheſis.

146. But, as nothing is more uſual than impurity of air, and every impurity diminiſhes its ſtimulus, a very impure air, or air blended with impure matters, without doubt debilitates, and produces aſthenic diatheſis. Accordingly, impure air is a frequent cauſe of typhus, as is evident from the fate of thoſe who died in the black hole of Calcutta. Whether ever the air, from an exceſs of purity, produces aſthenic diatheſis, is the more doubtful, that, as has been ſaid, it is as yet undecided whether it produces ſthenic diatheſis or not.

f. Contagious matter, in ſo far as it may have any tendency to produce general diſeaſe, *in* one form produces ſthenic, in another aſthenic diſeaſes, and, therefore, acts like the ordinary hurtful powers of either ſort, and admits of all the ſame reaſoning. But, in ſo far as it only occaſions the eruption, without making any change in the excitement, it is to be referred to the local diſeaſes.

g. To poiſons, if they act as general ſtimulants, all the reaſoning that has been employed with reſpect to the other hurtful powers, will apply. It is not, however, likely that they are general ſtimulants.

147. It is ſeldom from the ſeparate, almoſt always from the united operation of all the powers, that both the diatheſis, whether as remaining *within the range* of prediſpoſition, or riſing to the degree of actual morbid ſtate are produced, and from no inherent power in the ſyſtem.

CHAP. II.

The Cauſe of each Diatheſis.

148. The cauſe of the ſthenic diatheſis, produced in the way that has now been explained, is, in conſequence of the operation of the powers that have been mentioned, too great an excitement of the living ſyſtem every where, *with the effect of* firſt encreaſing all the functions, then of producing a diſturbance in ſome, and impairing others, but never by a debilitating operation.

149. The cauſe of the aſthenic diatheſis ariſing from the ſame ſource, is, in conſequence of the debilitating hurtful powers, too little excitement of the living ſyſtem every where, *with the effect of* impairing all the functions, diſturbing ſome, giving a falſe appearance of encreaſing others, but always debilitating (A).

CHAP. III.

The ſthenic Diatheſis.

150. PREVIOUS to the diſturbance* which never happens till after the arrival of the diſeaſe (A), and even then only in a violent attack of it, all the ſenſes are acute, the motions both voluntary and involuntary (B), are vigorous, there is an acuteneſs of genius, and a great force of ſenſibility as well as of paſſion and emotion. *The ſeveral parts of the body are perceived to be in a ſtate of vigour from the following marks of it*; the heart and arteries from the pulſe; the extreme veſſels on the ſurface of the body from the complexion; all the muſcles from the ſtrength that they exert; the internal ſecretions from the great quantity of milk and ſemen; the digeſ-

* *of the functions, which, it has juſt now been ſaid, the hurtful effects of both ſets of powers produce,*

tive organs from the appetite, the digeſtion, the vigour of the body, and the manifeſt abundance of blood.

151. How far the intellectual faculty, and the force of paſſion, are encreaſed, will be learned from a compariſon of them in this diatheſis, in good health, in the ſecond form of diſeaſes and prediſpoſition to it. In this way it is that the functions are firſt encreaſed.

CHAP. IV.

The ſthenic Diatheſis illuſtrated by an explanation of its ſymptoms.

152. The encreaſe of *the force of* the ſenſe, of the motions, of the intellectual faculty, and of the paſſions, depends upon the encreaſe of excitement in every one of their organs, among other actions, quickening the motion of the blood *through them.*

153. The coming on of every ſthenic diſeaſe is announced by a ſhivering. It depends upon a diminiſhed perſpiration, by means of the diatheſis being *exquiſitely* ſtrong in the extreme veſſels of the ſkin. The ſame is the explanation to be given of the ſenſe of cold, which commonly accompanies the ſhivering; and the ſame is the explanation of the dryneſs of the ſkin.

154. In the ſame diſeaſes, the pulſe is ſtronger, harder, and fuller, and ſomewhat more frequent, than in its ſound ſtate. Its fullneſs and hardneſs is owing to the taking animal food plentifully during the prediſpoſition. The force and frequency is occaſioned by the ſame and any other ſtimulus, as that of ſtrong drink; that of the diffuſible kind, and that of exerciſe, whether corporeal or mental: Nay all the ſtimulant hurtful powers are participant of the ſame effect.

155. If, in the progreſs of the diſeaſe, the pulſe ſometimes become weaker, ſofter, and quicker, that is a bad ſign, and occaſioned either by the debilitating plan of cure being puſhed beyond the proper bounds: or, in

conſequence of a neglect of that ſort of cure, it may be owing to ſome debility induced by the exceſs of excitement. The former of theſe is direct, the latter indirect debility; both to be avoided.

156. The complexion in the veſſels, which is often a conſequence of a previous appearance of paleneſs, and great quantity of ſecreted fluids, is occaſioned by an over-proportion of blood, in conſeqnence of an exceſſive ſthenic diatheſis obſtructing the perſpiration. The ſame is the cauſe of the head-ache and pains in differents parts. For, as the head-ache ſo quickly and eaſily yields to bleeding, it is, therefore ſeldom to be ſuſpected of being owing to inflammation within the head. And *the reaſon for ſo thinking is ſtrengthened by this further circumſtance*, that the inflammation ariſing in general diſeaſes always affect an external part, as far as that fact has been enquired into*.

157. The delirium alſo, that ſometimes ariſes in a violent ſtate of diſeaſe, is not to be imputed to inflammation, and for the ſame reaſon; for it yields ſo much to bleeding and other evacuations, that there is no reaſon for ſuſpecting inflammation within the head. That abundance of blood in the veſſels, diſtending theſe to exceſs, is the cauſe of the whole affair, is proved on the one hand by the redneſs of the face, implying ſuch abundance, and on the other by bleeding, removing the diſeaſe at once.

158. Thirſt and heat, which are alſo remarkable ſymptoms in ſthenic diſeaſes depend upon the ſthenic diatheſis in the extreme veſſels of the fauces and ſkin; the diatheſis ſo obſtructing the veſſels as not to allow a return of perſpiration, but to ſuffer, however, the blood to paſs into the very neighbourhood of the ends of the veſſels, and by means of the ſuppreſſion of the perſpiration, to accumulate, under the cuticle, the heat generated in the ſyſtem. Thus, in the throat, from an affection of the

* *Vide above*, 113.

ends of the veſſels, the ſaliva and other fluids, by the free flow of which the throat is lubricated, and freed from that ſenſe of dryneſs, which is called thirſt, are now confined*, and thereby produce thirſt.

159. Hoarſeneſs, cough, and expectoration, which are ſometimes obſerved in ſthenic diſeaſes, commonly proceed, and ſucceed to each other in the following order. There is firſt often a hoarſeneſs, then a dry cough, then a cough with expectoration. The cauſe of the hoarſeneſs and dry cough is an obſtruction of the exhalents and mucous veſſels, which terminate in the bronchia, ſtill occaſioned by a violent ſthenic diatheſis, and prevented from tranſmitting their contents to lubricate the air-veſſels (A), ſo as that hoarſeneſs may be removed, and the expectoration proceed with freedom. Again, the expectoration is *next* freely made, becauſe the diatheſis, being now diminiſhed, and allowing the ends of the veſſels to be relaxed, and the fluids to be poured out in abundance upon the air-veſſels, as the occaſion of the fluids producing a commotion of the excitability over this whole organ, and by the convulſive motion, which is called cough, of being themſelves thrown out.

160. As the greater freedom of expectoration now implies an abatement of the diatheſis; ſo too great a flow and two long a continuance of it ſhows, that the diatheſis is now ruſhing in the aſthenic *ſtate*, either from indirect debility, as when the diſeaſe, in its progreſs, has much exhauſted the excitability, or from direct debility as when the plan of cure, proper *in kind*, has been puſhed beyond the bounds.

161. Theſe ſame ſymptoms†, while they ſtop ſhort of the range of direct debility, or are not yet changed into the indirect, are occaſioned by heat, and whatever ſtimulates in exceſs, and removed by cold and whatever acts as a weakening power.

* *and prevented to flow out,* † *mentioned juſt now,*

162. Paleneſs, ſhriveling of the ſkin, clearneſs of the urine, and bound belly, which chiefly happen about the beginning of the diſeaſe, ariſe from a degree of the diatheſis, ſhutting up the ends of the veſſels in ſuch a manner, that either nothing is excreted, or the thiner part, as in the urine, only eſcapes. The cure of the affection of the urine, of the obſtructed perſpiration and coſtiveneſs, ſhows that the diatheſis is now gradually abating, the diſeaſe becoming mild, and now upon the eve of being thoroughly removed by emetics, purgatives, and ſudorifics, and the uſe of other debilitating remedies.

163. In ſthenic diſeaſes, when they are gentle, the appetite is often not much diminiſhed, and oftener more food can be taken than is ſerviceable. But, unleſs the lighteſt vegetable matter only, and that in the form of watery potion, or in a fluid form, be given, every morſel of it will do harm.

164. But, when either from indulgence is found of a rich nature, or from employing a ſtimulant plan of cure; or from the diſeaſe having, from the beginning, ariſen from very violent, hurtful powers, and now attained its higheſt degree of violence; in any, or all theſe circumſtances, both the other bad ſymptoms, mentioned above, break out directly, and the violent diſorders of the ſtomach, or an accute pain of the thorax, ſhow themſelves indirectly.

165. In a violent diatheſis, therefore, where there is little appetite for food, but a very great deſire for drink; with the latter the patient is by all means to be gratified; but the former ſhould be avoided, as producing loathing, ſickneſs at ſtomach, and vomiting. Thoſe ſymptoms are not uſually of long duration, unleſs when the diatheſis is now going, or actually gone, into the aſthenic ſtate by the means that have been mentioned above*, and, by removing the other ſymptoms by the proper debilitating plan of cure, they go off; but when

* *Vide laſt paragraph and a few immediately preceding it.*

the ſtomach ſickneſs and vomiting are urgent, and begin now to be a little more obſtinate, and of a little more duration, one may know that they ſtill remain ſhort of the change into indirect debility, *by the following marks*: if the pulſe ſtill maintains moderation in its frequency, and does not much abate of its fulneſs and force; if artificial vomiting and purging diminiſh the morbid vomiting, and, in one word, if the debilitating plan of cure ſtill ſucceeds. But, it will then at laſt be underſtood that the diſeaſe is altogether changed, and its cauſe converted into the oppoſite, when thoſe ſymptoms every day encreaſe; when the pulſe becomes weaker and weaker; when gripes in the inteſtines, and liquid ſtools, are ſuperadded to the ſymptoms that diſturb the ſtomach, and when the antiſthenic or debilitating plan of cure is now of evident detriment*.

166. While the ſame ſymptoms† ſtill ſtop ſhort of indirect debility, the exceſſive excitement in the ſtomach being of quicker tendency to indirect debility there than any where elſe, upon account of the ſtomach's great ſenſibility, and the force of the more powerful ſtimuli being chiefly exerted upon it, produces ſymptoms of diſturbance‡; for the moſt powerful ſtimuli, and thoſe that are ſtrictly powerful in producing ſthenic diatheſis (B) are firſt applied there, and exert a greater force upon the excitability in that than any other part. Thoſe ſtimuli are the ſeveral preparations of animal food, the ſeveral concentrated ſtrong drinks, the ſeveral condiments with which they are ſeaſoned, the various diffuſible ſtimuli, as the different preparations of opium, volatile alkali, camphor, muſk, æther; and they all act upon the ſtomach with that force which they exert not upon any other part; they do not upon the inteſtines below, becauſe they undergo a change from the firſt digeſtion before they paſs over into the firſt portion of the inteſtinal

* *See above* 103. † *of the ſtomach and inteſtines.*
‡ *See above* 54.

canal; not upon the lacteal veſſels, becauſe they are not received into them till they are further diluted, and undergo another change from the digeſtive operation, and when ſo changed, they are next carried to be mixed with the blood; not upon the heart and arteries, upon account of the ſame dilution *meeting them alſo in theſe veſſels*, and of a conſtant change of mixture occuring through the whole courſe of the circulation; not upon the terminations of the arteries, *whether* exhalant or glandular, *and whether* theſe excreet from the body a matter already corrrupted, or carry back by the lymphatic veſſels, an uſeful matter to the blood: and that both for the reaſon that have been given, and particularly becauſe ſome great change is made in the exhalants and glands; not upon the lymphatic veſſels, where a new fluid is conſtantly flowing in upon the old in theſe parts by means of anaſtomoſing branches, and chiefly in the thoracic duct; not upon the other blood-veſſels, upon account of the great change that a repetition of the circulation produces; not upon the muſcular fibres, whether voluntary or involuntary, becauſe the ſtimuli by no means come in contact with theſe; not upon the brain or medullary ſubſtance for the ſame reaſon*, as well as for the great diſtance of theſe parts from the part that received the firſt contact of the ſtimuli. In one word, as all the exciting powers, whether ſalutary or hurtful, or curative, act ſomewhat more powerfully upon certain parts than upon others, as theſe parts are generally thoſe which they firſt affect, and with which they come into direct contact; thoſe therefore in preference to others, are moſt liable to paſs either from ſthenic diatheſis into aſthenic, or from the latter to the former: *which, however, happens* in ſuch a manner that, becauſe the excitability is one uniform, undivided property over the whole body; whether the excitement has been encreaſed in a peculiar part, or diminiſhed; and whether its diminution has been owing to direct or in-

* *to wit, that they do not come into contact with them,*

direct debility, and *in either way* the asthenic diathesis produced: all the rest of the body soon follows the kind of change *that has taken place*; and since the powers that have acted have been, and are the same, that is, either excessively* or insufficiently stimulant†, or so to an ultimate excess; and as the excitability upon which they have acted, and still act, is the same, that is, the whole consideration of the cause is the same, the effect must also be the same, that is, the same sort of actions, whether in excess or defect‡, must be established over the whole body.

167. The inflammation, which accompanies the phlegmasiæ (c), occupies an external part, as far as its nature has been yet ascertained. And the reason of that is, that heat, which is the most powerful hurtful agent in those diseases, either alone, or alternating with cold, or succeeding to it, has much more power externally, where it is directly applied, than internally, where the temperature is nearly stationary, in stimulating, and, therefore, raising the general diathesis, to the degree of actual inflammation in a part. Hence the throat, hence the different joints, hence the face, where the form of inflammation is different§, hence the lungs, which are to be considered as an external part, because the air has direct access to them, *all these* are affected with inflammation in preference to other parts. And, besides the energy of the exciting hurtful power, just now mentioned, there is in the part, that is to undergo the inflammation, a greater sensibility‖ than in others, or a more accumulated excitability; by means of which it happens, that of the

* *in so far as they produced sthenic diathesis,*

† *that is debilitating, in so far as they produce the asthenic diathesis, that depends on direct debility, or in so far as they produce the asthenic diathesis that depends upon indirect debility.* ‡ *whether sthenic or asthenic.*

§ *as when the inflammation of erysipelas appears there;*

‖ *See above* 54. *l.*

parts that have been mentioned, *sometimes* one, *sometimes* another is affected, more than the rest (D). To this *consideration of the* cause, it is to be added, that which ever of the parts we have mentioned has been injured, in whatever manner it may have undergone the inflammation peculiar to the phlegmasiæ, that part, in every after attack of a new phlegmasiæ, is in more danger of being inflamed than the rest. This is the true cause of the recurrence of some of the phlegmasiæ, as the inflammatory sore throat, and rheumatism (B). Peripneumony is a disease less frequent than any of the rest of this form, because "the seat of its inflammation" is exempted from many stimuli, liable to produce sthenic diathesis with its accompanying inflammation.

b. As the inflammatory fever, catarrh, the gentle small-pox, are unattended by inflammation (unless that in the last a local inflammation from a local cause, quite different from that which makes our present subject, takes place), and as the inflammation in peripneumony, violent erysipelas, and similar other cases of great violence, is found the highest in degree; for that reason the conclusion is, that the degree of inflammation, which is a symptom of general sthenic diseases, is proportioned to the degree of the sthenic diathesis (F).

168. The inflammation, in this case, is nothing else, but a state of the inflamed part of a common nature with *that in* the rest of the body. And as the inflammation is produced by a greater degree of excitement in the inflamed, than in any other equal part; so, before the disease comes on, of which the inflammation is only a part or symptom, the excitement of that part is understood to be proportionally greater than in any other part (G).

169. This inflammation, which for the sake of distinction is to be called general sthenic inflammation, should be distinguished from another, which is a local affection, arising from local hurtful powers, and depending upon a fault in the organ, or a solution of continuity (H).

170. To this the term of ſthenic local inflammation applies. The general always depends upon ſthenic diatheſis, is a ſymptom or part of it, never precedes it, always ſucceeds to it ſooner or later, ariſes from the ſame hurtful powers*, and is reduced by the ſame remedies. In contradiſtinction to which, the local affection, as it riſes from local injury, producing a ſolution of continuity or deranging the texture of the part; ſo, if the labouring part is not very ſenſible, the affection extends no further. In the caſe of a part being endued with a high degree of ſenſibility, ſuppoſe the ſtomach, the inteſtines, among the internal parts; among the external the tender ſubſtance under the nails; *in theſe caſes*, the effect of the inflammation is propagated over the whole ſyſtem, and in conſequence of an affection of all the veſſels, excites a tumult every where. The ſame local ſthenic inflammation, whether it be fixed in the part, or from its propagation, gives more general diſturbance, yields to no remedies, but thoſe that act upon the affected part firſt, and heal the ſolution of continuity†. Let it ſuffice to have ſaid ſo much at preſent upon theſe inflammations, for the ſake of *eſtabliſhing neceſſary* diſtinctions as more is afterwards to be ſaid upon the local, in its proper place. There are as many inflammations ſtill remaining, univerſal and local, to be more fully explained in that part of our work where the proper order requires it.

171. Inflammation, alſo, as often as it effects a vital part, produces ſymptoms of diſturbance. Whether ever the general ſthenic inflammation affects the brain and its membranes, is hitherto not aſcertained (1). And it is more probable, that the commotion of the head, and other diſturbing ſymptoms of phrenitis, do not depend upon inflammation, as the following phænomena ſeem to ſhow: *The* firſt *of thoſe is*, the caſe by which the cure is affected, the whole tumult of *ſymptoms* readily

* *which produce the other ſymptoms,*
† *or reparation of united ſubſtance,*

yielding to bleeding, purging, and other asthenic* remedies; and, it not being very credible, that the effect of actual inflammation in a part so delicate, and so necessary to life, could be so easily effected. Then *another argument against the same opinion is, that* there is no certain proof, after recovery, of the existence of inflammation *during the disease*. Next, analogy makes for the same conclusion *which we are disposed to draw*; for, as it has been said above, general inflammation does not arise internally in any general sthenic diseases†; on the contrary, as often as it occurs, it is always in an external part (K). Now, all the symptoms are such as arise from the general sthenic hurtful powers, and that, also, yield to the general antisthenic remedies, and in proportion to their degree.

172. The same‡ is the cause of head-ache, redness of the eye, as well as of delirium.

173. There is, however, no reason to doubt, but that inflammation is the cause of that disturbance, which happens to the lungs *in peripneumony*. To the part where the pain is *felt* externally, whatever part of the thorax it is, an actual inflammation is opposed internally. And, as the inflammation is proportioned to the degree of general sthenic diathesis, and never happens but in a high degree of that diathesis; so that the pain is proportioned to the degree of inflammation (L); and the state of the pulse must be estimated by paying a due regard to its cause. In *the case of* an high diathesis, and high degree of inflammation, its effect, the pain, seated in some part of the thorax, sometimes about the sternum, sometimes nigh the nipples, sometimes farther back on either side, sometimes in the back between or

* *what are commonly called antiphlogestic, we call debilitating.* † *See above, par.* 113.

‡ *that we have assigned as the cause of phrenitic affection also.*

above the ſhoulders, is acute and pungent, and the pulſe very hard and ſtrong. When the diatheſis, and the part of it *we call* inflammation, is leſs, the pain is leſs acute, more dull, and eaſier to be borne; the pulſe is* *ſtill* hard and ſtrong, though leſs ſo than in the other caſe. Afterwards, in the progreſs of the diſeaſe, the pain abates, becomes dull, the reſpiration which had been much diſturbed by it, becomes more eaſy and free. The pulſe now, which formerly was only leſs hard becomes truly *poſitively* ſoft, and that in proportion to the degree of indirect debility, occaſioned by a neglect of the proper plan of cure; or in proportion to the production of direct debility from the antiſthenic or debilitating plan of cure having been puſhed too far. But the hardneſs of the pulſe, and increaſe of pain, is never to be imputed to the inflammation being ſeated in the membrane; nor is the ſoftneſs of the former, and dullneſs of the latter, to *be attributed* to its occupying the ſoft parenchymatous ſubſtance (M), it being impoſſible that an inflammation, if it occupied either of thoſe parts, ſhould not affect the next points of the veſſels in the other. The cauſe, therefore, of thoſe ſymptoms that has here been aſſigned, muſt be admitted.

174. The puſtles, which accompany certain ſthenic diſeaſes, ariſe from a contagion, taken into the body, diffuſed over the whole, and, in paſſing out of it, detained along with perſpirable fluid, under the ſcarf-ſkin. The cauſe of the diſtention, and, therefore, of the great number of puſtles, is the ſthenic diatheſis, taking place in a high degree over the whole body, but in a *ſtill* higher in the veſſels of the ſkin, for the reaſons formerly† aſſigned. In which operation the muſcular fibres of the veſſel, becauſes they are as much encreaſed in denſity, in ſo far as they are conſidered as ſimple ſolids, as they

* *not ſoft and yielding, according to the common notion, but*

† *See above, par.* 113. *and* 114.

receive an increaſe of tone, in ſo far as they are conſidered as living*, are, on that account, ſo ſhortened, as the ſufficiently to tranſmit the imperceptible vapour of not perſpirable fluid. All the ſthenic hurtful powers have a tendency to produce this effect, but heat, in a degree within its ſtimulant range and ſhort of indirect debility, more than any of them. The ſame is the cauſe of coſtiveneſs.

i. Sthenic diſeaſes are often followed by debility, ſometimes direct, at other times indirect, as is exemplified in the change of peripneumony into hydrothorax, the explanation of which is evident from what has formerly been ſaid.

CHAP. V.

The Aſthenic Diatheſis.

175. Before the ſymptoms of diſturbance appear, which only ſupervene upon a violent degree of morbid ſtate, all the ſenſes are dull; the motions, both voluntary and involuntary, are torpid; the acuteneſs of genius impaired; the ſenſibility and paſſions become languid. *The following functions are all in a ſtate of languor*, which is diſcoverable by the annexed marks: The languor of the heart and arteries is diſcernible in the pulſe; as is alſo that of the extreme veſſels on the ſurface, which is evident from the paleneſs, the dryneſs of the ſkin, and the ſhrinking of tumors, and drying up of ulcers (A), and the manifeſt abſcence of ſthenic diatheſis, to produce any reſemblance to thoſe ſymptoms. That the muſcles are in a ſtate of torpor is demonſtrable by their weakened action; and that the internal ſecretions are deficient, *equally certain from* the penury of ſemen and milk, and the redundance of fluids in a ſtate of

* *See chap.* 5.

degeneracy. The languor of the digeſtive organs is manifeſted by a want of appetite, loathing of food, ſometimes thirſt, ſickneſs of ſtomach, vomiting, weakneſs of the ſyſtem, and evident penury of blood.

176. In the ſame diatheſis, whether as not having attained to the height of diſeaſe, and only remaining within the latitude of prediſpoſition, or as raiſed to the meaſure of actual diſeaſe, the intellectual faculties and the paſſions are impaired. In this way are the functions impaired.

CHAP. VI.

The Aſthenic Diatheſis illuſtrated by an explanation of its Symptoms.

177. SHIVERING is not unuſual at the commencement of aſthenic diſeaſes of any conſiderable ſeverity; and that, as often as its cauſe, a very deficient perſpiration takes place. In this caſe the cauſe of the deficiency is, from the weakneſs of the whole ſyſtem, that weakneſs of the heart and arteries, in conſequence of which they propel their fluids every where with difficulty, and in their extremeties with ſtill more difficulty, or ſcarce at all. Hence the perſpiration ceaſes. The ſame is the explanation to be given of the ſenſe of cold, when it accompanies the ſhivering.

178. In aſthenic affections the pulſe is weak, ſoft, ſmall, and very quick. The ſoftneſs, when it can be perceived for the ſmallneſs, as well a the ſmallneſs, is occaſioned by an under-proportion of blood, ariſing, during the period of prediſpoſition, from a ſcantineſs of animal food, and an exceſs in the uſe of vegetable; or from a deficiency of aliment upon the whole, whether from the one or other ſource. The cauſe of the weakneſs and very great quickneſs of the pulſe is the ſame deficiency of nouriſhment, as well as of all the ſtimuli,

such as that of strong drink, that of mental or corporeal exercise, and an under-proportion of blood.

179. Since the excitability can only be gradually worn down* and the strength, thereby, repaired; if, at any time, therefore, the pulse becomes full and hard too soon, and without a proportional relief of the symptoms, that is a bad sign, and happens because the stimulant plan of cure† has been pushed beyond the proper rule‡; and it is a case of indirect debility superadded to the direct§.

180. The same is the cause of the paleness and dryness of the skin, as that of a checked perspiration and that is, the weakness of the heart and arteries. Hence the blood is not sufficiently propelled to the surface of the body.

181. Head-ache, which is a most frequent symptom of asthenic affections, and pains in the joints, which are more rare, are occasiond by a scantiness of blood: for such is the effect of the blood in distending the vessels, that a moderate distention, such as takes place in health excites an agreeable sensation; and every thing, either above or below that standard, occasions an ungrateful one, and, therefore‖, pain. But, we are much less in this case, than in that of sthenic pain¶, to suspect inflammation for the cause of the pain; because, not only the pain here, but even delirium, yields so easily to the stimulant method of cure; which would not readily happen, if so delicate and sensible an organ, and one so necessary to life, laboured under an affection so liable to destroy the texture of the affected part.

182. Neither in general, is delirium, and for the same reason**, to be imputed to inflammation. It is, on the contrary, to be attributed to a scantiness of blood,

* *See above, par,* 26. 43. † *otherwise the proper one,*
‡ *See above, par.* 49. § *See above, par.* 155.
‖ *when it rises to a certain degree,* ¶ *See above, par.* 156. ** *that has been just now mentioned,*

nd a deficiency of other ſtimuli. Nor is that by any means to be doubted; ſince ſtimulant remedies, which have no effect in filling the veſſels, ſucceſsfully and quickly cure every delirium depending on debility (A).

And, when, in conſequence of the removal of the diſeaſe, and the re-production and eſtabliſhment of the healthy ſtate, enough of nouriſhment is taken in and digeſted, then it is that, at laſt, the mental function receives a complete and ſolid re-eſtabliſhment.

183. Thirſt and heat, which do not leſs diſtinguiſh aſthenic than ſthenic diſeaſes, and are not leſs frequent ſymptoms, ariſe from the aſthenic diatheſis in the throat, and on the ſurface of the body, checking, in the latter caſe the perſpiration; in the former, the excretion of the ſaliva, the exhalable fluid, and the mucus, and that from the atony and relaxation of the extreme veſſels. In conſequence of the former, the throat being not ſufficiently lubricated with a due quantity of its reſpective fluids, is ſcorched with thirſt. The effect of the latter is, that, the perſpirable fluid being detained under the cuticle, together with it the heat, which in a free perſpiration uſually goes off in waſte into the air, and remains nearly of the ſame degree, is accumulated and increaſes. But, the encreaſe of heat depends not on the ſtate of excitement, or, as it is commonly called, the principal of life, ſince it happens both in the ſthenic diatheſis, and, likewiſe in indirect, as well as direct, debility. But the weakneſs of the veſſels on the ſurface of the body, under which the throat, and whatever part is acceſſible to air, is comprehended, is a part of the debility of the heart and arteries; the latter a part of that of the whole ſyſtem.

184. The aſthenic thirſt, which is a much more frequent and more violent affection than the ſthenic, is preceded by loſs of appetite; the loſs of appetite by loathing of food; it is ſucceeded by ſickneſs at ſtomach, vomiting, often an acute pain of the ſtomach, and other troubleſome ſymptoms; the explanation of which we next proceed to.

185. Want of appetite, loathing of food (B), depend upon a debility of the whole body; as is proved by all the debilitating antecedent powers that produce them, always acting by debilitating: and by all the remedies which both prevent and cure them, always acting by a ſtimulant and ſtrengthening operation. The cauſe of appetite is a ſtrong and ſound contraction of the fibres of the ſtomach, which digeſtion is ſupported (C), and the excretion of a fluid, ſuch as the gaſtric* liquor, ſuch as the ſaliva (D): and to the effect of both a certain emptineſs of the ſtomach is neceſſary. But none of theſe circumſtances can take place in a ſtate of debility. The fibres do not contract with force; the extreme veſſels do not pour out their fluids; the matter of food, formerly taken in, is not diſſolved, and properly mixed, and in that ſtate thrown out of the ſtomach; but continues in a great meaſure unchanged and indiſſolved. Hence it is, that there is no appetite for food, and in a higher degree of it, that a loathing takes place.

186. In the ſame manner has thirſt been explained†; and in the ſame manner is the ſickneſs at ſtomach, which is a higher degree *of affection* from the ſame cauſe; for when there is ſtrength and vigour, ſenſation is moſt agreeable in every part of the ſyſtem, as well as in the ſtomach and neighbouring parts.

187. With reſpect to vomiting; it is the chief of all theſe affections, that we have been ſpeaking of: for to ſuch a height has the atony and laxity of the fibres *in the ſtomach* gone, when it comes on; to ſuch a degree has the collection of crude naſty matters proceded, and the diſtention of the ſtomach from theſe laſt, and air let looſe *is become ſo exquiſite*, that the fibres are oppreſſed, and cannot perform their motion from the upper to the lower part, which is commonly called the periſtaltic motion. And, is in every caſe, both of health and diſeaſe, the

* *or fluid peculiarly ſecreted and exerted in the ſtomach.*

† *See par.* 183.

tendency of that motion is always from the ſtimulus in an oppoſite direction; downward when the ſtimulus proceeds from the mouth, and upwards when it comes from the ſtomach; in that way it is that the crudities, and air let looſe, of which mention has been made, acting as a local ſtimulus, direct all the motion, that they excite, towards the upper parts *of the canal*. This inverted motion, being contrary to nature, can never be agreeable; and hence, before the arrival of the vomiting, ſtomach-ſickneſs, ariſes; which when it continues for any time, muſt be violent, becauſe the local ſtimulus rouſes the muſcular fibres into violent and irregular motion.

188. The cauſe of pain in the ſtomach and inteſtines, and other parts, both internal and external, under a ſthenic diatheſis, is ſpaſm. Spaſm in any external cavity, that is in the organs of involuntary motion, is, by means of the debility in common *to its ſeat* with the whole body, a relaxation and atony of the fibres, and together with that a diſtending matter; what conſtitutes that matter in the ſtomach is the ſordes or foul crudities, in the inteſtines; hardened excrement; in both air let looſe. The effect of the matter in the diſtention that it gives, does not ſo much depend upon itſelf as upon the lax ſtate of the fibres diſtended by it; for the fibres, when ſtrong and vigorous, eaſily repel the diſtending power, which overpowers them in this ſtate: but the relaxed fibres, of which we are ſpeaking, yield more and more, *and that* in proportion to the urgent force exerted on them, till loſing all power of reſiſtion or contraction, all power of relaxation, they continue immoveably contracted. All which happens according to the nature of that property in muſcular fibres, by which, when they are ſtretched, they do not, like common claſtic matter, only contract when the diſtending power is removed, but even while it remains. During ſuch action and ſuffering, the ſenſible fibres undergo a certain violence; and hence the pain. But, that more is to be attributed to their own laxity, than the diſtending matter, is proved by ſtimulants re-

ſtoring the tone and denſity, which are exactly in proportion to each other, as depending upon the ſame cauſe; by which means contracting in the manner of ſound fibres, and powerfully reacting, they, without any aſſiſtance, as has lately been aſcertained, reſtore the periſtaltic motion, and drive downward before them the matter ſtill remaining, and ſtill continuing to diſtend (E). In this way wine, aromatics, and volatile alkali, and, above all the reſt, the various forms of opium, diſlodge from its ſeat *all* ſuch *hurtful* matter without either vomiting or purging, and that without any difficulty, and in a very ſhort ſpace of time.

189. The pain which is ſo often troubleſome in the external parts of the body, alſo depends upon ſpaſm, but not with the conjunction of a diſtending matter. And a power takes the place of it, which is not to be referred to any matter, but to a certain effort of the will in moving a limb*. By means of that the ſpaſm is excited in the ſame manner as in the other caſe, by diſtention, and often with the moſt exquiſite pain, where, as the effect is the ſame, that is, a ſpaſm, ariſing from debility, and to be removed by reſtoring the ſtrength; for that reaſon the cauſe alſo muſt be the ſame, and be reducible to debility, together with ſomething that altogether reſembles debility, and poſſeſs a power equal to it. In this way of reaſoning (F) we may often ſafely riſe from the contemplation of known effect to that of unknown cauſe. The pain we ſpeak of at preſent is that which reſpects the ſpaſms of the muſcles.

190. There another pain, leſs confined to the ſame part, more diffuſed, and equally troubleſome, which is not ſupported by diſtention but by another local ſtimulus equally ariſing from debility, of equal tendency to encreaſe the debility, and, by its debilitating operation, together with the other ſymptoms of debility, haſtening on death. This pain ariſes from a concentrated acid,

* *See* 58.

which is sometimes predominant in the alimentary canal, when under the influence of great debility, of which cholera chiefly is a clear example; but, besides that, all the affections of the alimentary canal, that are accompanied with vomiting and a loose belly, are more or less examples of it.

191, This acid is not the primary cause, but only a symptom supervening upon the disease, already formed in consequence of the debility, its proper cause and now fully established, arising from the same force as the other symptoms, and to be removed by the same remedies. When the same acid has arisen, it continues to encrease all debility that happens to be predominant, either in the first passages, or in the rest of the body: And, while it exerts that operation over the whole body, its influence is in that part where it exists, and where the diminution of the force of the disease is most wanted.

192. But, though it be itself in that way the offspring of debility, and of a tendency to create further debility, in the same manner as spasm has been said *to be*; still there is not, either for the sake of charging, or throwing it out of the body, occasion for any other indication of cure: For, as it has its rise at first from a general cause, so upon that it all along depends; whatever has the effect of overcoming the other symptoms, has also that of overcoming this. For that purpose it is, that, as in the case of spasm, stimulants, not emetics, nor purgatives, nor any other debilitating powers, are required.

193. As the acid, which has been mentioned, produces the pain in the internal parts, or in the organs of involuntary motion; so in the external parts, or organs of voluntary motion, it is occasioned by something that produces the same effect as the acid, that depends upon the will, and acts in conjunction with the convulsive *state*; and as in the case of spasm, there is no matter that corresponds with the distending, so in this there is none to correspond with that which produces the pain.

Nay, as the ſpaſmodic caſe is repreſented by any cramp of the muſcles, ſo is the convulſive by any convulſion, but, above all, by epilepſy. Finally, as in the former, the ſame reaſoning from known effect to unknown cauſe proves the ſameneſs of the external and internal caſe, it equally proves their ſameneſs in the latter (G).

194. The ſimple courſe *of morbid affection* from its ſlighteſt to its moſt violent degree (to take a review of the ſubjects from the place where we ſet out), is, that begins with loſs of appetite, and is brought on by want of the ſupports of food and of other ſtimuli, or by an over proportion of ſtimuli, and proceeds through all the intermediate degrees to ſpaſmodic or convulſive pain. For the reaſons lately aſſigned, there is firſt no appetite for food, and if the patient perſeveres in the debilitating proceſs of cure, and food is not adminiſtered, ſuch, ſuppoſe, as can be taken in the form of ſoups, a loathing of it follows. By-and-by, if ſtill nothing is uſed to produce ſtimulant effect, thirſt will come on; there will be the moſt keen deſire for the moſt debilitating power, cold water, which will be preferred to the greateſt dainties, and will be greedily ſwallowed (H). To this, ſtomach ſickneſs immediately ſucceeds, which unleſs prevented by a diffuſible ſtimulus, ſuch as a glaſs of the moſt pure and ſtrong ſpirit, or, failing that, another perhaps, *in ſome caſes* a third, ruſhes inſtantly on to vomiting. When the affection riſes a little higher, during the vomiting a violent pain ariſes in the ſtomach, *giving a ſenſation* as if there were a bar of iron in it, forcibly ſtretching and tearing it acroſs (I). When the affection becomes ſtill more ſevere, and the cauſe of the diſeaſe ſtill higher in degree, every kind of torture is undergone; an head-ache comes on with a feeling of ſtrokes like thoſe given by an hammer. Theſe ſymptoms of diſturbance are communicated to the alimentary canal, for the moſt part not immediately, but in conſequence of the diſeaſe remaining, and lurking, with an intervention

of intervals of deceitful respite. The belly is often affected with gripes and great pains, and exceedingly loose; but, which will not be wondered at in an inverted state of the peristaltic motion, it is oftener constipated, and, from time to time, undergoes all the vicissitudes of alternate vomiting and purging. Among the troublesome symptoms, that have been mentioned, are comprehend dyspepsia, *called in common* English Indigestion, the gout, diarrhœa, or *horse-belly*, dysentery, or the bloody-flux, cholera (K), the cholic (L) the iliac passion (M), the green purging of infants, the worms, *that wasting of the body called* Tabes, or Consumption, and atrophia (N) both of them diseases chiefly of children, and by far the greatest part of the diseases of that age.

195. As the cause of the disease proceeds, and the exciting hurtful powers prove more urgent; the external parts are drawn into consent, and now the organs of voluntary motion are affected. Sometimes the legs, sometimes the arms, and other parts, *differently upon different occasions*, are tortured with cramps; sometimes the thorax variously all round; sometimes the shoulders, sometimes the sides, sometimes the back, sometimes the neck, are affected with pain, from which pains no part of the human body is exempted, *and* the region of the lungs, of the liver, and of the stomach, are especially liable to them. The smart pains that affect those parts, and are supposed to proceed from internal inflammation, are in reality, owing to spasmodic or convulsive-affection (O). That this is their true origin is proved by the removal of stimuli, removing the affections, often immediately, always in a short time, and reproducing the healthy state. It is proved by the unsuccessfulness of the contrary method of cure, *which proceeds* upon bleeding, the various modes of purgation and abstinence. Nay, what even makes more for the same conclusion, is, that, while abstinence almost alone is often sufficient to produce the pains, rich diet also alone has been sufficient to remove them (P).

196. The ſame pains ſometimes combined with enormous motion* ſometimes without it†, are abſolutely free from inflammation. To diſtinguiſh them, then from the pains that flow from inflammation or a ſimilar origin, the concourſe of *accompanying* ſymptoms muſt be attended to. Sthenic diatheſis points out *that whatever* pains occur are ſthenic; and the information received from the aſthenic diatheſis is, that the pains *appearing in it are participant of its nature* and as certainly aſthenic. This remark is of deep application to diſeaſes of daily occurrence, and overturn the common practice. Even head-ache, which is ſo frequent an affection, is ten times to be removed by the ſtimulant plan, for once that the contrary anſwers (Q).

197. Symptoms of diſturbance occur alſo in aſthenic diſeaſes as well as the ſthenic. Such a ſtate of diſturbance takes place in the alimentary canal in the caſes of hyſteria, cholic, dyſpepſia, and the gout. Thus in the alimentary canal, beſides the pains, mentioned above, a certain ſenſe of burning, anguiſh, contortion and direful torture, *exhibit a ſet of appearances*, formidable in the higheſt degree, both to the patient and by-ſtanders, and which beget a ſuſpicion of their proceeding from inflammation as their cauſe. But thoſe affections have nothing to do with inflammation as their cauſe, and that they depend upon a ſtate of the part quite the reverſe, has been proved by the ſtimulant method of curing them turning out ſucceſsful in every inſtance in which it has been tried (R). The ſame fact is confined by the uſe of wine, opium and other diffuſible ſtimuli. After that, and ſtill

* *as in the convulſive kind ſo lately ſpoke of, where the enormity of motion is ſometimes external and in the organs of voluntary motion, ſometimes internal, as in cholera and ſo forth.*

† *as in the ſpaſmodic pains, head-ache, pains in the legs and ſoles, where there is an inability to perform the due motion.*

in conjunction with their use, animal soups, and next solid meat, and the usual way of living, and guarding against debility, effectually to re-establish the healthy state (s). This plan of cure proves to a demonstration, that those affections are most foreign both from sthenic inflammation and every degree of sthenic diathesis; *and*, besides the general sthenic inflammation, not appearing to affect internal parts, it affords another argument against inflammation in this case being the cause*.

198. The asthenic pulmonary disturbance distresses the patient with so intolerable a fixed pain, that no bounds have been set to bleedings for the cure of it. But all such bleedings have not only been useless, but detrimental, and often fatal; whereas, on the contrary, the stimulant plan of cure has always succeeded (T). By it the respiration is interrupted, and nearly all the symptoms that accompany an actual peripneumony, distress the patient, and to such a degree, that it has been suspected, there was an inflammation in the case, or rather it has confidently been believed that there was. Or, if any difference was discerned betwixt this affection and that phlegmasia, *or sthenic general affection with inflammation*; that was only a shadow of distinction, and led not to the rejection of the notion of inflammation being the cause, but only gave occasion to a question about its seat. But truly, there is no inflammation at all here, at least as a cause, and that the disease depends upon pure debility, is sufficiently proved by the arguments that have been brought before. The disease is encreased by the antiphlogistic, and diminished, and removed, by the stimulant plan of cure.

199. The formidable symptoms of disturbance, that accompany epilepsy, apoplexy, and fevers, such as stupor, a disposition to sleep, in them all; in fevers often that false watching, that is called typhomania, and sometimes coma†; in the latter, (or fevers), starting of the

* *See* 181. *and* 182. *par. above.* † *or an insuperable proneness to sleep,*

tendons, in the former, (or epilepsy and apoplexy), convulsion or a diminution of the voluntary motions; which by most physicians have been partly imputed to irritation (v), as typhomínia and the startling of the tendons; partly plethora, either alone and pure, or together with it mobility: All these without distinction are evidently owing to the same cause, upon which all asthenic diseases depend, that is, debility. Which is proved by the debilitating hurtful powers, whether acting directly or indirectly, alone producing those diseases; and by the remedies, the whole action of which depends on stimulus, alone relieving or removing them. But it is in vain to impute apoplexy to plethora*; as if at that time of life, where the body is nearly worn out and almost bloodless, that is, when the usual degree of aliment is neither desired, nor taken in nor digested, more blood could be produced than in the flower and vigour of human life. On the contrary, at the time when apoplexy comes on, in consequence of indirect debility, induced by old age and excessive excitement in the mode of living the solids are languid, the quantity of fluids deficient, as also their fountain, the blood. Epilepsy depends upon the same scantiness of fluids, only that its debility is oftener of the direct kind. Fevers may depend upon indirect debility, as in the confluent small-pox (x), or where drunkeness has been the principal hurtful power producing them, but at the same time their most frequent cause is direct debility. And in all the cases, that have been just now mentioned, debility is the primary cause and final termination both of all the rest of the symptoms and of those of disturbance.

200. To the symptoms of disturbance sometimes also belong the following that affect the head; great headache in fevers, imbecility of the intellectual function, confusion of thought, and delirium, the last often sufficiently fierce, though occurring in the highest degrees of de-

* *or an over proportion of blood, see above,* 131.

bility, and leading to efforts beyond the ſtrength. This ſtate often happens towards the end of a nervous fever, even when violent. Inflammation is apprehended, blood is let, but directly from the head; bliſters, which are extreme unction in the art, are clapped on, ſilence and darkneſs are preſcribed, even the moſt gentle ſtimulants are forbid. In conſequence of the emptineſs of the ſtomach, as well as of the veſſels of the whole body, and of the higheſt degree of languor from the want of many ſtimuli, vertigo is ſuperadded to delirium, and the patient, deprived of ſtrength, ſenſe and intellect, breathes out his laſt.

201. But in this caſe there is either no inflammation, or, if there be, it is altogether of a different nature from the general ſthenic one. That it is not the latter, the unſucceſsfulneſs of the debilitating plan of cure, and the incredible ſucceſs of that which firſt ſtimulates, and after fills the veſſels, afford certain proof: And that it is not any other inflammation is evinced by the ſo ſudden reſtitution of health. Now, as an impaired uſe, or confuſion of the intellectual faculty is, in a certain degree, always the conſequence of debility, whether ariſing from any other ſource, or from emptineſs, or a general inanition of the veſſels, and that too even in thoſe who are otherwiſe found; where is the wonder, if, in the higheſt degree of inanition, compatible with life, in the higheſt degree of diminution of excitement, ſcarcely leaving a ſhadow of life, alſo the higheſt degree of failure in the intellectual function, that is, delirium, among other inſtances of impaired function, ſhould take place. Nay this very fact is certain, and proved to a demonſtration. Thus famine, thus drinking water contrary to cuſtom, after a courſe of drinking to exceſs, or both eating and drinking with intemperance, a gloomy ſtate of the animal ſpirits, grief, terror, deſpair, not only induce a temporary delirium, but frequently bring on downright madneſs. The ſame concluſion applies to any conſiderable loſs of blood. For how many perſons

after being wounded in line of battle or on the highway, have never after, and often during a long life time, come to the right uſe of their ſenſes. To ſay nothing of contuſions, wounds and other injuries, by which the texture of the brain is injured, as belonging to local diſeaſes, of which we are to treat afterwards; how does cold induce death? It is not, amidſt a diminution of all the other functions, by a delirium preceding death? From theſe facts of ſuch, weight, both for their number and validity, and that bring forward all the powers in ſupport of the argument, it muſt be admitted, that both head-ache, and every failure of the intellectual function, in every degree, and that higheſt degree of ſuch failure, delirium, depend not at all upon general ſthenic inflammation, the only inflammation hitherto known; but ariſe from the higheſt deficiency, both of other ſtimuli, and of that, which depends upon a proper fulneſs in the veſſels, that is, debility. Debility then is the moſt frequent cauſe of the ſymptoms, that have been mentioned, as is proved by the reſtoration health ſo quickly upon the new plan of cure.

202. But if ever the aſthenic inflammation, mentioned* before, excited the tumult of ſymptoms, which are our preſent ſubject; it produces that effect in the ſame manner preciſely, that debility produces it, by means of a penury of blood and deficiency of other ſtimuli. For,

203. The general aſthenic inflammation is nothing elſe but aſthenic diatheſis, ſomewhat more violent in a part than in any other equal part†; and upon this footing, that the degree of aſthenic diatheſis conſtituting the inflammation is by no means to be compared with the degrees of diatheſis in all the reſt of the ſyſtem; becauſe the affection diffuſed over the whole body is far greater than that confined to a part‡.

* *See above paragraph* 170. *and* 202. *It is to be defined in the next paragraph.* † *See above paragraph*, 49.

‡ *See above*, 48. 49. 50. 51.

all the reſt of the body. And, as the inflammation is conſtituted by a leſſer excitement in a part, than in any other equal part; ſo, before the arrival of the diſeaſe (y, of which the inflammation is a part, a ſymptom, or ſequel, the excitement of that part is underſtood to be proportionally leſs, than that of any other part.

205. This inflammation* ſhould be diſtinguiſhed from another, which is local: It is general, and depends upon a general diatheſis and only happens when the diatheſis has attained to a certain degree; while the local ariſes from ſome hurtful power, that produces a ſolution or vitiation of the texture of the part: without regard either to diatheſis or degree: The general inflammation is brought on by the ſame hurtful exciting powers, which produce the general diatheſis, only applied in a higher degree, and the ſame remedies remove both the diatheſis and the inflammation: The local inflammation depends upon hurtful powers, that only harm a part, and is removed by remedies that change the ſtate of the part; but is not effected either by general hurtful powers, or general remedies. Examples of the univerſal are theſe inflammations, which accompany the gout, the putrid ſore throat, the gangrenous ſore throat, and that inflammation which produces ſore eyes: The local inflammation will be illuſtrated by examples, to be produced in their proper places (z): The general inflammation is attended by debility over the whole ſyſtem: which debility is only a ſequel of the local, and not always. To remove the former the general method of cure† is adapted; but the cure of the latter turns upon healing up the part. In this way, then, there are four ſets of inflammation, two univerſal, a ſthenic, and an aſthenic, and two local one of which is ſthenic, and the other aſthenic. The former often ends in ſuppuration, often in ſolution; the latter in gangrene, and ſometimes ſphacelus, ſome-

* *mentioned in the two laſt paragraphs,* 203. *and* 204.
† *See paragraph.* 88.

204. Inflammation in this case is nothing else, but a state of the inflamed part, of the same kind with that of times at the last in death. If, in the end of a typhus fever (2 A) inflammation affects the brain or its membranes, which (2 B) is neither yet proved, nor a very likely fact it will serve for an instance of an asthenic general inflammation.

206. As the general sthenic inflammation is occasioned by a quantity of blood, excessively distening the vessels, which are its seat, by that distention stimulating them, by stimulating encreasing thier excitement, by the last producing more forcible and more frequent contractions, by these encreasing the tone of the fibres as living, and their density as simple solids, and thereby diminishing their diameters* ; and, consequently, making the blood flow with great effort through the contracted vessels, and, during its flow, produce pain from the high force of the contractions, and the narrowness of the space through which it has to pass ; and the same though in a lesser degree, is the cause of sthenic diathesis over the whole vascular system, whether red or colourless : So,

207. The cause of general asthenic inflammation is also abundance of blood in the inflamed vessels, producing the same effects *in the inflamed portion* as in the sthenic *inflammation* ; and, notwithstanding of the penury of blood in every part of the vascular system besides flowing abundantly into the inflamed vessels, upon account of a greater atony and laxity in them, than in the others, distending them and producing the phænomena peculiar to any inflammation (2 C).

208. As the indication of cure for the former is, to diminish the quantity of blood, which is the first cause of the struggle, and, thereby, to reduce the excessive excitement to the degree that suits the healthy state, and the excessive contractions, which constitute the struggle,

* *See, 61. above, and 131.*

to the moderate ones, which are pleasant and agreeable to health*: So

209. The indication of cure for the latter is, first, by powerful stimuli, to drive on the quantity of blood which there is in every part of the system, that *the portion which* loiters in the languid vessels of the inflamed part, may be thereby propelled, and the vessels relieved of their burthen; and then by the gradual administration of seasoned animal food, in the form of soups, and, soon after, and when now the strength is recruited, in a solid form, to fill the whole system of vessels.

210. The two other inflammations, both local, will be treated of afterwards, each in its proper place.

211. The inflammation of the throat, which ends in what they call a putrid (2D) sore throat, is singularly insidious. During the first day it differs little in its appearance from the sthenic sore throat. The general symptoms are also similar. The pulse scarce exceeds the measure of the sthenic pulse in its frequency and other characteristics. For some time the whole disease proceeds with gentleness and tranquility, excepting, that a constant rejection by spitting of a tough mucous matter is troublesome. At last, when head is not made against it by means of the most powerful stimuli, a period arrives, when all the symptoms are suddenly precipitated into a bad state; *when* the pulse becomes very quick, very weak, and remarkably small; *when* the strength over the whole system, sinks; and now is not a moderate portion of diffusible stimulus, not before administered, that will stop the much to be lamented death of the greatest ornament of human nature (2E). The best plan of curing this disease, is to prevent the mortal period by employing the most powerful stimuli.

212. The diffusible stimuli are so powerful in removing the inflammation of the gout, that, sometimes, strong drink, undiluted, as wine, and spirits, or the lat-

* *See above*, 134.

ter diluted with water, as warm as can be borne, have in a few hours removed the most violent fit, and restored the use of the affected foot. And the same *remedies* as have been mentioned before, are of equal efficacy in removing the general symptoms (215).

213. The inflammation of the throat, in the gangrenous sore throat, is not, according to the common opinion, a primary affection; but, like every other general asthenic *inflammation*, depends upon the general diathesis, which, in this case, is manifestly asthenic, being a part or symptom of the diathesis, when that has attained a certain high degree.

This inflammation has nothing in common with the sthenic general inflammation, which distinguishes the sthenic inflammatory sore throat, (206) or with the two local inflammations.

214. The crowded pustles, in the small-pox, when it is now converted into the confluent disease of that name, that is, into an asthenic general disease, become partakers of the new diathesis, and, instead of sthenic, *which was their first state*, become asthenic; and, as by their local stimulus before, they quickly changed the sthenic into the asthenic diathesis, by means of indirect debility; so they, now, by the debilitating influence of their asthenic nature, confirm asthenia, or a state of debility, over the whole system; they encrease it, and carry it quickly on to death (211).

215. To throw light and illustration upon them, by comparing their respective methods of cure; is to be observed that the cure, in the one case is quite different from that of the other (211). The remedies of the distinct small-pox, and of its accompanying eruption, are cold, and whatever, by evacuation or otherwise debilitates. The remedies of the confluent disease, as well as of its accompanying eruption, are heat, remaining within the indirect debilitating degree, and all the powers, which stimulate as quickly, and as powerfully as possible, and consequently, the most diffusible.

216. They differ besides in this, that all the hurtful powers in the distinct case are sthenic; all in the confluent asthenic. And this difference equally applies to both diseases, and both eruptions.

217. And as the sthenic or distinct pustles have a direct tendency *to produce* asthenic inflammation, and sthenic eruption; so the tendency of the asthenic or confluent, is *as* directly to gangrene, sphacelus, and death.

218. The biles, carbuncles, and buboes, which often accompany the plague and sometimes the typhus fever* arise from a contagious matter, taken into the body, and then detained with the perspiratory fluid, under the cuticle, and in the glands. The case of the detention, and, therefore, of this eruption, is a total cessation of motion in the extreme arteries, especially the glands and perspiratory terminations, upon account of the universal debility, and the very great languor of the heart and arteries. That this is the case, is proved by their being no eruption during the period of predisposition, when some vigour still remains; and, therefore, the perspiration goes on in a certain degree; none in *the cases of* sudden death from the violence of the disease; neither eruption nor disease in all the cases, whether these are early prevented by the use of the more powerful stimulants; by the disease being always gentle, and the eruption always sparing, in proportion to the proper management of the stimulant plan of cure. For, whether the suppression of perspiration be the consequences of a very great degree of sthenic diathesis, or of an equal degree of sthenic as in the present case; all the foreign matter, that should be thrown out of the system along with the perspirable, is, together with it, detained, and so detained below the cuticle, by stagnating, and acquiring a more acrid nature, it produces local inflammation, either of a sthenic or asthenic nature, in proportion to the different nature of each, or rather of the habit of the body.

* *See above, the note*, under par.* 206.

219. In the same manner is that eruption which diversifies the skin in the gangrenous sore throat to be explained: as well as another, which supervenes upon that state of the small-pox, which by reason of the debility *of the system*, would otherwise turn out well; but if the new eruption be not opposed by the most powerful stimuli, is sure to end in death. Both these eruptions (2 K) are spotted both of them red: but the former* is marked by smaller, the latter by larger spots; in the latter the colour is a fine scarlet, far exceeding all art, and almost the power of nature herself in other respects†. Both of them are owing to a suppression of the perspiration by the debility that has been mentioned: the former is removed, in practice, by the stimulant plan of cure, which removes all the other symptoms; in the latter, *or uncommon eruption*, the debility produced of purpose in the preparatory plan of management, to render the small-pox mild, must be opposed, as soon as the eruption appears, and the strength must be restored by the use of the most diffusible stimuli: The pustules which are both few, and of no consequence, and do not even attain to the measure of actual general disease, and are, therefore, free from all danger, are not to be regarded. If this practice is executed, the recovery is both certain and quick; *but*, if it be *neglected*, or if a contrary plan of cure be set on foot, death is inevitable (2 L).

220. Heat is not peculiar to sthenic pyrexiæ (2 M), but belongs also to other diseases of the same stamp. Nor is it so confined to those, as not also to arise in all the degrees of predisposition to those diseases, and in proportion to each degree (2 N). But the matter does not end here. The same heat distinguishes all asthenic diseases, whether febrile, which is a distinction without any good meaning, or not *febrile*, and also the predispo-

* *or that in the gangrenous sore throat.*

† *The beautiful colours sometimes painted in the clouds are often not to be copied by art.*

ſitions to them all, and *that* in proportion to the degree of debility. There is not a more certain mark of a departing diſeaſe, whether ſthenic or aſthenic, than *a return of* that temperature, which is commonly called cool, to diſtinguiſh it from morbid heat.

221. The heat is then only natural, when neither diatheſis is preſent. From that *point* it encreaſes, through all the degrees of encreaſed excitement, till indirect debility, from exceſs of ſtimulus, is eſtabliſhed; and it encreaſes in proportion to the degree of excitement, rendering the perſpiratory veſſels always leſs and leſs patulous. It alſo encreaſes through all the degrees of diminiſhed excitement to certain boundaries, which are fixed by a cauſe by-and-by to be explained, *and encreaſes* in proportion to the degree of decreaſing excitement, though the latter all along renders the perſpiratory veſſels more patulous; and, thereby, among other effects, diminiſhes the motion, both of all the veſſels, and particularly of the perſpiratory.

222. When the heat has now been the greateſt it can be, and the debility encreaſed in proportion, at laſt in the extremities, and afterwards gradually in the reſt of the body, cold, which is always a bad ſign, ſucceeds to it. In the progreſs of the debility motion begins to be very languid, firſt in the extreme veſſels of the extremities of the limbs, and then to be deſtroyed altogether. Hence, as heat, whether in due proportion, or in exceſs, depends upon the motions of the blood and other fluids, being performed in due proportion, in exceſs, or to a certain extent, in a deficient degree; if, therefore, the heat is either nothing or next to nothing, as in the preſent caſe, the effect, together with the cauſe, by an univerſal law in nature, ceaſes. The ſame thing happens in both extremes of excitability, that is, of exceſſive abundance in direct, and of nearly a ceſſation of it, in indirect debility; and ſo much more readily will this happen, becauſe, whatever be its ſource, debility is always the ſame.

223. Because the excitement in sthenic diseases is for the most part much and equally encreased over the whole body; the heat, on that account, is also equally diffused over the whole. From which fact no cases are excepted, but those, in which, in certain parts, as the stomach, under a strong disposition to vomiting, and, therefore in danger of falling into indirect debility, indirect debility either actually takes place, from the disease proceeding with an excessive force of stimulus; or direct debility comes on, when the debilitating plan of cure has been pushed beyond the rule. But, so long as the sthenic diathesis is vigorous, and supports a high force of excitement the heat will almost always be equal.

224. The same thing happens in moderate debility. Accordingly, through the whole course of predisposition, and in those diseases, where the matter has not gone so far almost as total cessation of motion, the heat is pretty equal. The effect of cessation of motion has been explained*. But, before that happens, if any inequality of heat occurs in diseases of moderate debility, as is frequently the case in the hands and feet; the reason of that is, that a greater degree of debility as in cold, labour, and sweat from these, or any other source, and that sweat cold and clammy, has been applied to those parts, than to others. Not only in the gout, but also in other affections both of direct and indirect debility, a burning heat, chiefly distressing to the soles of the feet, torments the patient, especially in walking. That that arises from debility, checking perspiration, is proved by fatigue, cold, and other debilitating powers proving hurtful to it; and heat, rest, and other stimulant powers, giving it ease.

225. It remains now, that it be explained, how too great excitement, in high sthenic diseases, impairs some functions, but never, by debilitating operation; and how too small an excitement in violent asthenic diseases, gives an appearance of encreasing some functions, but always a false one.

* *See above*, 222.

226. If, in peripneumony, fynocha*, and violent rheumatifm, the voluntary motions are impaired, and to fuch a degree, that a perfon can neither ufe his hands nor his feet, more than a paralytic perfon; that that is not owing to debility, that is diminifhed excitement whether directly or indirectly (20), is evident from this double proof; that, if the apparent debility were real, ftimulants would be of fervice, and debilitating remedies of differvice (2 P). But the reverfe is the truth. For the fame debilitating powers, which cure the other fymptoms of confeffed exceffive excitement, alfo remove this indifpofition to the performance of motion; and the contrary encreafe the affection.

227. Again, in fpafms and convulfions, either of the involuntary motions, in the internal parts, as in dyfpepfia†, in colic, in dyfentary‡, in cholera§, in hyfteria, in any violent attack either of vomiting or loofenefs of belly, (great numbers of which affections happens every day, without being diftinguifhed by names); or in the burning affection of the alimentary canal‖, which is confidered by phyficians as an inflammatory affection; or in affections of the voluntary motions externally, as in the lock-jaw, in tetanus (2 Q), and in many fpafms of other parts; or in convulfion, epilepfy¶, and many other convulfive affections; if thefe functions feem very much encreafed; that that is not owing to encreafe of ftrength, that is, encreafe of excitement, fhall alfo be proved to any unprejudiced judge by the following twofold fact; that, if this were a cafe of really encreafed ftrength, debilitating powers, or the remedies of fthenic diathefis, would remove it; and ftimulants** not pro-

* *or the inflammatory fever.* † *in Engliſh indigeſtion.*
‡ *in Engliſh the bloody-flux.* § *or that diſeaſe the urgent ſymptom of which is vomiting and purging.*
‖ *See above,* 197. *and the annexed notes.* ¶ *or the falling ſickneſs in Engliſh,*
** *keeping within their ſtimulant range, and*

ceeding to their ultimate effect of inducing indirect debility, but remaining within that range, in which they remove asthenia* would encrease it. But to such a fact also is the truth in diametrical opposition†. For stimulants alone, which remove the other signs of acknowledged debility, also remove those spasms and convulsions; and debilitating powers encrease them, or change the disease into worse (2 R).

228. Because we know not what contraction is, or almost any function of living system (2 S); we shall not therefore, wrangle about whether it be an encreased or diminished function‡; but we will by no means give up the point of those spasmodic and convulsive motions being an impaired function (2 T); for, if, within certain boundaries§, excitement, when encreased, produces more strength, and less when it is either diminished without limitation, or ultimately encreased; and if every function so arising is properly defined to be either a function encreased in proportion to encrease of excitement, as contained within its boundaries, or as a function diminished in proportion to the deficiency of the same excitement, without any boundary, or to the ultimate encrease of exciting power beyond the stimulant range; consequently, in the last of these cases it is a most proper definition to say, that the function is diminished; and in the first, that it is encreased (2 U).

229. This notion, therefore, hitherto received with respect to these motions is false. It proceeds upon a supposition (2 X), as if the motions proceeded from an excessive influx of the nervous fluid, according to a mode of style which they first held (2 Y), or of the nervous power (2 Z), which is now the common language, that

* *or affections of debility,* † *Who does not know, that bleeding, evacuations of other kinds are hurtful, and that stimulants proportioned to the degree of the cause, are the only successful remedies?* ‡ *See above, Chap. 5. throughout.*
§ *See above par. 24.*

is, if it has any meaning, from an exceſſive excitement in the fibres that have been mentioned (3 A); and, as according to the phraſeology of the logicians, "error draws on error;" ſo this notion of the abſtract cauſe led to another* with reſpect to the operation of opium. And as they ſenſeleſly enough ſuppoſed exceſſive motions to be occaſioned by an exceſs in the principle of life, at leaſt in the labouring parts, ſo they either thought, or taught, that opium poſſeſſed the virtue of checking or allaying, as a ſedative, thoſe motions, and that contrary to the whole analogy of nature, and the certain proof afforded by all the exciting powers, every one of which has been proved to be ſtimulant, not one ſedative† ; but if it were in any reſpect doubtful, that nothing in nature, at leaſt in thoſe powers, that are commonly applied to animal bodies, is ſedative, how can there be any uncertainty *of that point* as to opium, much leſs, that the contrary concluſion ſhould be held for the truth? Has not it the ſame effect upon the Turks, that wine has upon us? Or, are we to ſuppoſe, that the troops of that people, on their march to the onſet of battle, chew opium, with the intention of checking their natural alacrity and propenſity to action, and of blunting and depreſſing their high ſpirits and courage? If fevers, if the gout, if indigeſtion, if the cholic, if aſthma, and the whole train of ſpaſmodic and convulſive diſeaſes, in fine all aſthenic diſeaſes, have lately, to the conviction *of every perſon who gave the ſubject a due conſideration*, and, contrary to the expectation and opinion *of all men* hitherto, been proved to yield to the various forms of opium without difficulty; and if all theſe diſeaſes, *in* which it is ſerviceable, have been demonſtrated to be affections depending on debility, are we to agree, that opium proves of ſervice, by an operation that is furtherdebilitating, or rather that extinguiſhes the

* *that is, they ſuppoſed the moſt powerful ſtimulus, opium a ſedative.*

† *See above par. 19. to 21. with the additions and notes.*

miserable remains of nature's motions? If the various forms of wine, and other strong drinks, have a very great effect in removing the same diseases, which has likewise been discovered by late experiments, and are, therefore, understood to be beneficial by the same *mode of* operation as opium, are we to agree, that that similitude of operation argues a diversity, nay a diametrical opposition in the nature of the powers that unite, with such harmony, in producing the same effect? Lastly, if it cures diseases, *that depend* upon a confessed deficiency of motion (3 E), equally as those, the motion in which, though seemingly encreased, are in reality diminished; what can any person say in objection to so strong an argument, added to so many and so powerful ones already advanced? In faith, opium is not a sedative; on the contrary, as it is the most powerful of all the agents that support life, and that restore health, and a truly blessed remedy, to the divine virtue of which the lives of so many mortals has been owing, and, in future, will be owing; so it must be acknowledged, that spasms and convulsions, over which it has so great power, do not consist in encreased, but diminished excitement, and that opium cures them by the same operation by which it cures any of the diseases depending upon debility.

230. Sometimes in diseases there is a preternatural flow of blood. Thus in sthenic diseases blood drops from the nose: it is spasmodically expectorated from the lungs, and tinges the urine. The first and last of these three are considered as critical signs; but they have no other meaning than an abatement of sthenic diathesis, and a disposition to indirect debility. This is an effect, that, for the most part, soon goes off, leaving behind it a state of convalescence*, and soon after a restoration of health, seldom passing into an *establishment of* indirect debility.

* *or of recovery,*

231. Great and continued bleeding discharges, whether from the womb, from the anus, or from around the latter, or by the nose, depend upon pure debility (3 c). An over-proportion of blood, distending the vessels beyond bounds, and establishing indirect debility, may sometimes be the primary cause. But, in this case, if no other debilitating power, and particularly directly debilitating, has acceded to the cause; if the discharge be stopt by a stimulant plan of cure; if the body is strengthened, and the laxity of the vessels taken off, the whole affection will soon disappear, and the health be restored. On the contrary, when indirect debility has not preceded, and other directly debilitating powers have been applied; such as those are which have been spoken of; and more *especially*, if the diseases are treated by bleedings and other evacuations, by abstinence, or by vegetable food and watry drink; in such a case the diseases become chronic*, troublesome, at last direful and fatal. That they depend upon debility, is proved by the failure of the cure just now mentioned, and by the great success of the stimulant plan. The true cause of bleeding discharge is not plethora, which cannot happen in the case of persons ill nourished, in water drinking, and under the application of other hurtful powers, that equally destroy the tone and density of the vessels†. For as food is nearly the only material, from which blood is formed; how, when it is withheld, in the absence of the cause, can the effect remain? and, if, upon account of the debilitating effect of other hurtful powers, any food that is taken is not digested how can there be an over-proportion, and not a manifest scantiness of blood? But *it may be alledged, that* loss of blood, and every sort of debilitating power, diminish perspiration, and that from that *circumstance* the quantity of blood is encreased. How can that happen? The matter, from which the

* *of long duration,*

† *See above,* 134. *and y.*

blood is made, *it may be added*, is taken into the ſtomach, and a ſmaller quantity of fluid paſſes off by perſpiration. But, *to that it is to be anſwered, that* in the firſt place it is not taken in; and next the little that is, is not digeſted (3 D); then after the ſerous part has been ſeparated from the red, will it, if detained and thrown back into the blood, again become blood? If theſe queſtions, to which there is no poſſibility of returning any anſwer, ſhould ſeem in any degree ambiguous; are we to believe that one part of the body is in ſuch a ſtate of vigour, as to produce an over proportion of blood, and another in ſo languid a ſtate, as not to be able to carry off by the due outlets its corrupted matter? And muſt we, *giving up our fundamental principle after ſo complete an eſtabliſhment of it*, allow, that the excitability over the whole body is not the ſame uniform, undivided property over all the ſyſtem; that the powers acting upon it are not the ſame, finally that matter can be created out of nothing (3 E)? It is in vain to talk of the fattening of chickens and cattle by keeping them from exerciſe and in a ſtate of reſt. The condition of health and diſeaſe is very different. In the former there is a certain latitude of the ſtrength of the ſtomach; in the latter, and eſpecially when debility is the cauſe, there is a proſtration of ſtrength. In fine, it is a univerſal and conſtant effect of all debility, to produce a deficiency of the fluids in the internal parts of the ſyſtem with a relaxation of the veſſels over all, eſpecially about their excretory terminations, and a diſcharge of the fluids by ſome out-lets. The death, that happens, during the time of an entertainment, is not to be imputed to an over proportion of blood, which cannot happen in ſo ſhort a ſpace of time. The drink has no effect in filling the veſſels. Nor do any perſons, but thoſe who are under direct or indirect debility, meet with ſuch an end, never thoſe, who have an over proportion of blood; which, as the appetite is gone, and the digeſtive powers deſtroyed, cannot be produced. In what diſeaſes was it that plethora was ſuppoſed to take place? Not in thoſe,

in which the digeſtive organs, and thoſe that produce blood, in fine, in which the whole ſyſtem, are in a ſtate of vigour, where the appetite is very keen, and the digeſtion moſt perfectly performed, and the digeſted matter moſt completely converted into blood; but in thoſe, in which upon account of the debility propagated over the whole body, all the functions are in a ſtate of languor, and in which the only matter, ſuited to make blood, is either not applied, or not aſſimilated. In this way, the gout, apoplexy, epilepſy, palſy, aſthma and hyſteria, the indigeſtions of perſons, who have been formerly addicted to luxury, in fine, thoſe very diſeaſes, which make our preſent ſubject, the hæmorrhages, as they are called and falſly defined by that term, laſtly; the far greateſt part of aſthenic diſeaſes, have been thought, at all times and by all phyſicians, to depend upon plethora with vigour, or plethora with mobility. But in fact and truth that both all the reſt of thoſe diſeaſes, and thoſe accompanied with bleeding diſcharge, depend upon a penury of blood and other debilitating powers is proved, by the conſtant failure of the antiſthenic plan of cure to the great diſgrace of the profeſſion, and by the incredible ſucceſs of the new ſtimulant plan. And with reſpect to the bleeding diſcharges, conſider the perſons, affected with them in the hurtful powers, that precede them, and in the ſymptoms *that attend them*. During the whole period of prediſpoſition, quite delicate and weakly, they have very little appetite for food, and take very little, and what they take, is not digeſted, and often rejected by vomiting. In their weak ſtate they are not ſupported by the ſtimulant *operation* of corporeal, or mental exerciſe, nor by that of the animal ſpirits, which are quite puny and dejected, nor by that of pure air *which they are not able to go out to take*, nor by that of agreeable ſenſation, nor by that of ſtrong drink, which from the miſleading advice of their phyſicians, they look upon as poiſon, nor by that of the diſtention of the veſſels, which are not ſufficiently filled with blood, nor by that of the

secretory small vessels, upon account of their sluggish motion, and stagnation of their degenerated fluids every where, and the direct debility constantly arising from that. What sort of pulse have they? Such, as it is in all diseases of manifest debility, for instance, fevers, (in which last, which is surprising their favourite plethora, was seldom suspected by them), small, weak and very quick and almost empty. Upon the whole, what like are their intellectual functions, those of passion and emotion, and their corporeal functions, either in sense, or motion whether of the voluntary or involuntary kind? All weak, all frail, all such, as show that they have not a third part of life to support them. What, on the contrary, is the state of those, who abound in blood, and yet never experience discharges of it? They are strong and full of vigour in all their functions, with redness of countenance, sparkling eyes, strong, hard and moderately frequent pulse. Their appetite for food is keen, the quantity they take is great and well digested. As those persons, may experience droopings of blood of no consequence, and yet not often so they fall into no discharges of blood. And it is in perfect consistency with all that has been said, *to add* that the various forms of strong drink, and these particularly, which are the strongest, such as are called spirits, are surprisingly successful remedies of bleeding discharges, in spite of every thing that has hitherto been thought to the contrary, in spite of rooted prejudices: But the preparations of opium (3 F) and of the other diffusible stimuli are *still* more successful. This is a fact, that proves to a demonstration, that in the bleeding discharges there is no excessive activity, no hæmorrhagic effort as it is called, and on the contrary that there is only a falling off of the natural moving energy. The hæmorrhages, then, that have been the subject of so much false explanation, and false denomination, must be rejected from the number of sthenic diseases, and transferred to the asthenic diseases, under the title *Hæmorrhagæ*.

232. If any perſon be ſeized with a cough at firſt rather dry and bound, then more moiſt and free, and after that accompanied with a large expectoration, if the hoarſeneſs at firſt is deep, and afterwards ſlighter and freer, in proportion as the cough becomes more and more moiſt; if the cheſt all round, over the whole region of the lungs, is diſtreſſed with a degree of diffuſive pain; if there is either no vomiting, or what of it there is, ſeems forced up by the convulſive motion of the cough ending in expectoration, and in ſuch a manner, as either not to return, or to have no ſpontaneous tendency to a return; if the ſtrength is otherwiſe good, and the pulſe ſtrong, full, and more or leſs hard, *and* not much exceeding the frequency of a healthy pulſe: Such a caſe will be found to be ſthenic, and to depend upon heat and every other ſtimulus*, to be cured by cold and every other debilitating remedy (36). The cauſe of theſe ſymptoms is a high degree of ſthenic diatheſis† over the whole body, higher on the *external* ſurface of the body, and eſpecially in the throat, *which is a part of that ſurface*‡. The ſame ſymptoms in whatever *morbid* caſe they occur, are to be explained in the ſame manner. Conſequently, the catarrhal ſymptoms, which are an inſeparable part from the meaſles, admit preciſely of the ſame concluſion; and, as well as the whole diſeaſe, are to be underſtood to ariſe from exceſſive excitement, and to be cured by the debilitating plan. The ſame is the judgment to be formed of the influenza. In all which caſes it is eaſy to make trial *of the truth*. Give a glaſs of wine or brandy, give a little opium; the hoarſeneſs will encreaſe, the cough will be more hard and bound, the expectoration will ſuffer a temporary ſuppreſſion. Give a large draught of cold water, *and* all *the ſymptoms*

* *See above the following paragraphs* 113. 114. 122. 124.

† *or ſtimulant operation or exceſſive excitement, or waſted excitability.* ‡ *See above par.* 113.

will be relieved. Often *does it happen that* a perſon *troubled* with a cough when he ſits down to drink *wine*, is freed from it in the courſe of *the circulation of* the glaſs (3 H). The reaſon of which is, that aſthenic diatheſis was the cauſe, which was converted by the drink into a ceſſation of all diatheſis, or into a temporary ſthenic diatheſis. Often at the end of a debauch in drinking, the cough, and that very violent, returns for this reaſon, that the ſthenic diatheſis has made conſiderable advances. It will be cured by drinking a tumbler or two of cold water, and drinking no more wine; *which precautions operate* by ſtopping the exceſs of excitement.

233. *From the deſcription juſt now given** it appears, that ſymptoms, commonly ſuppoſed to be the ſame, are however of a diametrically oppoſite nature (3 1); which will be evinced by a fuller explanation. If, therefore, any one has a very great cough, a very great expectoration, either at firſt with hoarſeneſs, and afterwards, through the whole courſe of the diſeaſe, without the hoarſeneſs; if he is of a very advanced age, or arrived at the laſt ſtage of life; if he is of a weak habit; if his pulſe is neither ſtrong, *nor* full, and *withal* very quick; if this concourſe of ſymptoms has been preceded by either direct or indirect debility, as uſually happens in *the caſe of* famine, *of* water-drinking, of a long courſe of ebriety, and *of having led* a life of luxury; one may be certain, that all theſe ſymptoms are aſthenic†, and to be removed by ſtimulant remedies.

234. The explanation of the dry cough is eaſy, and ſuch as was formerly given‡. The origin of the cough and expectoration is quite the reverſe§. For whether the ſyſtem has been weakened directly or indirectly, as the excitement over the whole body is diminiſhed in the

* *of the nature and cure of the ſymptoms we have been ſpeaking of, compared with that which is next to be given,*

† *or depend upon debility,* ‡ *See above par.* 159.

§ 128. *in the M. S. addition* 161. *and particularly* 134.

highest degree, as the debility in every part is exquisite; the consequence is, that in the vascular system the tone, and in proportion the density, every where diminished; *and the diminution* chiefly takes place in the extreme terminations of the arteries, *that are* most remote from the centre of activity, and above *all* other *parts of the vascular* system, in the perspiratory vessels*. When *all* this has taken place: the quantity of fluid that is thrown up by expectoration is incredible. Indeed† it is great enough, not to be inferior in its degree to the greatest profusion that takes place in consumption, and even to exceed it.

235. The cure of it, however, in all the cases that depend upon direct debility, is by no means difficult (3 K), unless the disease has proceeded beyond the boundary *of admitting a cure*, and life is now approaching to its end. The cure, however, is a good deal more difficult in the case of indirect debility, and for this *good* reason, that *there is no other plan of* cure but stimulating, to remove a disease occasioned by an excess of stimulant operation‡. Nay, the same debility as shall afterwards be observed, produces the same relaxation both of the bronchia and of the rest of the body, *but it does* not always produce consumption. With this profusion of expectoration appearing sometimes in the form of fever§, sometimes in that of the gout, the physician has often a long struggle, while he employs *his* diffusible stimulants, *the event of which is* such, as to produce a complete restoration of health, *and thereby to* leave not the least suspicion, of there being any local affection in the lungs, which is so much the object both of the faith and fear of physicians (3 L.)

k, When, in all the vessels, the fluids are not agitated by a sufficient action, they are proportionally more imperfectly mixed, and therefore in a vitiated state. But

* 59. 60. 61. † *though it has never been attended to.*
‡ *See above* 103. § *See the last note* (3 K).

in the extreme terminations of the veſſels, as being at a greater diſtance from the center of motion, they often, from a total ceſſation of motion, ſtagnate, and degenerate into a foreign nature. This is *an effect* not produced by heat alone* but by cold†, nor only by this, but by all the powers that debilitate in an equal degree‡.

CHAP. VII.

Of Sleep and Watching, whether ſalutary or morbid.

236. AS death finiſhes the operations of all life, ſo ſleep finiſhes thoſe of every day: and as the former is the conſequence of a perfect extinction of the excitement, from, either a complete exhauſtation or ultimate abundance of excitability; ſo the latter§ ſucceeds to a diminiſhed excitement, while the excitability is either diminiſhed, but in ſuch ſort that it can be accumulated again, or abundant, in ſuch ſort that *the abundance* can be waſted, and the excitement, in both caſes, renewed.

237. Such is the nature of the excitability, of animals, that it can neither be deficient nor over-abundant, without detriment, a deficiency producing indirect, and a ſuperabundance, direct debility. And, as any exciting power, carried beyond its boundary‖, can produce the former, and the with-holding of any, give occaſion to the latter¶; ſo the ſame propoſition holds good of the exceſſive or too ſparing uſe of ſeveral of them, or of them all (A). Sleep, then, is the effect of the actions of the day, at firſt giving always more and more excitement, but leſs and leſs *in proportion to the continuance of their operation***, but in ſuch ſort as always to add ſome

* *See above par.* 115, † *See alſo par* 17.
‡ *See alſo* 119. *which compare with par.* 28. *Nay all the power mentioned in par.* 11. *and* 12. *and fully explained in Part Second, Chap.* I *throughout.* § *or ſleep,*
‖ *See par.* 18. ¶ *See par.* 38. ** *See par.* 36.

excitement, till the matter *at laſt* comes to a point, where the degree of excitement, neceſſary to conſtitute the waking ſtate, no longer exiſts. Of this we have the moſt certain proof in every days experience, and in the confirmation of it, which the complete induction of the effects of all the exciting powers affords (B).

Thus, heat not ultimately exceſſive, or reduced, by cold, from that exceſs in its ſtimulant degree*, and food, and drink, and labour, either of body or mind, and the exerciſe of paſſion and emotion, when their ſtimulus neither ſtops ſhort of the proper point, nor goes beyond it, all give a diſpoſition to ſleep. This is the moſt ſalutary ſtate of ſleep.

l. Premature, unſeaſonable, or morbid ſleep, is produced by either indirect or direct debility.

m. With reſpect to the effect of the former, an exceſſive energy of any one or more of the ſtimuli† produces it; accordingly, any one or more of thoſe that have been mentioned, by acting in exceſs, and waſting the excitability, ſuch as hurried drinking, produce that effect.

n. Of the directly debilitating powers, which produce the ſame effect, the want, or ſparing application, of the powers, which, by a due degree of ſtimulus, produce ſleep, will ſurpriſe into a bad kind of it; accordingly, when a perſon is in that ſtate, that he wants excitement in order to be in health, the defect of light, of ſound, and of the various contacts *of the bodies* that excite the other ſenſes, the defect of both ſets of motions, the voluntary and involuntary, as well as of the exerciſe of the mind, of the exerciſe of paſſion, of heat, acting in its ſtimulant degree, and too long continued ſleep itſelf, all theſe produce hurtful ſleep (C).

238. On the contrary, ſound watching is the effect of the ſuſpence of the ſame diurnal actions during the pe-

* *See paragraph* 122.

† *Of indirect debility in producing premature ſleep, ſee par.* 237.

riod of ſleep, taking off more and more excitement, moſt at firſt, and leſs and leſs after, but always adding to the ſum of diminution of excitement, and accumulation of excitability; that is, always continuing to take off ſtimulus, till the matter comes to the degree of diminiſhed excitement, and encreaſing excitability neceſſary to the watching ſtate. In this way does ſleep prepare the ſyſtem for the watching ſtate: which is afterwards kept up, for the due length of time, by the ſeveral exciting powers, acting through the day, till at laſt, by a certain failure of their action, ſleep is produced again*.

o Too long or morbid watching is alſo brought on in a two-fold way, by indirect and direct debility. Thus, intenſe thinking†, violence of paſſion in extreme‡, ultimate exceſs in corporeal labour§, unuſual and high relaxing heat, debauch in eating and drinking, a great exceſs in the uſe of the diffuſible ſtimuli‖, a great abundance and velocity of blood; all, or any of theſe, riſing to indirect debility by an ultimate exceſs in their operation, are notorious for their effect of repelling ſleep. Again, cold, not in that extreme degree which immediately precedes death; abſtinence from food, or that ſort of it that is not ſufficiently nouriſhing, or of ſufficient indirect ſtimulus to produce the requiſite diſtention; weak drink, as tea, coffee, or watery drink, eſpecially when a perſon has been accuſtomed to more generous; intermiſſion of uſual labour or exerciſe, whether of body or mind; a ſenſe of ſhame from diſgrace, and fear, and grief; all theſe, by their operation not ſufficiently approaching to indirect debility, produce an undue or morbid ſtate of watchfulneſs.

239. As debility, therefore, whether indirect or direct, or in part a mixture of both¶, is the cauſe of ſleep,

* *See laſt par.* 237. † *See above,* 137.
‡ *See,* 140. § *See* 137. *d.*
‖ *See* 124. 125. 126. *p. r.*
¶ *See par.* 47. *and the note belonging to it.*

the firſt of ſound ſleep, the two latter of an improper or morbid ſtate of that function; ſo an exceſs of the ſame debility, whether indirect or direct, is alſo a cauſe of improper or morbid vigilance. The only ſalutary ſleep is that which is produced by a proper degree of excitement, occaſioned by a proper action of the exciting powers upon the excitability; all the extremes of either exceſſive ſleep, or exceſſive vigilance, are either many tendencies to diſeaſe, or actual diſeaſe (D).

A perſon fatigued with his uſual exerciſe, is immediately compoſed to ſleep; which, equally, flies from him who has had either leſs, or more, than that middle degree (E).

240. As the effect of both indirect and direct debility is ſometimes ſleep, ſometimes watching, both of them unſound, both hurtful; ſo the cauſe of bad ſleep is either ſort of debility; without a ſtimulus acting upon the ſyſtem in a weakened ſtate, and, thereby, throwing the ſyſtem into a ſtate of diſturbance. The ſame debility of either kind, with ſuch a ſtimulus, produces the morbid watching; in which caſe it is a ſmall ſtimulus that acts as an irritating power (F).

p Inſtances of morbid ſleep occur in the predispoſitions to diſeaſes, and the actual diſeaſes, that depend upon ſthenic diatheſis, and in the ordinary ſtate of intoxication from drinking. But all the exciting powers, when converted into hurtful ones of exceſſive ſtimulus, each in proportion to its degree of exceſs, have the ſame tendency (G). But, when the exciting power proceeds beyond the ſleep-inviting point; or when any ſtimulus, ſtill finding unwaſted excitability to act upon, continues to act; in that caſe the watching will be continued with bad effect*.

* *as in the harrowing watchfulneſs, which is liable to accompany the phlegmaſiæ, or the ſeveral ſthenic diſeaſes with inflammation of a part.*

241. Instances of morbid sleep occur in all the diseases of indirect debility, and in pains that have advanced to the same *degree of exhausted excitability in the scale* (H); as in the several cases of the phlegmasiæ, that arise from the violent progress of the morbid state, or the improper administration of stimulants for the cure; which is particularly exemplified in the dropsy of the breast, that often arises from peripneumony under such management. With respect to sleep from direct debility, women, who have had many deliveries, who have often suckled, as well as all lazy persons, and those, of both sexes, who are addicted to luxury, and whose custom it is to sleep to much, are all liable to fall into this sort of morbid sleep.

242. When either direct or indirect debility, sometimes produces sleep that gives no refreshment*, sometimes an ungentle, turbulent waking state, neither of them accommodated to health; as the debility, productive of either effect, exceeds that in which sound sleep consists: the use of that degree of stimulus which may repel the former, and convert the latter in sleep, will remove the complaints, and serve for an illustration of the nature of both (I). In asthenic diseases the watching state for the most part is the consequence of direct debility, with some power acting with slight stimulant effect; the reason of which is, that the disease depends upon more debility than that which constitutes sleep. Hence it comes about, that every thing that stimulates, every thing that raises the excitement as it were to that point, which composes the system to sleep, produces that effect by a stimulant, not a sedative, virtue. In a small degree of debility, where the excitement has fallen only a little below the point of sleep, a very small

* *which often happens in fevers and many other cases of debility, besides those mentioned in the text (241.), and ought never to be encouraged, but repelled by every means of exciting the patient.*

degree of ſtimulus, ſuch as a little animal food; if the weakneſs had been owing to vegetable food, ſuch as wine, or any drink of equal power, after a water regimen; ſuch as conſolation in affliction of mind; heat, when cold has been the debilitating power; gentle exerciſe or geſtation; or the ſtimulus of a pleaſant train of thought, when one has been deprived of the ſtimulus of corporeal or mental exerciſe, is ſufficient. In higher degree of debility (for the curative force ſhould always be adapted to the degree of the diſeaſe*, either a proportional higher degree of the ſtimuli which have been mentioned, or ſome more powerful one, ſuch as thoſe, which are called diffuſible, ſhould be employed.

243. In both which caſes, the virtue, of opium is great; its virtue, however, is not peculiar to it, or any other than what it poſſeſſes in common with all the other ſtimulant powers, differing only from the reſt in the higher degree of its (K) virtue. Thus in great debility as in fevers, as in a violent fit of the gout, diſturbing with tumultuary diſorder the internal parts, and in other ſimilar diſeaſes of debility, in which the violence of the diſeaſe keeps of ſleep; opium often, after the watchful ſtate has remained many days, brings on profound and ſound ſleep; in which caſe, becauſe the excitability is very abundant, and, therefore, can bear but a very ſmall force of ſtimulus, we ſhould, on that account, begin with the ſmalleſt degree of ſtimulus, and proceed gradually to more and more†; till at laſt we arrive at the point of ſleep, which will ſoon happen, as it is placed much within the range of direct debility: And with reſpect to coma, or that ſleep which is not recruiting: ſuch is the effect both of other diffuſible ſtimuli and of opium, that it converts morbid ſleep into vigilance; vigilance, after a certain ſpace of time, into refreſhing ſleep, and, in that way, conducts the patient ſafely,

* *See above, par. 44. and 92.* † *See above, par. 107.*

gently, and pleasantly, to health. But as the influence of the stimulant operation, that supports excitement, is of so great importance, and as sleep of longer duration than to prove refreshing may arise even from good remedies, the rule to be observed when that happens is, whenever any attack to sleep upon account of too long a suspension of stimulant action, has been of less service than was expected, to shorten its next attack, and renew the operation of the stimulus.

244. In asthenic diseases, and those arising from indirect debility, in which sleep is also kept off; in order both to restore it, and remove the other symptoms, and bring about the healthy state, both other stimuli should be employed according to the degree of debility requiring their use, and, when the degree of debility is very considerable, the diffusible stimuli, and among the rest opium, should not be omitted.

245. These are the times and circumstances of the body in which opium produces sleep. In all the other states either of health or disease, it excites the functions both of body and mind, as well as of passion and emotion; among others it banishes sleep and produces great activity and vigilance. Thus if any one is under the pressure of sleep without an evident cause, he will by opium be rendered surprisingly sprightly, lively, and vigilant; it banishes melancholy, begets confidence, converts fear into boldness, makes the silent eloquent, and dastards brave. Nobody, in desperate circumstances, and sinking under a disrelish for life, ever laid violent hands on himself after taking a dose of opium, or ever will. In one word, through all the intermediate degrees of excitement from direct to indirect debility, opium is by far the most powerful of all the agents, and as such must be most hurtful in sthenic diathesis, because, when added to the other stimulant powers, it not only banishes sleep, but is liable to precipitate those diseases from the sthenic state to indirect debility, and from this last to death.

246. That the debility, upon which coma depends, is less than that which supports morbid vigilance, is proved, from the former being less dangerous, and more easily removed; yet, when its duration is in any degree considerable, or when it resembles profound sleep, care should be taken to prevent the hurtful effect it may produce from direct debility*, in which case recourse should be had to the different forms of wine and opium, with the intention of raising the excitement to that degree which repels the sleepy state, produces more strength, and facilitates the return of health (1).

247. In the gout, in indigestion of which examples have already been adduced, in diarrhœa and the cholic, and many other asthenic diseases, particularly disturbing the alimentary canal, and chiefly affecting those women who are exhausted with frequent child bearing, and long and repeated nursing; it often happens, that there is a strong propensity to sleep, contrary to what happens to the same persons in health, and the period of sleeping attack is prolonged, without the indulgence in it bringing an alleviation of the disease. The same thing happens to those who have fallen into indirect debility from drunkenness or any other cause. That this desire for sleep depends upon direct or indirect debility is evident from every thing that gives further debility encreasing the disease, and every thing that strengthens, removing it. Among those, all strong drink, and the preparations of opium, are peculiarly effectual, and that in proportion to their greater and more diffusible stimulant power, *than that which others possess.*

248. Nor is it unconnected with this explanation of *the nature of* sleep and watching, and of both of them being sometime repelled, sometimes induced, by a certain degree of stimulust†; that excessive motions, and

* *See above, par.* 240. *and the note under it, as well as this whole chapter.*

† *See above par.* 240. *where this proposition is reduced to its exact principle.*

convulsive, which have been mentioned*, such as the quick pulse in fevers† and other *motions*, are removed by an equal force of stimuli, *to that which is required to remove morbid affection* without *any* motions. Hence *it is plain, that* irregular motions are not only not encreased functions‡, independent upon debility, but that they are impaired functions, and consist nearly in the same degree of debility.

249. From what has been said, the analogy between watching and life, and sleep and death, and their dependence upon the same laws of nature, that govern all the other functions, clearly appears and the most solid probation has been adduced, that the most vigorous vigilance consists in the highest degree of salutary excitement; that the middle and deep period of sleep depends on the highest debility that is consistent with the healthy state; that true sleep depends on a middle degree of indirect debility, and that morbid sleep and morbid watching are the offspring of great debility, whether of the indirect or direct kind.

CHAP. VIII.

The Cure of both the Diathesis.

250. AS the cause of both the diathesis is that which has been formerly§ related; the indication of cure, therefore to be taken from that is, in the sthenic diathesis to diminish excessive excitement over the whole system; in the asthenic to encrease deficient excitement *likewise over all the system*, till it be brought to that degree, which proves the cause of health.

251. The remedies that produce that effect in the *cure of* sthenic diathesis, are the powers, which, when their stimulant operation is excessive, produce that very diathe-

* *See above par.* 229. † *See par.* 178.
‡ *See above par.* 228. § *See above par.* 148.

fis, in this case, acting with that slight and reduced force of stimulus, by which they produce less excitement than health requires, or by which they prove debilitating.

252. The powers which produce the same effect in the asthenic diathesis, are those that, when their stimulus is small, produce that diathesis, *in this case*, exciting with that high degree of stimulus, by means of which they give more excitement, than suits the healthy state, or by means of which they stimulate.

253. In the sthenic diathesis that temperature (A) which is called heat, must by all means be avoided; *and* for this *very good* reason, that the only degree of it which proves debilitating, that is the excessive to an extreme, cannot be carried to that height, in which it debilitates, without the risk of hurtful or pernicious consequence from the excess of stimulus (B).

254. But, when the diathesis, and its cause the encreased stimulus, is gentle and the actual diseased state, there is no occasion for forbidding that degree of heat, which accompanies *the operation of* sweating and pediluvium†; because the waste of fluids in the former, and the agreeable sensation in the latter, promise somewhat more advantage, than the moderate *degree of* heat *employed in this case* threatens disadvantage.

255. In a particular manner, after the application of cold in an intense degree, must *the application of* heat be avoided, because its operation, from the encrease of the excitability by cold, becomes more effective‡. And the consequence is the more to be dreaded, that, at the same time, other stimuli are usually urgent.

256. Cold is the beneficial *degree of* temperature *in the cure of* this diathesis, *but it must be cold* not followed by any considerable degree of heat. That mistake, therefore, in medical practice, of thinking cold hurtful

† *Pediluvium is the warm bath of the legs and feet.*

‡ *See above par.* 37. *h. and note* (D).

in ſthenic diatheſis by a ſtimulant operation, ſhould be corrected: and its benefit in the ſmall-pox is not to be underſtood to ariſe ſo much from its mere debilitating degree, as from avoiding the ſtimulus of heat after its operation. When the ſame precaution is employed, the ſame cold either alone, or in conjunction with other debilitating powers, has lately been found the moſt effectual remedy of catarr*.

257. From which circumſtance, and becauſe a cap of freſh dug up earth put upon the head, has been of ſervice in phrenitis; and that degree of cold, which produces froſt and ſnow, when applied to the naked body, has removed a ſynocha accompanied with delirium (C); and becauſe cold is ſo efficacious *a remedy* in the ſmall-pox; it clearly follows, that the uſe of cold ſhould be extended to the whole range *of* prediſpoſition, the whole circle of diſeaſes, depending upon ſthenic diatheſis.

258. That no hurtful effect ariſes from the ſuppoſed aſtringent power of cold in the ſthenic diatheſis (D), is proved by its very high influence, when applied to the ſurface of the body in the ſmall-pox, in keeping up a freedom of perſpiration in proportion to the degree of its application. And its influence in producing atony with proportional laxity *of the fibres of the veſſels*, is in conformity to the ſame obſervation (E).

259 For the removal of aſthenic diatheſis the ſtimulus of heat is ſignally uſeful, and chiefly for the following reaſon; that it muſt be as uſeful in this diatheſis, where the excitement is too low, as it is hurtful in the ſthenic, by giving a further encreaſe of the excitement, too much encreaſed already. Hence in fevers, in the gout, in dyſpepſia, in the cholic, in rheumatalgia†, and in all aſthenic diſeaſes, the ſyſtem is very much cheriſh-

* *or the common cold in Engliſh, a name ſtampt upon it by the very blunder we have been ſpeaking of.*

† *or what is improperly, as has been ſaid before, called the chronic rheumatiſm.*

ed by heat, and debilitated by cold: Which by its debilitating effect, is ranked among the powers that produce the diſeaſe (F), and is deſtructive in fevers.

260. As cold is hurtful in aſthenic diatheſis in the proportion in which it is ſerviceable in the ſthenic*; it is accordingly, for this further reaſon, to be avoided in diſeaſes of the higheſt debility, that like intenſe heat, it relaxes the extreme veſſels, and produces a putrefaction in the fluids†.

261. The more certainly to moderate the ſthenic diatheſis while as yet it remains within the range of prediſpoſition, a ſparing uſe ſhould be made of fleſh and the preparation from it, and vegetable diſhes uſed with greater freedom. But, when the ſame diatheſis is encreaſed to the degree, that conſtitutes diſeaſe, abſtinence from animal food, eſpecially in a ſolid form, and a free, but ſtill not exceſſive, uſe of vegetable matter, eſpecially in a fluid form, are the beſt means of removing it, as far as the management of diet goes.

262. In that degree of this diatheſis, which does not exceed prediſpoſition, it is proper to avoid ſeaſoning, which is deſtructive in diſeaſes.

263. Watery drink is very ſuitable to it, and all pure and ſtrong drink hurtful, and that in proportion to the quantity of alkahol that it contains. The latter *ſort of* drink, unleſs *taken* very weak, is deſtructive in diſeaſes. In the number of which pure water, eſpecially with an addition of ſomething to acidulate it, is preferable to ſmall-beer, which a great authority admitted. But the diffuſible ſtimuli in this diatheſis are above all others hurtful.

264. Since the indirect ſtimulus of food aſſiſts the direct, that is, propagates itſelf over the whole body; for that reaſon, bounds ſhould be ſet to the bulk even of the ſuitable matter‡.

* *See par.* 257. † *See above* 117. ‡ *See above* 127.

265. In every degree of asthenic diathesis, vegetable food should be avoided, and recourse had as soon as possible to that, which consists of meat and animal matter. And, as that can seldom be executed immediately upon account of the weakness of the stomach; the diffusible stimuli should, therefore, be used; such as the *different* forms of wine when the debility is moderate, and opiates when it is greater. *And at the same time*, from the very beginning rich soups should be given in great quantity upon the whole, and a gradual transition made to the use of more solid matter.

266. As it is animal matter in this case, that is of service, so the degree of stimulus, that seasoning adds to it, improves its effect*.

267. During the predisposition to asthenic diseases, watery, cold, acid, fermenting drink is hurtful, and that proportion of pure strong liquor, that the degree of debility requires, is beneficial. But, after the diseases, have actually taken place, and have now attained a high degree of vehemence, the same strong drink becomes so indespensably necessary, that excepting the soups, and the still more diffusible stimuli, it is the only *support* required for a long time. There is no occasion for any dread of the indirect stimulus of food, when the matter, which chiefly affords it, that is, vegetable matter, is guarded against†.

268. For *the purpose of* diminishing the stimulus, which an over proportion of chyle and blood (c), directly applied to a great extent of the body, produces; the over proportion, when it is very great, should be removed by abstinence, bleeding, and purging: when it is more moderate, but yet adequate to the effect of producing diseases, the directions lately given‡, respecting a moderate diathesis, ought to be observed; that is, we should adhere to *the practice of* vomiting and purging

* *See above par.* 125. † *Compare this with what was lately said in paragraph* 264. ‡ *See above par.* 254.

from time to time, and to a ſparingneſs in diet. But blood ſhould not be let. And, if upon any occaſion, the patient ſhall give way to a little fulneſs in his uſe of food, he ſhould uſe vegetable matter, abſtinence, gentle and frequent exerciſe, and ſweating, and, thereby, keep up a full perſpiration.

269. The ſame are the means of cure for an exceſs in the velocity of the blood*, in ſo far as it depends upon an over proportion: when the velocity depends upon violent motion of the body, the means of leſſening it, when the diatheſis is ſo moderate, *as only* to produce predispoſition, or a gentle degree of actual diſeaſe, are an abatement of exerciſe, more indulgence in reſt, and a reduction of other ſtimuli. In the very great diatheſis, that which occaſions ſevere diſeaſes, in order to retard the motion of the blood, a point muſt be made to avoid the ſtimulus of all the exciting powers, and blood muſt be taken profuſely. *Here* it is ſuperfluous to lay down a rule *for the obſervance of keeping the body in a ſtate* of reſt, as reſt, even in ſpite of the patient, is unavoidable†.

270. Withdrawing the powers that occaſion an over proportion of the ſecreted fluids in the excretory ducts, is the beſt method of removing the ſtimulus, which that over proportion, by its diſtending energy, produces (H). *The cure, therefore, conſiſts in* more frequent coition, drawing off the milk, taking in food of a leſs nouriſhing nature, and in reſtoring the perſpiration by removing the ſthenic diatheſis upon the external ſurface.

271. To remove the debility, or atony and laxity, of the veſſels, which is occaſioned by a penury of chyle and blood over a very great extent of the ſyſtem (I), firſt, the ſtrength muſt be gradually brought back by diffuſible

* *See above par.* 130. *to* 133.

† *It would be ridiculous to require of a patient in the rage of peripneumony not to run a race, when his real ſtate is, that he cannot move or turn himſelf in the bed without pain.*

ſtimuli (K) and ſoups; next, we ſhould gradually uſe the latter more ſparingly, and ſolid matter more plentifully: laſtly, to give the whole ſyſtem ſtill more ſtrength, it ſhould be fortified by exercile, and the reſt of the durable ſtimuli; but no further uſe ſhould be made of the diffuſible, than to employ them ſo long as conſiderable debility remains (L).

272. In a weak ſtate both of the veſſels and of the reſt of the body, every motion of the body, any way conſiderable, and all other ſtimuli, which quicken the motion of the blood, and bring on an indirect temporary debility, ſhould be with-held. But, in a caſe of ſlighter debility, ſuch motion as does not prove fatiguing, but acts as an agreeable ſtimulus, and gives recruit, ſhould not be avoided. When a perſon is recovering from a diſeaſe, he ſhould be gradually brought back to his uſual plan of life; nor ſhould it be forgot, that, till that is done, the health is never completely reſtored.

273 The debility which an under proportion of ſecreted fluids, or a degenerate, though plentiful ſtate of them, produces in the excretory ducts, is removed by the ſtimulant plan of cure which has juſt now been ſpoken of*, not by an antiſeptic one†.

274. The ſuitable remedy of that *ſort of* ſtimulus, which ariſes from either violence or aſſiduity of thinking, is an abatement *in the degree* of thinking, or that high ſtretch of the intellectual function, whether its degree or frequent *repetition* be regarded, that by waſting the excitability, proves at laſt, indirectly debilitating: Which is a rule, however it may ſuit the ſtate of prediſpoſition, that is by no means ſafe, after the diſeaſe has once made its appearance, and eſpecially if it is a violent one; becauſe there is no acceſs to any benefit from it, but through the intermediate degrees of that ſtimulant range, which, by encreaſing the excitement, already too great would do miſchief ‡.

* *See above*, 271. † *See above*, 117. *and* 118.
‡ *See above*, 253.

275. In order to cure a ſlight ſthenic diatheſis, ſuch as occurs in prediſpoſition, and to prevent diſeaſe, habitual paſſion ſhould be avoided; but the removal of actual diſeaſe requires, that every firſt guſt of paſſion, ſhould be prevented. The ultimate exceſs of paſſion, upon account of the intermediate danger of ſtimulating too much, is by no means to be thought of.

276. In ſo far as debility depends upon exceſs in mental exertion, or upon a languid ſtate of that faculty, the exceſs ſhould be diminiſhed, and the langour removed, and an agreeable train of thinking ſet on foot; without which latter, however much all the other ſtimulant powers may have been employed, it may be depended upon, that perfect health, in every reſpect, will not be brought about (M).

277. In every degree of debility that high force of the paſſions, that produces indirect debility, muſt be avoided; and it muſt not be forgot, that a very ſmall degree of them is ſufficient for that effect: we are not to give looſe reins to agreeable paſſions (N).

278. When there is a deficiency in the force of any of the paſſions, as in ſadneſs, grief, fear, terror, and deſpair, which are only leſſer degrees of gladneſs, confidence, and hope, and imply only a diminution of exciting paſſions; ſuch deficiency or diminution muſt be expelled, and the exciting degree of paſſion recalled; hope and aſſurance muſt be infuſed, and the patient gradually carried up to feelings of joy.

For there is only a ſum total of the paſſions, which act in the ſame manner as all the other ſtimuli, that is, by ſtimulating, either in exceſs, or in due, or in deficient, proportion; nay, like the reſt, as often as any one is deficient, it, by accumulating the excitability, has the effect of making the other ſtimuli act more powerfully*. Take, for inſtances, the terror of an army before the ſound of trumpet for the onſet of battle, and

* *See above, par.* 37. *and the note annexed to it.*

the courage with which they are afterwards inſpired, from the conſciouſneſs of their bravery, the General's ſpeech to animate them, or, perhaps, his commemoration of their former brave deeds.

r An ultimate exceſſive voluptuouſneſs in the exerciſe of the ſenſes, as well as the effect of diſagreeable objects, preſented to them, in aſthenic diatheſis, ſhould equally be avoided; and, in the ſthenic diatheſis, their turbulent force ſhould be guarded againſt*.

ſ Nothing is better accomodated to the aſthenic ſtate than purity of air: which, either alone, or conjoined with exerciſe, muſt, conſequently, be of the greateſt benefit to convaleſcents.

t Since the matter of contagion, in ſo far as it has any tendency to produce general diſeaſe, produces either ſthenict, or aſthenic, diatheſis‡, and acts by an operation ſimilar to that of the general hurtful powers; the inference to be drawn from that is, that in the cure, general remedies ſhould be employed; and debilitating ones oppoſed to ſthenic, ſtimulant ones to aſthenic, diatheſis§.

279 Theſe powers, the ſame in kind with thoſe that produce the diatheſis, differing only in degree, and in that reſpect diametrically oppoſite, remove the diatheſis ſeldomer, and leſs ſucceſsfully, one by one; oftener, and more effectually, when ſeveral co-operate, but, beſt of all, if all of them be taken together, eſpecially when there is occaſion for great aſſiſtance.

* *See par.* 143. *and* 144. † *as in the ſmall-pox and meaſles,* ‡ *as the contagious typhus, the gangrenous ſore throat, dyſentary, and the plague,*

§ *Par.* 147. *and* 175.

CHAP. IX.

A comparison of the different parts of the sthenic plan of cure with each other.

280. AS, in the sthenic diathesis, bleeding is the most powerful remedy of all others, being that, which completely carries off a stimulus, as much more powerful than any other, as it is directly applied to a greater extent over the system; consequently, as often as the diathesis is very high, it should be freely used; but never risked during predisposition, and sparingly, or not at all, ventured upon in diseases of a gentle nature; in which other remedies should be preferred (A).

281. The next place of importance to bleeding, when heat and other stimuli are guarded against, is claimed by cold. Heat is always hurtful, and still more so after a previous application of cold; but it is most hurtful, when it is also combined with other excessive stimulant powers. Cold is always of service, and in proportion to its degree; provided foreign stimuli, blended with it, and overcoming its debilitating effect, be cautiously shunned.

282. The third place in rank after these remedies is claimed by vomiting and purging and sweating. These evacuations have a powerful effect in removing sthenic diathesis, and therefore do they, with great advantage, supercede the oftener imaginary than real, necessity of profuse bleeding. They are often alone sufficient to restore the healthy state.

283. Together with all these, the articles of diet, the stimulant operation of which prevents the benefit to be received from them, should be sparingly used, and that in exact proportion to the degree of the diathesis. This precaution alone is adequate to the removal of predisposition, and often to that of diseases, especially those that depend upon a small and gentle diathesis.

284. Alſo with all the remedies yet mentioned we muſt conjoin reſt, when the diſeaſed ſtate has taken place, and moderation in motion during the period of prediſpoſition (z).

285. The practice of the common run of phyſicians is very bad, in going too much upon any one of the remedies that have been mentioned, and overlooking all the reſt, or enjoining them careleſsly. We are not to depend upon bleeding alone, not even in peripneumony itſelf; but employ all the reſt either in concourſe or ſucceſſion.

286. The diſturbed functions, or thoſe that are impaired* not from a debilitating cauſe, admit of the general plan of cure, and no other.

287. The ſymptoms of debility, which are the conſequences of the violence of the ſthenic diatheſis, in the progreſs of the diſeaſe, and that threaten death by indirect debility, ought to be prevented by an early interpoſition of the remedies.

288. The ſame early cure ſerves to prevent ſuppuration, effuſion, gangrene, which ariſe from ultimately exceſſive excitement, paſſing into indirect debility.

u If ſthenic diatheſis ſhould happen to be conjoined with a local diſeaſe, the former, to prevent it from aggravating the latter, ſhould be removed by its own reſpective remedies.

CHAP. X.

The ſame compariſon of the different parts of the Aſthenic plan of cure with one another.

289. IN aſthenic diatheſis, and the diſeaſes depending upon it, reproducing the loſt quantity of blood, is the moſt powerful remedy, when we, at laſt, find acceſs to it, as being the only means of reſtoring a ſtimulus of

* *See above, par.* 147. 150. 172.

so much more power and efficacy, that its direct application is made to so great an extent of the system*. For which reason, as, in every degree of debility, the quantity of food, from which only blood is made, that is taken and digested, is always in an inverse proportion to the degree of debility† ; so much, and of such a form, as can be taken and digested, should immediately, and without loss of time, be administered ; on which account, if the debility be moderate, giving solid animal food sparingly each time, but often repeated, is proper and suitable. When the debility is greater, and solid animal food can neither be taken, nor if taken, digested, broth made from it, as rich as possible, and as free of fatty matter, should be carefully administered‡. With this view to excite the stomach, and render it more fit for recieving aud digesting the food just now mentioned ; the diffusible stimuli, such as different kinds of wine, and more particularly still opiates and other remedies of similar powerfulness, ought to be constantly employed ; sparingly at first, and afterwards more fully, if the debility be direct : after which, the use of the diffusible should be gradually laid aside, and, in the same gradual way, recourse be had to a larger use of the more durable and natural stimuli§. In the case of indirect debility, we should also gradually proceed from the highest to the lowest force of stimulus, as has been mentioned formerly‖, and, in an inverse manner, go on from the smallest force of durable stimulus to the greatest. Lastly, in that moderate debility, which constitutes the predisposition to asthenic diseases, it must always be kept in mind, that an abundance of blood is the greatest sup-

* *Compare this with par.* 280. *above, and with all the paragraphs from* 131. *to an* 136.

† *Or in a direct proportion to the degree of excitement.*

‡ *Compare this with par.* 271.

§ *See last note* (‖), *and compare it with this.* ‖ *par.* 103.

port of health (a), and that we are not to give way to weakened appetite*.

290. To the vital fluid, and the several means of encreasing its quantity, which have just now been mentioned, the next remedy in the cure of asthenic diathesis is heat; as being the power by which animals†, in their first formation, in their growth, and most especially in their decay, are brought forth into existence, are nourished, and acquire vigour, and afterwards, through *the several degrees of* their declining state, are to some extent upheld, till their excitement is all extinguished‡. By heat, understand that point of external temperature, which intervenes as a mean betwixt cold, as it is called, and high heat§; under which our sense of temperature is agreeable and pleasant; under which the body is neither weakened by that relaxation which produces sweat, nor by that torpor‖ which cold begets, *where the debility is*, in this case, direct, and in the former indirect; under which the functions of the whole body are excited, called forth, and, as it were cherished in the sun-beams; without which all other stimuli are of no effect (b).

291. Such a temperature as that, is suited to every state of the body, but still more to *its different states of* debility; because, *in the latter case*, as the excitement is deficient from other sources, there is so much more occasion for this stimulus, which is much easier come at than many others, *to supply such deficiency*. Hence, both in other diseases of great and direct debility, and particularly in fevers, heat is found to be of the greatest benefit, and above all others in all such complaints of

* *This is equally the reverse of the general practice of inanition in almost every disease, without a single exception.*

† *And we may add vegetables.*

‡ *Compare this with par.* 112. *and* 253. *and* 259.

§ *The Latins have a single word for this which we want; the word is ardor.*

‖ *Or benumbed state.*

that kind, as cold has had any ſhare in producing*. In the ſame diſeaſes cold muſt be moſt carefully avoided, as it is always of a directly debilitating operation, and never of ſervice but in ſthenic diatheſis, and thoſe that are in a progreſs to indirect debility (c). We muſt be equally on our guard, in every degree of aſthenic diatheſis, againſt exceſſive heat; which is equally debilitating as cold, and equally productive of atony, laxity, and gangrene of the veſſels, as well as ſtagnation and corruption of the fluids, in conſequence of the inactive ſtate of the veſſels†.

292. As refilling the veſſels is the greateſt remedy, becauſe its direct ſtimulus is applied over ſuch an extent of the ſyſtem; for that reaſon heat, which is immediately applied to the whole ſurface of the body, and directly affects the body to that extent, ſhould be next in virtue *to it*.

293. Since vomiting, purging‡ and ſweating§ are ſo powerful in debilitating, as to claim the third place of rank in the ſthenic cure: they muſt, for that reaſon, by the ſame debilitating operation, be equally hurtful in aſthenic diatheſis, and the ſtimuli that ſtop their operation, and, conſequently, both the other ſtimuli, and particularly the diffuſible ones, equally ſerviceable.

294. To run over the liſt of ſtimuli, that anſwer this purpoſe, we muſt begin with the cure of that ſlighter loſs of fluids *that occur* in thoſe diſeaſes, and proceed to the more violent kinds of them.

In a ſlight looſeneſs of belly, ſuch as happens in prediſpoſition to aſthenic diſeaſes, or in the ſlighter degrees of the latter; it will be commonly ſufficient to abſtain from vegetable food, and from weak, watery drink, or that *kind of it that* ferments *in the firſt paſſages*, ſuch as the ſeveral drinks made from barley, called beers; to

* *See again, par.* 259. † *With this propoſition compare par.* 115. 117. *and* 118. ‡ *See par.* 282. § *See par.* 254.

uſe animal food, as well ſeaſoned and as rich as poſſible, and free of all fatty matter; to drink pure wine, or ſpirit, in different degrees of ſtrength; and to take *ſuch* exerciſe *as is* gentle in degree, and often repeated*.

295. When the belly is ſtill looſer, and *with that affected* with gripes and pains, as happens in the violent diarrœa, and in the dyſentery in which the looſe ſtools are accompanied with vomiting; or, when, without theſe troubleſome ſymptoms *affecting* the belly, diſtreſſing vomiting is an urgent ſymptom; or, when the vomiting is conjoined with a moiſture upon the ſurface, or macerating ſweat; or when ſweat is the only urgent ſymptom, and *as ſuch* waſtes the ſtrength, exhauſts the body, and diſſipates the fluid: in all theſe caſes, we muſt have immediate recourſe to the moſt diffuſible ſtimuli, and check ſuch an impoveriſhment of the fluids *of the ſyſtem*.

296. In which caſe, the uſe of ſtimuli will be ſo much the more neceſſary, that other ſymptoms uſually accompany thoſe encreaſed excretions. Their great efficacy, and ſtimulant power, is proved by their ſingular virtue *in removing* thoſe and other *ſymptoms*, in fevers and other moſt violent ſthenic diſeaſes, nay, in the article of death itſelf, from ultimate debility.

297. Accordingly, in ſpaſm and convulſions in the internal, in the external parts†, in bleeding diſcharges‡, in the direful delirium of fevers, and other very violent diſeaſes§, in ſthenic inflammation‖; when thoſe ſtimuli, which have a more permanent influence fail, or act to no *good* purpoſe; the virtue of the diffuſible ſtimulants, the principal of which is opium, is eminent.

298. As, therefore, the energy of that ſtimulant virtue ſerves to check looſeneſs of the belly, and vomiting,

* *See and compare, for the more clear underſtanding of this paragraph, the* 263. 267. 272. † *See par.* 194. *and* 195. ‡ *See par.* 183. *y. z. and* 231. *and the ſubjoined notes.* § *See* 197. 199. 200. ‖ *See par.* 203. *to* 211.

or even ſweating, when theſe ſymptoms are gentle, and depend upon a leſs violent *degree* of the cauſe; ſo that degree of its power, which is fitted to check theſe affections in the greateſt height of their violence, and to reeſtabliſh the ſtate of health, is by far the greateſt of all the powers, which are applied to the human body; which may be known from this proof, that when the action of all the other power by which life is ſupported is of no effect, they turn aſide in the inſtant ſtroke of death.

299. The moſt weak degree of the diffuſible ſtimuli* are the white wines, except madeira, canary, good ſherry and the red wines, except port and ſpirits procured by diſtillation, ſo diluted, as to equal the ſtrength of the wines, or exceed it a little. Still higher than theſe are the latter *taken* pure, and higher ſtill, thoſe that have undergone many rectifications. The ſtrength of which is in proportion to the quantity of water expelled, and of the alkili retained.

300. A higher place in the ſcale is claimed by muſk, volatile alkali, camphor; our trials of which are not yet ſo complete, as to aſcertain its force exactly: next comes æther, and, laſt of all, opium. Of all which, however, unleſs, when as they ſometimes do, they have loſt their effect by a continuance of their application, and are, therefore, ſubſtituted in place of each other for the ſake of renewal of the operation of each; and when, in that way we make the complete round of them, for the ſake of repelling extreme debility: *in every reſpect*, the preparations of opium are ſufficient for moſt purpoſes of high ſtimulating.

301. Together with all theſe†, regard muſt be had to *the articles of* diet‡,

* *See above par.* 126. *p. q. r. ſ.* † *They are animal ſoups, and ſolid meat* 289. *heat*, 290. *ſtimulants* 294. *diffuſible ſtimulants* 298. ‡ *See par.* 283.

And, as in great debility, and the diſeaſes depending upon it, of the only ſuitable matter, that is meat, nothing ſolid can be taken; for that reaſon, the matter to be uſed muſt be fluid, but ſtrong. Animal ſoups ſhould be given ſparingly at a time, but repeatedly, in proportion to the degree of debility, and jellies both along with the diffuſible ſtimuli. After that, when, chiefly by means of the diffuſive ſtimuli, the ſtrength is in part reſtored; at firſt ſolid meat, likewiſe in ſparing quantities, but often repeated; then *given* more plentifully, and at greater intervals, ſhould be taken. *In which progreſs* the patient ſhould gradually recede from the uſe of the diffuſible ſtimuli.

302. When now the diffuſible ſtimuli are altogether laid aſide, and the convaleſcent is given up to his uſual manner of living, and that management, which perſons in health commonly obſerve, (only that more care is taken *than in perfect health*, to avoid any thing that might prove hurtful); then it is, that every attempt of the phyſician ſhould be directed to the conſideration of the ſtrength of his patient, as returning, but not yet *quite* eſtabliſhed*. In his movements he ſhould firſt uſe geſtation, and then gentle but frequent exerciſe, and the latter ſhould always end in ſome, but not an high degree of fatigue. His ſleep ſhould neither be too long, nor too ſhort, leſt the former produce direct, the latter indirect debility†: the moſt nouriſhing food ſhould be taken, but not in too great a quantity, leſt the excitability of the ſtomach be worn off, without the attainment of a due degree of vigour; but it ſhould be often taken, in order to reduce the excitability gradually, which only ſerves to produce proper vigour, and reduce it to its half waſted ſtate‡; that degree of heat, which ſtimulates, ſhould be employed§, and both exceſs of it, as well as cold they are equally debilitating, ſhould be avoided; the

* *See above par.* 105. *and* 109. † *See par* 241. *and ſequent.* ‡ *See above par.* 24. 25. *and* 26. § *See* 112.

patient ſhould breathe pure air, and avoid impure; he ſhould keep his mind in gentle action, obſerve moderation in his paſſions, and court agreeable objects of ſenſe; he ſhould have no companions around him, but agreeable ones, and be in frequent gay entertainments; he ſhould travel through a pleaſant country, and be moderate in love. Neither is the management of the ſenſes, and any return of contagious matter to be neglected.

CHAP. XI.

How the remedies ſhould be varied.

303. AS the hurtful powers, that produce predispoſition to diſeaſes, or diſeaſes themſelves act ſome on one part, ſome on another, with ſomewhat more force than on any other equal part; and as ſuch a part is commonly that which they directly affect*; ſo the powers, which are employed as remedies, in order that their general effect may reach the whole body with the more certainty, ſhould be in the ſame manner, differently applied to different parts.

304. The cure of any ſthenic diſeaſe whatever, is improperly entruſted to bleeding alone, though that is one of the moſt powerful of the debilitating remedies. And the reaſon is, that, though the excitability is ſufficiently reduced by that remedy in the greater blood-veſſels, perhaps too much, yet in the extremities of theſe, as well as in the reſt of the body, it is not ſufficiently reduced (A). Nor is the alteration of bleeding with purging a perfect ſort of cure; becauſe, though the exceſſive excitement be ſufficiently, and more than ſufficiently, removed in the greater blood-veſſels, and in the innumerable ſmall arteries, whether exhalent or mucous, which diſcharge their fluids into the inteſtines; yet, neither on the perſpiratory termination of the arteries, nor on the

* *Par.* 49.

reſt of the body, is an equal debilitating energy exerted: for inſtance, the ſmall veſſels which open into the ſtomach, are not ſufficiently relieved of their diſtending* load. And although vomiting†, which has been improperly left out of the cure of ſthenic diſeaſes, and ſtill more improperly employed in every one of the aſthenic, ſhould be conjoined with the two remedies juſt now mentioned, even that would not be enough to produce an equality of diminiſhed excitement; as there would ſtill remain in the perſpiratory veſſels, the ſame ſtate of the excitement, which has been mentioned, as in the reſt of the body, that is not vaſcular. In violent ſthenic diſeaſes, therefore, after diminiſhing the diatheſis, and in the ſlighter from the beginning of the diſeaſe, the addition of the operation of ſweat to the evacuations that have been ſpoken of, will produce a more equal diminution of excitement, a more perfect ſolution of the diſeaſe. For by means of this evacuation, not only from the larger blood-veſſels, in the interior parts of the body, but from an infinity of outlets both of the external, and internal ſurface of the body, an immenſe quantity of fluids, every where diſtending, and, thereby, producing a very great ſum of excitement, is withdrawn. But the matter ſtops not even here. For, ſince in ſlight ſthenic affections much nouriſhing food, and in them all, too much, can be taken; the conſequence of that muſt be, that, however much the quantity of the blood and other fluids has been diminiſhed, if the food, which is the only power than can produce blood, continues to be taken, all the veſſels, in proportion to the quantity that has been taken, will again go on to be filled, and to be fired with the fewel of exceſſive excitement. To prevent which inconvenience, and to diminiſh excitement, ſtill with greater equality over the ſyſtem; ab-

* *and therefore ſtimulating load, the ſtimulus in any veſſel being the quantity of its fluid.*

† *See par.* 268.

ſtinence, or an allowance of vegetable matter in a fluid form, and watery drink, will have a very great effect. But neither does the matter end here. For, if, after taking all the precautions and ſecurities that have been recommended, the degree of heat, that proves hurtful from its ſtimulus, be allowed to approach the external ſurface of the body; it will produce another inequality of excitement, however much that may have been properly and equally diminiſhed by the other means of cure. Wherefore, as the ſthenic diatheſis depends ſo much upon the ſtimulus of heat, directly affecting the ſkin*, and is, on that account, prevalent in the ſkin in preference to other parts; to make ſure of rendering the diminution of excitement as equal as poſſible, the debilitating effect of cold ſhould be oppoſed to the high degree of excitement, which the heat has produced. When, at laſt, all the directions, which have been ſo fully pointed out, have been excuted, ſtill to reproduce the equality of excitement, ſuited to good health; it remains, that we be on our guard againſt the ſtimuli that ariſe from the intellectual functions and paſſions. For, as they have a great effect in producing ſthenic diatheſis†, ſo the guarding againſt them, or prevention of them, muſt be equally effectual in removing that diatheſis, and in reproducing that equality of excitement, upon which health depends (B).

305. If the cure of ſthenic diſeaſes hitherto has conſiſted in bleeding, purging of the belly, and in the uſe of refrigeration in a few caſes; and, if the other objects of attention, which have now been ſo fully treated of, have either been totally neglected, or mentioned in a ſlight way, by the by, and as if they had been of no conſequence, and, in the cures which where preſcribed in that way, not reduced to any principle; it will eaſily now appear, from what has been ſaid above, and in other parts of this work, how much the knowledge of

* *See par.* 113. † *See par.* 138. 140.

thoſe diſeaſes has been improved, both in the practical and reaſoning part: and it will now, at laſt, be found a certain and eſtabliſhed fact, that both the nature and true theory of ſthenic diſeaſes, as well as the practice of the cure of them, conſidered either as an art and imitative, or as rational and ſcientific, has been diſcovered and demonſtrated.

306. As the debilitating or antiſthenic* remedies are the ſame with the aſthenic hurtful powers†; ſo the ſthenic remedies‡ are alſo the ſame as the ſthenic hurtful powers.

x. And as the remedies of aſthenic diatheſis, to whatever part they are applied, alſo ſtimulate that part more than any other; ſome of them one, others another part, and encreaſe the excitement:

307. So, in aſthenic diſeaſes, if we want to rouſe the excitement with more equality, and reſtore the loſt ſtrength, we muſt not depend upon the moſt diffuſible ſtimuli alone§. For, while they indeed encreaſe the excitement over the whole body, at the ſame time, they produce that effect in the ſtomach with greater force than any where elſe. Hence, even from the beginning of the cure, when almoſt no food can be taken, and other durable and more natural ſtimuli‖ are moſt imperfectly applied; yet, together with the diffuſibles, ſoups¶ ſhould be given, and as much haſte as poſſible ſhould be made to bring the patient to take ſolid meat, while care at the ſame time, ſhould be taken to apply a proper degree of heat. For, by this method, we muſt properly ſecure both the internal and external ſurface. Nay, in the ſame way, we move that inanition of the veſſels which takes place in aſthenic diſeaſes in an exact pro-

* *See par.* 90. † *See par.* 303. *to* 306. *the preſent one.* ‡ *See par.* 91. § *See par.* 300.

‖ *as that of pure air, exerciſe, the ſtimulus of the motion of the blood and other fluids in the reſpective veſſels.*

¶ *See.* 301.

portion to their degree. For, as in that abundance of blood, which is the moſt powerful means of bringing on ſthenic diſeaſes, there is an opportunity of making a quick cure by immediate taking of blood; ſo it is only by inſenſible, gradual, imperceptible, and obſcure ſucceſſive ſteps, that we open the acceſs to the removal of that penury of blood, which proves the moſt hurtful power in aſthenic diſeaſes, and effect the filling of the veſſels again.

308. After this management of both ſurfaces of the body, and this partial filling of the veſſels; ſtill the excitement is not, equally enough encreaſed. To effect this further in part; at the ſame time ſome moſt diffuſible ſtimulus, ſuppoſe any preparation of opium, ſhould be adminiſtered, and the little animal food, or meat, that there is any appetite for, and that can be taken and digeſted, ſhould be added. The idea of giving food is evident from the latter explanation given about ſoups*. But, the uſe of the more durable, and leſs diffuſible, ſtimulus depends on this, "that when the excitability is worn out by any one ſtimulus, any new ſtimulus finds excitability, and draws it forth, and thereby produces a further variation of the effect".

309. Hitherto the ſtimulus of the motion, by which all the muſcles, which, from their ſituation on the ſurface of the body by their contractions propel the blood along the veins to the heart, are thrown into action, has not been ſupplied†; and, therefore, both upon account of the emptineſs of the veſſels, and the ſlow circulation from the want of that impulſe, the excitement is not ſufficiently arouſed over all that tract. After the ſtrength has, then, been ſo recruited, that rich food can now be taken, the body can now be rouſed, firſt by foreign, then by its own organs, of which the former is called geſtation the latter exerciſe, and alſo refreſhed by air; when

* *See par.* 307. † *See par.* 17. *e. b. c. d.* 272. 302.

all that has happened, then it is, that the excitement is further raised in several points, and becomes more equal upon the whole.

310. The last stimuli to be mentioned, which, along with those already mentioned, have a natural tendency to produce an equalization of excitement over the whole system, arise from the action of the mind, the energy of passion or emotion, and a still greater purity of air, than is attainable by persons shut up in a room*. In this state of convalescence, the same management, which was formerly mentioned upon the going off of sthenic diseases, perfectly applies (c).

311. The stimulant plan of cure, in all its parts, is new, whether the reasoning part, or the merely practical be regarded; and, whether the cause and the exciting hurtful power, or the indication of cure and the remedies, be considered. May it, therefore, be put as a question, whether the whole doctrine, which has hitherto been delivered, has, at last, brought forward clear proof, that the art of medicine, hitherto conjectural (d) inconsistent with itself, altogether incoherent, is reduced to an exact science, proved not by mathematical principles, which is only one kind of probation, but by physical ones, and established by the certain testimony of our senses, nay, and by the very axioms of the mathematical elements?

CHAP. XII.

As the Action of all the other Powers, that act upon living Bodies, is the same, that that of the Remedies is also the same.

312. AS it is found certain, and proved, that the common effect of all the exciting powers is precisely the

* *See and compare with these last mentioned stimuli the following paragraphs* 274. 277. 278.

same, to wit, the production of the phœnomena peculiar to life, that is, that sense, motion, intellectual operation, and passion and emotion, are the same, for what else is the effect of heat, of food, of seasoned food, of drink, of the blood, of the colourless fluids secreted from it, and of the air, among external bodies; what else in the functions of the living body itself, is the effect of muscular contraction, of thought, of the passions, and of sensation, but to excite, preserve, and continue as the sustaining cause of those functions in common to animals? And, as it is from that evident, that the operation of all the same powers is also the same; for it must be granted, that the same cause by an universal law in nature, tends to the same effect*: and further, as the operation *betwixt cause and effect* depends upon stimulating†, and that stimulus produces all the phœnomena of life, health, disease, and those intermediate degrees between both, which are called predispositions‡; from those certain and demonstrated facts it follows, and must be admitted, that the operation of the remedies, both in sthenic and asthenic diseases is the same. For, if there is no difference betwixt health and sthenic diseases, except an excess of excitement in the latter, and none betwixt the former and asthenic diseases, but deficient excitement in these last, what else can the operation of the remedies, to remove sthenic diseases be, but to diminish, and of those that remove the asthenic, but to increase the excitement§.

313. Whatever thing produces the same effect as another, or several things, it must be the same thing as each of them, each of them the same thing as it, and every individual of them the same thing as every other individual.

In sthenic diseases, bleeding, vomiting‖, and purging¶, sweating, abstinence**, rest of body and mind††,

* *See par.* 20. *with the annexed note.* † *See* 19 *and* 22.
‡ *See* 23. § *See* 88. ‖ *See* 280. ¶ *See* 282.
** *See* 283. †† *See* 284.

tranquility with reſpect to paſſion, *all theſe* reſtore health by nothing elſe but a diminution of excitement.

314. In aſthenic diſeaſes, the adminiſtration firſt of diffuſible ſtimulants, for the purpoſes of gradually bringing back the appetite for the greateſt remedy, food, as well as keeping the food upon the ſtomach, and of aſſiſting in the digeſtion of it*, then the application of heat†, then the uſe of the leſs diffuſible and more durable ſtimulants, as animal food, without and with ſeaſoning, wine, geſtation, gentle exerciſe‡, moderate ſleep, pure air, exertion of mind, exertion in paſſion and emotion, an agreeable exerciſe of the ſenſes, all thoſe re-produce health by no other operation, but that of only encreaſing excitement.

CHAP. XIII.

That all the Powers, which ſupport any Sort of Life, are the ſame, or the fundamental Principle of Agriculture.

315. AGAIN, are not the powers, which produce perfect health, the ſame as thoſe, which, by an exceſs of force, produce ſthenic diſeaſes; by a deficiency of force, aſthenic, as well as the prediſpoſitions to both, are they not the ſame, with no other variation but that of degree§?

316. Further, as we learn from the whole doctrine delivered above, the hurtful exciting powers, which produce ſthenic diſeaſes, are the remedies of aſthenic; and thoſe which produce the latter, are the remedies of the former‖.

317. All the powers, therefore, that ſupport any ſtate of life, are the ſame in kind, only varying in degree; and the propoſition is true, of every ſort of life [illegible] full extent over the animal creation.

* *See* 314. *to* 301. † *See* 301. ‡ *See* 301. 302.
§ *See* 23. 73. ‖ *See* 89. 90. 91. 92. 94.

Such is the life of animals*. Concerning which, all that has been said applies to the life of vegetables.

318. Accordingly, as animals, in every state of life, have their exciting powers† in predispositions and diseases, their hurtful exciting powers‡ in the cure of both those, their indications, and remedies adapted to each§; all that, in every respect, is precisely the case in plants.

319. The powers that support plants, in every state of life, are heat, air, moisture, light, some motion, and their internal juices.

320. The action of plants also consists in stimulus‖; by means of which, the phænomena peculiar to that sort of life, sense, some motion, and verdure, are excited; and the cause of this state is excitement, an effect in common to all exciting powers¶.

321. Nay, in this case too the exciting powers, when applied in due proportion, produce health; but their too great or too sparing *action* occasions diseases, or predisposition to diseases; of which the former depend on an excessive, the latter upon a deficiency of stimulus. Accordingly, excess or scantiness of moisture, excessive heat or cold, by an equality of *hurtful* operation, lead to disease and death, indirectly or directly. And, as the rays of the sun or darkness, when their operation is either too great, or too long continued, prove debilitating, the former indirectly, the latter directly; so the alternate succession of night to day, of darkness to night, seems to be the effect of an intention in nature, to prevent too great an effulgence of the light of day, or too long a continuance of it, from stimulating either in excess or an ultimate excess, and thereby inducing sthenic diseases, or those of indirect debility; or to prevent an

* *See from* 10, *to* 13. *inclusive.* † *See* 62. 67. 68. 69. 73. 112. *to an* 147. ‡ *See the same.*
§ *See* 88. 89. 90. 91.
‖ *See* 17. 19. *and notes.*
¶ *See Part I. Chap. II.*

exceſs, or too long continuance of darkneſs from producing direct debility, and the diſeaſes peculiar to it*.

322. Nor do plants want their excitability, which, equally as in animals, "is not different in different parts of its ſeat; nor is made up of parts, but one uniform, undivided property over the whole ſyſtem†." The effect of which is, that to whatever part of a plant any exciting power is applied, its operation, whether in exceſs, in due proportion, or in under-proportion, immediately affects the excitability over the whole.

323. This effect is alſo produced with the ſame inequality as in animals, being, for inſtance, greater in any part to which its exciting power is directly applied, than in any other equal part. And, as there are two reaſons for that fact in animals, the direct impreſſion of the power upon the part more affected, and a greater energy of the excitability of *a part or relation to which it is ſo applied*, than on that of any other equal part‡; the very ſame is the fact with reſpect to plants. Further, as the excitability bears a greater relation to the impreſſion of the *exciting* powers, on the brain, the ſtomach, and inteſtines, than on any of moſt of the other parts; ſo the part in plants, that correſponds to theſe parts, is the root, which is affected in the higheſt degree by the exciting powers. It is the root of plants, in preference to any of their other parts, to which the conflux of moiſture is made. The heat there is the beſt, which is neither exceſſive, and therefore liable to produce ſthenic affection, nor ultimately exceſſive, and therefore ready to induce indirect debility (both which diſadvantages are prevented by the depth *of the ground*); nor deficient, or what is called cold, which would bring on direct debility (A).

* *Chap. IV. We have no leſs proof, than that of the univerſal feeling of mankind, of the truth of what has been advanced, with reſpect to the ſtimulus of light and the debilitating effect of darkneſs.* † *See Part I. Chap. IV.*

‡ *See* 49 *and addition* 50. 51.

324. But the only use of the soil, through the pores of which the powers that have been mentioned penetrate, is to furnish that sort of a strainer, by which the powers may neither, from the pores being too patulous go down in too great quantity, and produce first a sthenic or too luxuriant a state of the plant, and then indirect debility, nor, from the contractedness of the pores, be insufficiently admitted to the root, and occasion indirect debility, or the decaying state of a plant. But that the soil is not otherwise necessary to the *production of* some *degree of* vegetable life, is proved by plants often living, to a certain degree, in pure water. That, however, it is useful as a filter, is proved by the good effect of ploughing, of breaking the clods, of dividing the tough clay by lime and other absorbent earths, and by these means relaxing the pores: *On the other hand, we have proof of the same thing* in the success of contracting the pores by making ground, *naturally* too friable, more tenacious with dung, and covering light ground with rags and stones, and thereby keeping in both heat and moisture.

325. From this *view of the facts*, the reason is evident, why every sandy as well as clay soil, when the former has not received, and the latter parted with its toughness, is barren and unfruitful. Hence it is, that very hot summers and countries are hurtful to clay grounds, by shutting up the pores; and serviceable to friable and lean grounds, by diminishing their porosity. Hence, dry seasons are suitable to low-lying rich grounds, which, from all quarters, conduct a quantity of moisture around the roots of the plants, while rainy seasons are those that answer in grounds that are high and of a thin soil. Declivities facing the north, which are commonly of a thin and poor soil, are cherished and protected by hedges and clumps of trees, and a great number of bare stones, covering every thing, which some persons, of more industry than sense, often remove with hurtful effect; their good effect being to give heat and keep in moisture. But in those places, the declivity of which looks towards the

south, there is not equal occasion for such *protection from cold* and dryness, as they, from their more happy situation, are cherished by the sun, defended from the cold winds, and exposed to those which blow from the southern points that are seldom too dry (B).

326. To return, *from this digression on agriculture*, to our proper subject; from what has been said upon cultivation and nature of plants, we learn, that their life is similar to that of animals; that every thing vital in nature is governed by excitement, which the exciting powers only afford; that there is in no living system, whether of the animal or vegetable kind, any inherent power necessary to the preservation of life; that the same powers which form life at first, and afterwards support it, have at last a tendency to produce its dissolution; that life, the prolongation of life, its decay and death, are *all states* equally natural: that every living system lives in that which procreates; that the generations of animals and vegetables are in that way renewed, that *the system of* nature remains, and maintains an eternal vigour; in one word, that all the phœnomena of nature are fabricated by one single organ (C).

There are many circumstances that give reason to believe, that this globe has undergone great changes, and that whatever is now sea, has been land; whatever is land at present, has been sea; and that the fossil *kingdom of nature* has not been more retentive of the respective form of each of its individuals. But whether the last, like animals and plants, have a short life, so as, after their manner, to be produced into living existence, to grow, to run through a period equally without growth and diminution of bulk, to decay, to die, and in death loose their proper form; the great duration of their age, and the shortness of ours, deprive us of any possibility of learning.

327. As all the motions of the planets, which latter were formed to remain and continue their courses for ever, depend upon this one principle, to proceed straight

onward, according to the manner in which all projectiles move, and then by the influence of gravity, which affects them all, to be pulled downwards, and thereby, upon the whole, thrown into circular motions; ſo, in the leſſer and living bodies with which thoſe greater bodies are filled, that is, animals and plants, of which the whole ſpecies remain though the individuals of each ſpecies die; whatever is the cauſe of their functions, whatever gives commencement and perfection to theſe, the ſame weakens, and, at laſt, extinguiſhes them." It is not, therefore, true, that ſome powers are contrived by nature for *the preſervation of* life and health, others to bring on diſeaſes and death. The tendency of them all is indeed to ſupport life, but in a forced way, and thus to bring on death, but by a ſpontaneous operation.

PART THE THIRD.

OF GENERAL DISEASES.

THE FIRST FORM, OR STHENIC DISEASES.

CHAP. I.

328. IN every ſthenia, in all ſthenic diſeaſes, in the whole firſt form of diſeaſes*, an univerſal criterion is encreaſed excitement over the whole ſyſtem, evidenced, during the prediſpoſition, by an encreaſe of the functions of body and mind†, and demonſtrable, after the arrival of diſeaſes, by an encreaſe of ſome of the functions, a diſturbance of others, and a diminution of others; in ſuch ſort, that the two latter are eaſily perceived to ariſe from the hurtful powers that produce the former, and to depend upon their cauſe. As by that common bond of union the diſeaſes of this form are connected together; ſo

329. There are certain circumſtances, by which they are diſtinguiſhed by a difference of their degree: for, there are ſome ſthenic diſeaſes, accompanied with pyrexia‡ and the inflammation of ſome external part; there are others without the latter of theſe, and others without both.

* *See above par.* 69. 88. 148. 150. 151. *Chap.* 9.

† *See par.* 150. *throughout.*

‡ *See par.* 68. *and the ſubjoined note, for the meaning of pyrexia, which will be juſt now repeated.*

330. The general ſthenic diſeaſes, without pyrexia and inflammation, are ſome of them called phlegmaſiæ, others exanthemata. But they will all, without diſtinction, be treated here according to their rank in excitement, from the higheſt to the loweſt degree of excitement.

331. The phlegmaſiæ and exanthematic diſeaſes have the following ſymptoms in common to them. The firſt of theſe is that degree of ſthenic diatheſis, that diſtinguiſhes prediſpoſition*. This diatheſis upon the formation of the diſeaſe, is ſucceeded by ſhivering, a ſenſe of cold, languor, and a certain feeling like that which we have in fatigue from labour, called by phyſicians, laſſitude. The pulſe at firſt, in every caſe, and in mild ones through their whole courſe is moderately frequent, and, at the ſame time, ſtrong and hard; the ſkin is dry, and there is a retention of other excretions†: The urine is red; there is great heat and often thirſt.

332. The ſymptoms peculiar to phlegmaſiæ (A), are an inflammation of an external part, or an affection nearly allied to it; while the general affection, for the moſt part, precedes this local one, and never ſucceeds to it (B). This general affection, for the greater convenience of diſtinguiſhing it from fevers, is to be denominated pyrexia‡. In the exanthematic ſthenic diſeaſes, an eruption of ſpots or puſtules, more or leſs crowded, according to the degree of the diatheſis, covers and diverſifies the ſkin. The eruption appears upon the occaſion of a foreign, contagious matter, having been taken into the body, and detained below the cuticle.

* *From the firſt deviation from perfect health to the commencement of actual ſthenic diſeaſe, the ſthenic diatheſis takes place in an encreaſing ſcale from* 40° *to* 55°.

† *Such as that by the belly, and that which pours out the ſaliva and mucus, and forms the matter of expectoration.*

‡ *Of this deſignation warning has been given more than once. See note at* 329.

333. The explanation of all those symptoms easily flows from the doctrine delivered above. The sthenic diathesis in the manner, that has been so fully explained* precedes. The characteristics of the pulse are never to be referred to the affection of a part, having been demonstrated to arise from the diathesis†.

334. The frequency of the pulse in sthenic diseases is moderate, because, while the stimulus in the system cannot fail to produce some frequency, the quantity of blood, to be thrown into quick motion, sets bounds to it and prevents its rising into quickness. But, at the same time, it is evident, that a quantity so great cannot be transmitted with the same celerity, as an under proportion (C). The strength of the pulse is occasioned by the degree of excitement in the moving fibres of the vessels, which is commonly called their tone, and by that of their density considered as simple solids‡. The hardness of the sthenic pulse is nothing else, than the continuance for some time of each strong contraction, closely embracing a great column of blood, and, thereby, as it were, resembling a stretched rope (D).

335. That this is the exact state of the arteries is proved by the great quantity of food taken with a good appetite, before the arrival of the disease, and during the period of predisposition; it is proved by the same and other powers, giving an unusually great excitement over the whole system§, and, therefore, among their other effects encreasing the digestive energy; and it is proved by evacuant, with other debilitating remedies, both preventing and removing the diseases. The confounding, therefore, this state with one diametrically opposite (E),

* *See above all the paragraphs, where the operation of the powers producing sthenic diathesis, are accounted for.*

† *See also par.* 154, *and* 155. *and particularly* 173.

‡ *See above* 59. 60. 61.

§ *See the whole of the first Chapter of Part II. upon the powers producing sthenic diathesis.*

which has hitherto been an universal practice, was a very capital blunder, and could not miss of producing the worst consequences, by equally perverting the theories and actual practice of the art.

336. The shivering and sense of cold depend for their cause upon the dryness of the skin. The languor and feeling of lassitude point out a higher degree of excitement in the brain and fibres of the muscles, that can be conveniently borne by the excitability, confined within certain boundaries*. They are therefore functions impaired from a stimulant, not from a debilitating cause†.

337. The dryness of the skin is occasioned by the great excitement and density of the fibres that encircle the extreme vessels, diminishing their diameters to such a degree, that the imperceptable vapour of perspiration cannot be taken into them, or, if taken in, cannot be transmitted‡. This state is not spasm, is not constriction from cold, but a sthenic diathesis, somewhat greater on the surface, than in any other part. The stimulant energy of heat, especially after the application of cold, which is otherwise a powerful exciting cause of sthenic diseases, is applied to this part with more force than to any of the interior parts, and encreases the sum total of stimulant operation§.

338. The same, in general, is the cause of the temporary retention of the other excretions‖; only that the operation of heat, just now mentioned¶, is foreign from the present explanation; and on that account, the diathesis, that effects the interior vessels, is more gentle. These vessels, for that reason, and because they are na-

* *See above* 153. † *See above paragraph* 165.
‡ *See* 69. *and* 113. § *See* 37. *b. and* 113. *just now quoted.*

‖ *See* 331. *and note* (*); *and also the par.* 158. 159. 162. ¶ *in the* 337. *and the reason is, that heat being stationary in the interior parts, has not that force which it has upon the external surface. See above par.* 113.

turally of a larger diameter, are ſooner relaxed in theſe diſeaſes, than the pores upon the ſkin*.

339. The redneſs of the urine is owing to the general diatheſis affecting the veſſels that ſecrete it, and proving an obſtacle to the ſecretion†. Hence ariſes the ſtraining of the fluid to be ſecreted to diſtend the ſmall veſſels‡, and the counter-ſtraining of the moving fibres, by their contraction, to diminiſh the cavities which the diſtention encreaſes; and, in ſo far as they perform the function of ſimple fibres, to reſiſt the diſtention. But, as, in this forcible action of the veſſels, the coheſive force of all the ſimple ſolids yields ſomewhat, the effect comes to be the tranſmiſſion of ſome particles of blood. This tranſmiſſion happens not at firſt, becauſe the diſtention does not ſuddenly, but after ſome time, overpower the coheſion of the maſs of ſimple ſolids.

340. The cauſe of the great heat is the interruption of the perſpiration, preventing the heat generated in the inner parts of the ſyſtem to off go by the ſkin.

341. The thirſt is occaſioned by the ſthenic diatheſis, cloſing up the excretory veſſels of the throat, and *there* oppoſing the excretion of the *peculiar* fluid§. And the heat, by diſſipating what fluid is excreted, contributes to the effect.

342. The inflammation and affect nearly allied to it‖, whether of a catarrhal or of any other nature, is a part of the ſthenic diatheſis, greater in the affected, than any other equal, part of the ſyſtem¶: Which is manifeſted by the exciting powers, alſo in this caſe acting upon the whole ſyſtem, by the ſymptoms of the diſeaſes ſhowing an affection in common to the whole, and by the reme-

* *It is reaſonable to think, that veſſels, which pour out a watery fluid, have a larger diameter than thoſe, which, like the perſpiratory, even in their healthy ſtate, only tranſmit an imperceptible vapour.*

† *See par.* 162.

‡ *Or tubuli uriniferi.*

§ *See par.* 158.

‖ *mentioned above in par.* 332.

¶ 167. 168. 169. 170.

dies driving that affection, *not from the inflamed part only*, but from the whole syſtem*.

343. The general affection, for the moſt part, precedes that confined to one part, or is ſynchronous with it, never comes after it, becauſe its cauſe, the exceſſive excitement†, producing the diatheſis, exiſts before the diſeaſe itſelf ‡; and, though it forms the rudiments of the affection of the part during the prediſpoſition§, yet it does not, *at that time*, form that affection itſelf, and not always even during the diſeaſe, but only in a certain high degree both of the diſeaſe and of the particular affection itſelf ‖. Hence, when the diatheſis is great, the affection of the part is in proportion¶, and ſlight under a leſſer degree of the diatheſis** ; while in a moderate and gentle diatheſis it does not happen at all††, and for this reaſon, that a high degree of diatheſis is neceſſary to the formation of it. Thus in peripneumony, where the diatheſis is the greateſt, and in rheumatiſm, where it is next *in greatneſs*, the inflammation is found proportionably great (F). And even in the meaſles, the danger of which turns entirely upon the ſthenic diatheſis, the danger of inflammation is equal, by which, and often in a high degree, the lungs themſelves are affected. Synocha is never phrenitic, but when a great diatheſis occurs, threatening the brain with inflammation, or the danger of it. Nor is there any danger to be apprehended in eryſipelas‡‡, even when *its inflammation* affects the face, but when the pyraxia is violent. And the mildneſs of the diatheſis enſures a good termination. Simple Synocha is nothing elſe but a phlegmaſiæ, conſiſting of a py-

* 89. *See alſo part firſt, Chap. IV.*

† *See* 62. 69. ‡ *See* 173. § *See above* 168.

‖ *See above* 167. *b.* ¶ *as in peripneumony and rheumatiſm, inflammatory ſore throat, and mild eryſipelas, ſore throat.* ** *as in the ſthenic.* †† *As in ſynocha, or the common inflammatory fever and catarrh.*

‡‡ *or the roſe, or St. Antony's fire.*

rexia and diatheſis, inadequate, upon account of their ſmall degree, to the production of inflammation. Yet, as all the hurtful powers producing it, and all its remedies are preciſely the ſame, with thoſe of any phlegmaſiæ; the ſeparating it from them, and uniting it with fevers, which are diſeaſes of extreme debility, was an unpardonable blunder (G); and ſo much the more ſo, that inflammation, which was ſafely ſuppoſed eſſential to the nature of the phlegmaſiæ, does take place in it, as often as the diatheſis, neceſſary to produce it, is preſent*. Yet this fact, upon account of another blunder, neither of a ſlighter nature, nor of leſs hurtful conſequence, that of ſuppoſing inflammation the cauſe of the phlegmaſiæ, could not be diſcerned. In fine, to remove all doubt of inflammation being compatible with the nature of catarrh, but commonly not taking place in it, upon account of the moderate general diatheſis, upon which it uſually depends; even in it, as often as the diatheſis riſes high, which ſometimes happens, when the proper plan of cure for it has been neglected, and the effect of the exciting hurtful powers has been carried to exceſs, an inflammation, and a formidable one indeed, ariſes, often affecting the threat†, and ſometimes the lungs, and producing, *there* an affection riſing to all the rage of a peripneumony.

344. It is in vain to talk of a thorn thruſt under the nail, wounding it, ſuperinducing inflammation upon wound, and ſpreading a ſimilar affection *along the arm* to the ſhoulder, and a pyraxia over the whole body, as an illuſtration and proof of the manner, in which the phlegmaſiæ ariſe from inflammation. For nothing like a phlegmaſiæ follows this, or any ſimilar affection of a

* *What is a peripneumony, a rheumatiſm, or any phlegmaſiæ, but a ſynocha, with a diatheſis ſufficient to produce inflammation?*

† *When that happens it is ſtill commonly a mild diſeaſe, which will be ſhewn by and by.*

part, unleſs the *ſthenic* diatheſis previouſly happens to have taken place, and is now upon the eve of ſpontaneouſly breaking out into ſome one or other of its reſpective diſeaſes. But, without that diatheſis, no general affection takes place, and if an oppoſite diatheſis be preſent *when ſuch an accident happens*, an oppoſite general affection will be the conſequence, to wit, a typhus fever, ariſing as a ſymptom of gangrene (H), and dangerous to life.

345. That the affection of the part depends upon the general affection is proved by the frequent occurrence of inflammation, without being followed by any phlegmaſiæ. Which happens, as in the caſe juſt now mentioned, as often as the general diatheſis is abſcent, or the inflamed part is not an internal one and of high ſenſibility*. Accordingly, all the examples of phlegmone, all thoſe of erythema or eryſipelas, without general diatheſis (I), are foreign from the phlegmaſiæ, abſurdly conjoined with them, and more abſurdly ſtill conſidered as their prototypes; being *in fact* all only local affections, or ſymptoms of other diſeaſes. This concluſion is not weakened by a certain reſemblance of diſeaſes with inflammation in an internal part to the phlegmaſiæ; theſe diſeaſes being neither preceded by the uſual hurtful powers, that produce either the phlegmaſiæ, or any general diſeaſe whatever, nor cured by the uſual remedies of the latter. It was, therefore, a very bad miſtake, and of moſt hurtful conſequence to the practice of cure, to enumerate among the phlegmaſiæ thoſe diſeaſes, that ariſe from ſtimulants, acrids, and compreſſion, and are only curable by removing their local cauſe, which is ſeldom affected by art (K).

346. It is not without good reaſon, that the appellation of *pyrexia* has been given to the general affection, which appears in the phlegmaſiæ and exanthemata; they being by it moſt advantageouſly diſtinguiſhed on the

* *See above* 170.

one hand from fevers, which are diſeaſes of debility in extreme, and on the other from a ſimilar, but altogether different affection, which is a ſymptom of local diſeaſes (L), and may be called a *ſymptomatic pyrexia*.

347. The true ſthenic diſeaſes* accompanied, except one, with pyrexia† and external inflammation‡, are peripneumony, phrenitis, the ſmall pox, the meaſles, as often as theſe two laſt are violent, the ſevere eryſipelas, rheumatiſm, the mild eryſipelas, and the cynanche tonſillaris. Thoſe free of inflammation are catarrh, ſimple ſynocha, the ſcarlet fever, the ſmall pox, the meaſles; when in the two latter caſes, the eruption conſiſts only in a few puſtules.

The Diſcription of Peripneumony.

348. The ſymptoms peculiar to peripneumony (M) (under which pleuriſy, and, as far as it is a general diſeaſe, cardites, are comprehended), are pain ſomewhere in the *region of* the cheſt, often changing its ſeat: difficult breathing; cough, for the moſt part bringing up an expectoration, and ſometimes a mixture of blood *in the matter of expectoration*.

349. The ſeat of the diſeaſe is the whole body, the whole nervous ſyſtem§: which is proved by the diſeaſe being produced by an encreaſe of the diatheſis, which took place in the prediſpoſition, and by no new circumſtance‖; by the inflammation within the cheſt, for the moſt part following the pyrexia at a conſiderable interval of time, and never preceding it¶, and by bleeding and other remedies of ſimilar operation, which affect not the inflamed part, more than any other equally diſtant *from the centre of activity*, removing the diſeaſe.

* *See above* 329. † *See* 332. ‡ *See* 167.
§ *See par.* 47. 48. 49. 54. 55. *and not the inflamed portion in the lungs, according to the common opinion.*
‖ *See above* 75. 76. ¶ *See above* 332. *and the note* (n).

The proper seat of inflammation, which is only a part of the general diathesis, is the substance of the lungs, and a production of the pleura, covering their surface, or any part of that membrane, whether the part lining the ribs, or that containing, within the external surface of it, the thoracic viscera, different in different cases, and in the same case at different times,

350. Pain, in some part of the chest, depends upon an inflammation of the corresponding internal parts just now mentioned*, which is proved by dissection; only that it is oftener occasioned by an adhesion of the lungs to the pleura costalis, seldom to an inflammation of that membrane, *as we learn from the same evidence.*

351. When the inflammation takes place on the surface of the lungs, it is impossible it can be confined either to the substance of the lungs, or the membrane covering their surface. For how can any person suppose, that the points of the same vessels, either as distributed upon the membrane, or plunging into the substance of the lungs, or emerging from it, can alone be inflamed without *a communication of the affection* to the next points (N). The distinction, therefore, of the inflammation *accompanying the phlegmasiæ* into perenchymatose, or that affecting the substance of the viscus, and into membranous; as well as the notion which makes the latter case universal, is equally remote from the truth. The reason of neither the membrane contiguous to the lungs, nor the substance of the latter, being always inflamed, but of the inflammation being sometimes communicated to some part of the neighbouring membrane, is explained by the vicinity of the part inflamed *in the last case* to that which receives the air, therefore varies in its temperature (O).

352. The pain often shifts its seat† in the course of the disease, because its immediate cause, the inflammation, is equally liable to change, being disposed to leave

* *See above par.* 173. † *See above par.* 348.

its firſt ſeat, or in part to remain in it, while in its greateſt part it ruſhes into another. Which is a fact proved by the compariſon of the known change of the pain with the traces of inflammation in the correſponding parts, diſcovered after death*.

353. This fact, added *to thoſe already produced*, *brings* another ſolid argument† in refutation of the opinion of the diſeaſe being produced or kept up by inflammation, or in any ſhape depending upon it; confirms that here advanced, and proves that the inflammation is regulated by a ſtrong general diatheſis, and directed by it ſometimes to one part, ſometimes to another; that, *as depending on that cauſe*, it encreaſes and is in a manner multiplied. And the ſame concluſion is confirmed by the inflammation abating, becoming more ſimple, and *at* laſt receding from every part it had occupied, in proportion to the progreſs of the cure in relieving or removing the diatheſis. The ſame fact is confirmed by the nature of rheumatiſm, the pains of which are ſeverer and greater in number, in proportion as the diatheſis runs higher; and milder and fewer in proportion to its gentleneſs. Theſe pains, that have their dependence upon the general diatheſis, *and are* a part of the general diſeaſe, ought to be diſtinguiſhed from the local ones, which often occur, and may accidentally precede this diſeaſe (P).

354. The difficult breathing is owing to no fault in the lungs, as an organ, to no defect of excitement in them, but to the air alone in inſpiration, by filling and diſtending its own, compreſſing the inflamed veſſels.

355. The cauſe of the cough is a large ſecretion and excretion of the exhalable fluid, and mucus, irritating the air veſſels, encreaſing their excitement, as well as *that* of all the powers, that enlarge the cavity of the thorax; then ſuddenly ſuſpending it, and thus perform-

* *Many ſuch are to be found in Morgagni, Bonnetus, and Liutad.* † *See all that has been ſaid.*

ing a full inſpiration, and a full expiration, partly in conjunction with the operation of the will*.

356. The cough is leſs or none at all at firſt; becauſe, on account of a ſtrong diatheſis occupying the extremities of the veſſels, the ſame fluids flow on in the form of an inſenſible vapour, are leſs irritating *in that form*, and diſmiſſed with leſs effort.

357. *Again*, the cough is afterwards followed by expectoration; becauſe the accumulated fluids, with their effect, the effort of coughing, are carried forward in the rapid action of the air ruſhing out, as it were, in a torrent†. And the mixture of blood with them points out the force of ſecretion formerly explained.

358. The ſoftneſs of the pulſe, commonly taken into the diſinition *of the diſeaſe*‡, has been here rejected, becauſe the characteriſtics of the pulſe do not follow the inflammation, but the general diatheſis§. With reſpect to the diatheſis, *the proper language is, that* the pulſe inſtead of ſoft, is leſs hard; and when the effect *that the cure has produced upon the pulſe*, is conſidered, it may then be ſaid to be ſoft (Q).

359. Nor is the varying feeling of pain, which *is deſcribed as* ſometimes acute, and pungent, ſometimes obtuſe, gravitative, and rather to be conſidered as an uneaſineſs than pain, though immediately dependent upon the inflammation, to be conſidered as of any conſequence in pointing out the ſtate or ſeat of the inflammation; becauſe, however great the inflammation is, wherever it is ſeated, whatever danger it denounces, the only means of removing it, and of averting the danger, is to remove the general diatheſis. The motion, therefore, of the membrane being inflamed, when the pain is acute, and the interior ſubſtance, when it is obtuſe, muſt be rejected as good for nothing, muſt be guarded againſt as

* *See above* 159. *and* 160. † *See above par.* 238.
‡ *at leaſt when they called it peripneumony,*
§ *See above* 154. *and* 173.

deſtructive*. For often, when the diſeaſe has arrived at an advanced ſtage, a ſudden abatement of the pain taking place, without a proportional relief of the breathing, to an unſkilful perſon gives an appearance of a return of health. But the cauſe of that, while it has nothing to do with the ſeat or ſort of inflammation, is that degree of excitement, which ſhows, that the excitability is exhauſted, the excitement come to an end, and that the vigour, before exceſſive, is now converted into direct or indirect debility (R). Hence ariſes in the veſſels, eſpecially the labouring veſſels, in place of the exceſſive excitement, *with which they were before affected*, no excitement at all; and extreme laxity takes place of their former denſity. Hence, inſtead of an excretion encreaſed by violence, an immenſe diſcharge takes place without force, without effort, *and merely* by the watery *part of the* fluid, from the enert ſtate of the veſſels, leaving the more conſiſtent; and a ſudden ſuffocation takes place, in conſequence of an effuſion of fluids from all quarters into the air veſſels.

360. The carditis, or inflammation of the heart, is a diſeaſe of rare occurrence, is ill underſtood, and for the moſt part a local affection. When the latter is the caſe, there is no uſe for the interference of a phyſician. And if ever it be a general diſeaſe, it admits of no other definition or cure but thoſe of peripneumony. From peripneumony then, as it ariſes from the ſame antecedent hurtful powers, and is removed by the ſame remedies, it is not to be ſeparated.

The Deſcription of Phrenitis.

361. Phrenitis is one of the phlegmaſiæ†, with a ſlight inflammatory or catarrhal affection of ſome one, or more joints, or of the fauces, with head-ache, red-

* *See par.* 351. *and the note under it at* (N).
† *See above par.* 347.

neſs of the face and eys, impatience of light and ſound, watchfulneſs, and delirium.

362. Inflammation, in its proper form, appears not in this caſe. And yet there is an approach to inflammatory ſtate in the joints, in the muſcles, and eſpecially over the ſpine, or about the cheſt, or in the bottom of the throat; or *there is* a catarrhal ſtate, which is an affection depending, *however*, upon the ſame cauſe, *as inflammation*, and only differing from it in being leſs.

363. The head-ache, and redneſs of the face and eyes, ariſe from an exceſſive quantity of blood in the veſſels of the brane and its membranes, diſtending ſtimulating in exceſs, exciting in exceſs, and contracting the veſſels, to *a degree that gives* pain*. To the production of which laſt inflammation is not neceſſary: independent of which, this exceſſive action is painful, becauſe it exceeds that mediocrity in which agreeable ſenſation takes place†. The redneſs both points out and explains the over-proportion of blood. And that the over-proportion gives pain by its diſtending operation, is ſhewn by the relief that bleeding and every thing that diminiſhes the quantity, and moderates the impetus of the blood, adminiſters.

364. It is the overabundance alſo that produces the impatience of light and ſound. For, as a certain impulſe of the blood is neceſſary to the exerciſe of every ſenſe, by wheting the organ of ſenſation (s); ſo, when the cauſe riſes to exceſs, an equal encreaſe of the effect muſt be the conſequence. But theſe *very* ſymptoms, with pain, ariſe in an oppoſite ſtate of excitement, to wit, the aſthenic.

365. The vigilance and delirium are occaſioned by the ſame exceſs of excitement, produced by the exceſſive ſtimulus of the abundance of blood and of the other powers. Other hurtful powers, contributing their effect, are intenſe thinking, and a high commotion of paſſion.

* *See above* 156. *and* 157. † *See* 181. 182.

Excited by thoſe, no body, even in health, ſleeps; and therefore, the wonder is the leſs, that a high degree of them, and under the influence of a violent diſeaſe, ſhould repel ſleep. Both encreaſed watching and delirium are ſymptoms of diſturbance.

An explanation of the Sthenic Exanthemata.

366. The ſthenic exanthemata, after the application of a contagious matter, and of the uſual hurtful powers which produce ſthenic diatheſis, appear firſt in the form of a ſthenic pyrexia, or ſynocha, and then after a ſpace of time, not certain to a nicety, are followed with ſmall or larger ſpots.

367. That the exanthematic ſthenic diſeaſes differ not from the other ſthenic diſeaſes *not exanthematic* in any circumſtance of conſequence, is proved by this ſtrong argument; that, except the eruption and the phœnomena peculiar to it, there is nothing in the ſymptoms, and except the contagion, there is nothing in the hurtful exciting powers, but what happens in any ſthenic diſeaſe; and the preventatives, as well as the remedies, are the ſame *in all*. While that is the ſtate of the fact, it was the height of abſurdity, *merely* for the ſake of the eruption and its peculiar phœnomena, to ſeperate the exanthematic from their kindred diſeaſes, and to unite them with the moſt oppoſite diſeaſes both to them and to one another (T). For how, when the uſual plan of cure removes the effect of the eruption, whatever that be, and thereby ſhows it to be the ſame, can any one imagine, that the cauſe ſhould be different and not preciſely the ſame? unleſs we muſt again have to do with thoſe who maintain, that the ſame effect may flow from different cauſes. Truly, the operation of contagion, in ſo far as it affects general diſeaſe, is not of an oppoſite nature to the general ſthenic operation, but preciſely the ſame.

368. Contagion is a certain matter, imperceptible, of an unknown nature, and like moſt of the phœnome-

na of nature, only in any meaſure open to our enquiry in its evident effects. Taken from the body of one affected with it, or from any groſs matter (ſuch as clothes or furniture, where it happens to have been lurking,) and received into a ſound body, it ferments without any change of the ſolids or fluids, it fills all the veſſels, and then is gradually ejected by the pores.

369. And, as no effect, except ſthenic diatheſis, follows it, and the hurtful powers, that otherwiſe uſually produce that diatheſis, always precede it, and an aſthenic or debilitating plan of cure always, and only, ſucceeds *in removing it*, and conſequently its effect no ways differs from the diſeaſes hitherto mentioned; it is, therefore, with juſtice, that the diſeaſes ariſing from it, are conjoined with thoſe others, as belonging to the ſame form.

370. Betwixt them there is only this difference, that in the exanthematic caſes of ſthenic diſeaſe, the matter requires ſome time to paſs out of the body, *which time is* different in different caſes; and it paſſes out more copiouſly or ſcantily, the more free or impeded the perſpiration is*. But it is impeded by no ſpaſm, by no conſtriction from cold, and only by the prevalence of ſthenic diatheſis upon the ſurface of the body; as is evident from this fact that cold, by its debilitating operation, procuring a free iſſue for the matter, clearly promotes the perſpiration†. And that it produces this effect, by diminiſhing the diatheſis, not by removing a ſpaſm, has been demonſtrated formerly. As the iſſue of the matter is in this way promoted by inducing a free perſpiration; ſo

371. Whatever part of it is detained below the cuticle, by that delay, it acquires a certain acrimony, produces little inflammation, and conducts them, when produced, to ſuppuration. Theſe, by irritating the affected part,

* *See above paragraph* 21. *and* 76.

† *See paragraph* 117. 118. 120. 121.

create a ſymptomatic pyrexia ſymptomatic ſthenic diatheſis, which ſhould be diſtinguiſhed from the general *pyrexia and general ſthenic diatheſis**.

372. The period of eruption is more or leſs certain, becauſe the operation of fermentation, being in ſome meaſure certain and uniform, to that extent requires a certain uniform *ſpace of* time, for being finiſhed, diffuſed over the ſyſtem, and reaching the ſurface of it, as is atteſted by the effect. Again, it is not exactly certain, becauſe the perſpiration, in the varying ſtate of vigour, *that muſt occur*, muſt, *at different times*, and under different circumſtances, be more vigorous or more languid.

373. The pyrexia, ſymptomatic of the eruption, ſometimes takes on the form of an actual fever: The reaſon of which is, that the high degree of ſtimulus, which the eruption throws upon the whole ſurface, produces ultimately exceſſive excitement, and therefore, *puts* an end *to it in the eſtabliſhment of* indirect debility†.

The deſcription of the violent Small-pox.

374. The violent ſmall-pox is a ſthenic exanthema, on the third or fourth day of which, ſometimes later, ſmall ſpots or points, inflammed, and by and by to be transformed into exact poſtules, break out; containing a liquor *which*, generally on the eighth day after the eruption, often later, is changed into pus, and dwindles away in the form of cruſts. The eruption, the degree of which is always in proportion to that of the ſthenic diatheſis, in this caſe is the greateſt that ever occurs.

375. All theſe phœnomena are governed by the laws of fermentation, lately mentioned‡. The number of puſtules, being proportioned to the degree of diatheſis, ſhows that, without the hurtful powers, that otherwiſe

* *See above paragraph* 174. *and* 276.
† *See par.* 214. 215. ‡ *See above par.* 368.

and without any co-operation of contagious matter, produce that diatheſis, the contagion has not much effect in producing the real morbid ſtate, and that it chiefly regulates the exterior from the diſeaſe*.

376. But a violent ſmall-pox is diſtinguiſhed by the following ſymptoms: Before the eruption there is a ſevere pyrexia; this is ſucceeded by an univerſal cruſt of puſtules over the whole body. Antecedent to which the hurtful powers are very violent ſthenic ones, and particularly heat; the remedies that remove it are very aſthenic, and in preference *to any of them* cold.

The deſcription of the violent Meaſles.

377. The violent meaſles is a ſthenic exanthematic diſeaſe†, beginning with ſneezing, watery eyes, dry cough, and hoarſeneſs; on the fourth day of which, or later, there appears an eruption of ſmall numerous papulæ, or little points; that on the third day, or later, terminate in an appearance of branny ſcales. This diſeaſe, when preceded with a high degree of ſthenic diatheſis, is proportionally violent.

378. The ſneezing, watery eyes, dry cough, and hoarſeneſs, are catarrhal ſymptoms, and, therefore, depend upon ſthenic diatheſis‡. And, ſince they appear, four days or more, before the eruption, that is, before the matter might ſeem to have reached the affected parts, and are conſtant and univerſal; hence are we to ſuppoſe that the ſthenic diatheſis follows the hurtful powers, that uſually produce it, and not entirely the peculiar matter in this caſe, and that it is indiſpenſibly neceſſary to the meaſles. But though that *ſuppoſition* ſhould be rejected, and it ſhould be contended, that thoſe ſymptoms ariſe from the *contagious* matter; it ſtill muſt be granted,

* *Which, without diatheſis, is of no conſequence, and does not amount to general morbid ſtate.*

† *See above par.* 366. ‡ *See above par.* 174.

that this disease differs, however, in nothing from the other sthenic diseases, but equally depends upon sthenic diathesis, and yields to antisthemic or debilitating remedies. And it must be allowed, that, since the matter produces the same effect as the usual hurtful powers, its operation must be absolutely the same, and the cause of the disease the same. Consequently, we find nothing in the indication of cure, but what is in common to this disease with other sthenic exanthematic ones, which is, that time must be given to the matter to pass out of the body, and the perspiration be conducted in the same manner, as the sthenic diathesis is usually treated upon other occasions*.

379. The eruption admits of the same reasoning that has been delivered†. The circumstance of it being a violent disease when preceded by a violent sthenic diathesis, and mild in a mild degree of that diathesis, is a further instance of the little difference that there is betwixt the operation of contagion, and that of the ordinary powers producing sthenic diathesis.

380. When the diathesis runs so high as to suppress the perspiration, the eruption often disappears for a time, as if it went into the interior parts of the body: Which is a danger, that is chiefly threatened at the end of the disease; and shows, that this matter, in the same manner as the variolous, kindles up a symptomatic inflammation over the surface of the body, and then, by a further encrease of the diathesis, suppresses the perspiration. Hence, with other viscera, the lungs (u) are often inflamed.

381. The violent state of the small-pox, often from the great stimulus of the eruption, converts both the sthenic diathesis and eruption into the asthenic ones, and thereby produces the confluent small-pox, of which we are afterwards to treat. Whether any thing like that is the consequence of the measles, is not yet ascertained:

* *See above par.* 96. † *See above par.* 375.

But as every excefs of excitement, as in the converfion of peripneumony into a dropfy of the cheft, is liable to run into indirect debility, it is, therefore, fcarce to be doubted, but that the fame thing happens to this difeafe, which is inferior to none in violence.

The Defcription of the violent Eryfipelas.

382. The violent eryfipelas is a phlegmafiæ, always beginning with pyrexia, and followed by inflammation. The inflammation is feated in fome external part of the body, oftenefl in the face, fometimes in the throat, with rednefs, of an unequal edge, fomewhat raifed, creeping from one place to another, and attended with a fenfe of burning.

383. It is peculiar to this inflammation, and foreign from the other general ones, to invade the corrupt mucofum. To aflign a reafon for which is of no confequence; fince this inflammation does not differ from the others either in the operation of the exciting powers producing it, or in that of the remedies which remove it.

384. The caufe of the rednefs of the inflammation, in this as well as in every cafe, is an exceffive quantity of blood in the inflamed veffels; for the queftion about the degree of rednefs is of no importance. There is lefs fwelling in the inflamed part, *than in other fthenic inflammations*, becaufe there is *here* a free fpace betwixt the fcarf-fkin and true fkin, allowing the effufed humour room to fpread and diffufe itfelf. The fame is the caufe of the flow motion of the inflammation, and of the inequality of its edges. The fenfe of burning is owing to an acrimony *of the contained fluid*, acquired by ftagnation.

385. The attack of the inflammation upon the face is not more dangerous than upon any other place, except when the diathefis, upon which it depends, is great, rendering the inflammation proportionally great*. In

* *See par.* 85. *and* 343.

which latter case, whatever part is inflamed, the disease must be held for a severe one; but still severer, if the inflammation seizes the face; in which case a great tumult of affection internally accompanies the disease.

386. When such a sthenic diathesis, and affection of the head depending on it, happens, no disease is more dangerous, none more rapid in its race to death; while in a mild diathesis no disease is milder.

A Description of Rheumatism.

387. Rheumatism is a phlegmasiæ, especially in that temperament, which inclines to the sanguine. It is a consequence of heat succeeding to cold, or so alternating with it as to prove the more stimulant: It is accompanied with pain nigh, or between the joints, chiefly the greater ones, and proportioned to the degree of the diathesis*: And the inflammation always comes after the pyrexia.

388. External temperature is hurtful in this disease in the same way, as it has been often now explained†.

389. The rage of the pain is in the parts that have been mentioned‡, because it is in these parts that the inflammation, or more encreased part of the general diathesis§, chiefly acts. Which *again* happens, for this reason, that the nearly most powerful of the exciting hurtful causes, the temperature, that has been mentioned‖, is only directed thither. There is no translation of the inflammation to the internal parts, for this reason, that these parts, which preserve nearly an equal temperature amidst every change of it externally, are not acted upon it by the same hurtful power *which annoys the external parts*.

390. Cold, according to the common opinion, is not hurtful in this disease; because the rage of the disease is greatest under the operation of heat, which has an

* 343. † 113. *et passim.* ‡ 167. § *ibid.* ‖ 113.

effect quite oppoſite to that of conſtriction*. This fact is confirmed by ſtimulant diet, *in all its articles*, proving always hurtful, and by abſtinence being always ſerviceable, and often alone making out the cure. And it brings *a ſufficient* refutation of that miſtaken notion, according to which, temperature is alledged to be more hurtful, and ſweating more ſerviceable, than is conſiſtent with the truth; as if there were no other hurtful powers but the former, no other remedies but the latter. In this, as well as in all other general ſthenic diſeaſes, it is the general ſthenic diatheſis alone that produces, and the ſolution of it alone, that removes the diſeaſe. Which is a clear fact, and ſupported by the evidence of every part of this doctrine that has yet been delivered. The pains of parts, which ſometimes precede this diſeaſe, often happen without being followed by it, and that, in both caſes, having nothing to do with ſthenic diatheſis, upon which this diſeaſe entirely hinges, are a local affection, or belong to a very different general diſeaſe, rheumatalgia, of which more afterwards†.

391. The reaſon of the greater joints being affected in this diſeaſe, and the leſſer ones in the gout, is the following: In rheumatiſm, becauſe both the reſt of the diſeaſe, and the pains depend upon a violent ſthenic diatheſis; therefore it is, that the greater joints, which, for the reaſons aſſigned, undergo more of the diatheſis, have alſo a greater ſhare of the diſeaſe. But, as the gout conſiſts in debility, its influence will be greateſt, where there is *naturally* the greateſt debility, and therefore in the extreme parts, and thoſe moſt remote from the centre of activity (x).

A Deſcription of the mild Eryſipelas.

392. Both the definition and explanation of the violent eryſipelas‡, delivered before, ſuffice for thoſe of the

* 113. † 353. ‡ *From* 382. *to* 387.

mild; but in such sort, that the latter, both in its antecedent hurtful powers and symptoms, and in the whole nature of its cause, must be understood to be much milder than the former, and not only so, but a remarkable mild disease.

393. It is often not so much a sequel of the sthenic cynanche, which is commonly called tonsillar, or the common inflammatory sore-throat, as a supervention upon it before it has finished its course. It often appears alone and unaccompanied with the cynanche, arising from a similar lenity of the hurtful powers, and manifesting a similar mildness of symptoms through its whole course.

394. Nay, in the same persons, in the same state of the hurtful powers, sometimes this erysipelas, sometimes cynanche, sometimes catarrh, promiscuously arise, and are *all* removed by the same gentleness in the method of cure (y).

A Description of the Cynanche Sthenica.

395. The sthenic cynanche is a phlegmasiæ, with an inflammation taking place in the throat, and especially the tonsils, never preceding the pyrexia. It is accompanied with swelling and redness, and an aggravation of pain in swallowing, especially any thing fluid.

396. The reason for the inflammation occupying the place mentioned here, has been given before*. And, when it has once taken place, it is afterwards liable to frequent recurrence, because its seat being in the way of the most hurtful powers†, and less covered than other parts‡, is exposed: And the vessels *first* distended by the

* *See* 113. 322. † *Heat and alteration of temperature. See* 36. *with addition.* ‡ *See par.* 167. *If one is walking in the evening, when a sudden fog comes on, with cold and chillness, he may cover his throat externally, but it is impossible to defend it internally.*

inflammation, and then afterwards relaxed, take in an over-proportion of blood upon every encreaſe of its impetus (z).

397. As the inflammation, like *that of* the other phlegmaſiæ never precedes the pyrexia*, for the reaſon aſſigned†; ſo, if an unſkilful perſon ſhould think it did, the reaſon of that is the gradual degeneracy of the general ſthenic inflammation into a local diſeaſe, from its frequent recurrence, and always leaving a taint behind it in the affected part. This latter *inflammation* may happen, without a general ſthenic diatheſis, and therefore, without being followed by a ſthenic cynanche; and it may accidentally coincide with the former, *or ſthenic diatheſis*, and, therefore, precede the latter or ſthenic cynanche: But, in both caſes, it ought to be diſtinguiſhed from *the pure* general *caſe*, for the ſake of guarding againſt the commiſſion of a hurtful miſtake in the cure (2 A). In an aſthenic habit, whether ſucceeding to the former or not, there is again another general inflammation, to be refered to aſthenic diſeaſes.

398. If any perſon can explain why the pain is aggravated in ſwallowing, he may *communicate* his knowledge; if he cannot, it is no matter.

399. The cynanche œſophagææ has been here omitted, becauſe it is a rare affection, and admits of the ſame reaſoning and cure as the tonſillar, from which it differs not but in the inflammation being farther down, and in ſome redneſs only coming within view. But, as a ſuſpicion that it may be local, as when the æſophagus happens to be eroded or burnt, by a ſtimulus, or ſome acrid matter; the diſtinctions, therefore, ſhould be attended to‡, and made uſe of for the ſake of practice.

400. There is likewiſe a rare diſeaſe, ſometimes happening in certain countries, never in others, called the croup§. In it the reſpiration is labourious, the inſpira-

* *See the definitions of them all, &c.* † *See* 167. 343.
‡ *See above* 81. 83 169. § *by noſologiſts cynanche ſtridula.*

tion ſonorous, with horſeneſs, a ringing cough, and a ſwelling ſcarce to be diſcerned*. It is a diſeaſe that infeſts very young children almoſt only. And in all other particulars it is of a doubtful nature (2 B).

401. Concerning which, when it happens to occur in practice, uſe the following *marks of* judgment. As the ſthenic diatheſis, in the degree requiſite to *the formation of* actual diſeaſe, which depends upon a high degree of diatheſis, happens leſs, either in the beginning, or towards the end of life; becauſe the high degree of excitability in the former, and the low degree of it in the latter, admit a ſmaller degree of the effect of the exciting power, *that is*, a ſmaller force of excitement†, than the long period of human age betwixt theſe two extremes; yet it is not altogether foreign from either‡. In childhood, the high degree of excitability compenſates for the ſlightneſs of the ſtimulus; while, in old age, the high degree and force of the latter may compenſate for the deficiency of the former, and ſuffice to induce ſome ſthenic diatheſis, even to that degree which conſtitutes diſeaſe. In this way infants undergo wonderful viciſſitudes of excitement, and within the ſhorteſt ſpaces of time. This day they will ſhow every ſign of extreme debility, next day every one of *reſtored* vigour; becauſe the operation of *any* ſtimulus given them ſoon riſes to its higheſt, upon account of their high degree of excitability, and ſinks as ſoon to its loweſt, upon account of its own ſmall degree (2 C). Hence every ſthenic diatheſis, that happens to them, is ſhort, acute, and ſoon removed§; nor is their aſthenic ſtate of long continuance, or

* *It is perceived upon diſſection of the dead ſubject.*

† *See par.* 25. *and* 26.

‡ *Though it is ſeldom that either a child, or very old man, will be ſo ſthenic as to need bleeding and much evacuation, yet they will ſometimes.*

§ *A ſingle gentle purge will do it.*

difficult to be removed; provided there is no local affection*, and a proper method of cure is employed†.

402. The marks of ſthenic diatheſis at this age are, great frequency of pulſe, when compared with that of adults, more frequent than their own in health, diſtinctly meeting the finger upon feeling it; a boundiſhneſs of belly at firſt, which becomes more free in the progreſs of the diſeaſe; dryneſs of the ſkin; burning heat, thirſt, watching, ſtrong crying.

403. The ſigns of the aſthenic diatheſis at the ſame age are, a pulſe not to be reckoned from its frequency, ſmall, falling ſoftly like ſnow upon the finger of him who reckons it, ſo that he is uncertain if he touch it at all; a very looſe ſcouring belly, with green matter; frequent vomiting; dryneſs of the ſkin, heat greater than natural, and greater in ſome parts than others; interrupted ſleep, never refreſhing; a feeble voice in crying, fit to excite compaſion.

404. The former *diatheſis*, beſides other hurtful powers, is preceded by the uſe of ſound milk, animal food, an abuſe of opium or ſtrong drink; exceſſive heat after cold and moiſture, which latter encreaſes the debilitating effect of the former; a ſtrong ſet of ſimple ſolids.

405. The latter, together with the known hurtful powers, is preceded by the uſe of milk from a weak, ſickly nurſe; that of vegetable food with ſugar in it; watery diet; watery drink; habitual vomiting, habitual purging, both by other means uſed for the latter, and particularly by magneſia, given with the intention of abſorbing an acid; cold not followed by heat; a weak maſs of ſimple ſolids.

406. Conſider which of theſe ſets of ſigns precede or accompany the croup, and whether its pyrexia be ſthe-

* *Which very ſeldom, indeed, happens,*

† *Which, till of late, has been very rare: The antiphlogiſtic cure has made away with three-fourths of mankind, before they arrived at the ſeventh year of their age.*

nic or asthenic. Weigh the different sentiments of authors upon the subject. Suspect their theories, but their facts *still* more. Be on your guard not to be misled by the vanity, emptiness, and rashness of young physicians; as well as by the obstinacy and bigotry of the older sort, that encreases with their age and practice, to be bent by no force of reasoning, no weight of truth, scarce by the power of God: Regard their minds as bound in the fetters of prejudice: Remember, that a whole age of physicians were in the wrong, except one man (2 D), and persisted obstinately in their error, in the case of the Alexipharmic physicians: And, reflect within yourself, *good reader!* whether the present physicians, who follow the doctrines delivered in the schools, judge better *than their predecessors*, and do not run into the contrary extreme of madness, doing as much mischief in fevers, an diseases of pure debility, as they did in sthenic diseases, and in fact take a wide range of spreading destruction among mankind. Thus secured against mistake consider the cures of this disease that have appeared. If in those, or in any trial that you may make, you shall find that either bleeding and purging, or antispasmodics, as they are called, that is, stimulants succeed; then be assured, that, in the former case, the disease is sthenic, in the latter asthenic; *of which you will be still* more certain, if you shall find that the exciting hurtful powers and symptoms, which have been enumerated, at the same time agree *with the other marks of judgment.*

A Description of Catarrh.

407. Catarrh is a phlegmasiæ, in which, to the general symptoms mentioned before*, are added cough; hoarseness; and first a suppression, or slight encrease of the excretion from the nose, fauces, and bronchia, fol-

lowed afterwards by a further encreaſe; ariſing from ſtimulant powers, often heat alone, but chiefly after a previous application of cold; and to be removed by debilitating powers, often by cold alone, guarding againſt heat*.

408. The explanation of the cough is the ſame as that given before. But it is freer, *than in peripneumony*, and not avoided, becauſe there is no inflammation in the neighbourhood to aggravate it, and raiſe paint.

409. That the hoarſeneſs is owing to a ſuppreſſion of the vapour that ſhould be exhaled into the bronchia, may be known from this; that, when the hoarſeneſs has remained long, almoſt without expectoration and cough, or with a moderate degree of them, while the ſthenic diatheſis continued in full force, and did not abate in the bronchia; upon the diatheſis giving way, and the expectoration and cough becoming more free, the hoarſeneſs abates, or goes off. That this can be effected by a ſtimulus of that kind and degree, that conſtitutes ſthenic diatheſis, is ſhown by *the effect of* ſtrained ſpeaking producing temporary hoarſeneſs, by ſilence removing the hoarſeneſs, and cold drink relieving it.

410. The ſuppreſſion of excretion is that of the mucus and exhalable fluid, related before‡, and it admits of the ſame explanation that was formerly given.

411. That ſtimulants produce catarrh is evident from this, that heat alone, fulneſs in food, ſtrong drink, and moderate exerciſe, for certain produce it; cold, cold drink, ſpare diet, and reſt, as certainly and affectually remove it. It was, therefore, a very unlucky miſtake, to think it aroſe from cold alone, and was to be cured by heat. On the contrary, cold is never hurtful in it, but when its action is ſucceeded by that

* *See par.* 112. 114. 117. 122. *and all the ſtimulant powers, from* 112. *to* 147.

† *See par.* 159. 355. ‡ *See par.* 408.

of heat, to be explained as before*. The occurrance of catarrh so often in summer, where its action can be a thousand times traced back to heat, but not to cold; the influenza never needing the assistance of cold, which catarrh often does, in the manner just now said; its never succeeding to *pure* cold, but immediately to heat, facts known to old women, to shoe-makers and taylors, to sore-eyed persons and barbers, unknown to medical authors and professors, *all* confirm the same fact.

A Description of the simple Synocha.

412. The definition of simple synocha is the same with that of phrenitis†, excepting the symptoms affecting the head. It is a slight disease, ending in health, often in one, always in a few days, unless when new hurtful powers, either accidentally, or from the use of a stimulant plan of cure, have been superadded.

A Description of the Scarlet Pyrexia.

413. The scarlet pyrexia is an exanthema‡; about the fourth day of which, or later, the face swells somewhat, and at the same time the skin is here and there affected with a red efflorescence, and then checquered with large spots; which are afterwards to unite, and in three days to end in little scales, as if branny ones. This eruption does not arise, but in consequence of sthenic diathesis produced from another source. And there is another similar to this, which accompanies an opposite disease, afterwards to be mentioned.

414. The eruption, appearing at a certain time, and remaining for some time, must be imputed to the fermentation, requiring a certain time, differen: in dif-

* *See* 122. † *See par.* 361.
‡ *See paragraph* 330.

ferent diſeaſes, and is to be explained in a ſimilar manner as before*.

415. The ſwelling of the face depends upon a greater degree of ſthenic diatheſis there, than any other equal part. And we are to imagine, that, beſides the hurtful powers that uſually produce it, it is encreaſed by the contagious matter, now approaching the ſurface.

416. This matter of itſelf produces no morbid ſtate, only giving the exterior and exanthematic form†, and following the nature of the ſthenic or aſthenic diatheſis. Hence, after its application, the diſeaſe that ariſes is ſometimes ſthenic, as this is of which we have given a definition, ſometimes aſthenic, as that diſeaſe which we are afterwards to mention in its proper place. This view of it ſerves to reconcile the jarring and contradictory explanations, and methods of cure of authors, who have gone into ſuch controverſies to ſettle its nature.

A Deſcription of the mild Small-pox.

417. The definition of the mild and violent ſmall-pox is the ſame; excepting that there are often very few puſtules, never exceeding one or two hundred in number: Sometimes the place only, which was inoculated, is beſet with puſtules, without any other in the reſt of the body; and beſides, theſe there may be only one.

418. The number of puſtules and crouded eruption is occaſioned not by the nature of the contagious matter, nor by its quantity, but by the ſthenic diatheſis, in ſo far as it is induced by the ſthenic hurtful powers, in which the matter has very little participation‡. If, therefore, that diatheſis be prevented, and eſpecially upon the ſurface, the eruption will never be crowded; and, after it has appeared, if it be immediately removed, the eruption will never be dangerous.

* *See par.* 367. *and* 378. † *See par.* 375.
‡ *See par.* 370. 372. 375.

419. As the contagious matter does not contribute much towards ſthenic diatheſis, for the reaſons alledged*; ſo, that it does contribute ſomething, is proved by a crowded eruption both appearing and encreaſing, when the diatheſis, after the reception of the contagion, was not encreaſed by the ordinary hurtful powers (2 E).

420. And, therefore, while the excitement ſhould be reduced below that degree which ſuits perfect health; there are, however, certain boundaries, beyond which we ſhould not proceed in the debilitating proceſs.

421. For when the ſthenic diatheſis is very much reduced, and the excitement immoderately diminiſhed, there appears over the whole body, an eruption quite unlike the variolous, of a high ſcarlet colour, and in its progreſs proceeding conſtantly from a ſpotted appearance into a continued ſheet of efflorescence†; which, unleſs treated upon a ſtimulant plan, would prove fatal.

A Deſcription of the Mild Meaſles.

422. The definition of the mild meaſles is the ſame with that of the violent. To which all the reaſoning that has been employed about the ſmall pox will apply. If, immediately upon the arrival of the catarrhal ſymptoms, the aſthenic diatheſis contrary to every mode of curing this diſeaſe hitherto thought of, be removed; often no diſeaſe of that kind which affects the whole body, follows. And the diſeaſe always proceeds with the ſame gentleneſs as the ſmall-pox treated in the ſame way‡.

423. The catarrhal ſymptoms are of the ſame nature as in the catarrh, and admit of the ſame cure, that is, aſthenic.

* *From* 417. *to* 419. † *from the top of the head to the ancles. See above par.* 219. *and two notes.*

‡ *All this has been well proved by every one of my children, and by an* 100 *patients at once.*

424. Catarrh, and ſimple ſynocha, are free from all inflammation, whether general or local. The ſcarlet fever, and the mild ſmall-pox and meaſles, are free from the general, and exhibit upon the ſurface a local, inflammation of no conſequence*.

A Deſcription of the Sthenic Apyrexiæ.

425. The ſthenic apyrexiæ which are equally free of pyrexia† and every degree of inflammation, ariſe from a ſthenic diatheſis, that has leſs effect upon the vaſcular ſyſtem, *than the other ſthenic diſeaſes*‡.

A Deſcription of Mania.

426, Mania is a ſthenic apyrexia; in which the mind is diſordered, and forms falſe ideas of every thing.

427. In ſo far as mania does not ariſe from a fault of the ſubſtance of the brain, which is a local caſe that ſometimes happens: the powers that have the chief ſhare in producing it, are exceſſive excerciſe of the mental function, and a high exuberance of paſſion. Theſe, however, while they act more upon the brain *than any other part*, at the ſame time do act more or leſs alſo upon the whole body, though not to the degree of drawing pyrexia after them (2F). Which is proved by the diſeaſe being cured by a debilitating plan, and by other ſtimuli, as well as thoſe juſt now mentioned, not immediately applied to the brain, but to a diſtant part of the ſyſtem from it.

428. The moſt powerful of thoſe ſtimuli are, ſpirituous or vinous drink, and opium, and, perhaps, ſome other things, taken into the ſtomach, and firſt acting there. Of the other aſthenic hurtful powers, ſome *of themſelves, and operating* alone, have leſs effect in induc-

* *See par.* 169. *and* 210. † *See par.* 329.

‡ *So much ſo, as never to have been thought in any ſort connected with that affection we call pyrexia.*

ing mania, and yet, *even they*, by their ſtimulant operation encreaſe the force of thoſe, that have that hurtful effect as is proved by the effect of removing them in relieving the diſeaſe.

429. If poiſons ſometimes produce mania, without hurting the ſubſtance of any ſolid part, their operation muſt be ſuppoſed the ſame, as that of the general ſtimulants, their effect the ſame, and the diſeaſe a general one, and the ſame*. But if theſe very poiſons act by deſtroying the texture of a part, they muſt be conſidered as the origin of a local diſeaſe†.

430 The heart and arteries are leſs affected in mania, *than in any of the pyrexial diſeaſes*; becauſe, the hurtful power, which chiefly affects the veſſels, too much food, has leſs concern in the number of the hurtful powers *here*. And yet that the food, ſuperadded to the other hurtful powers, does prove hurtful *even in this diſeaſe*, is evident from a contrary power, abſtinence, being, among other remedies, found of very great efficacy in reſtoring the healthy ſtate. Which, with what has been ſaid above, proves that mania is not a diſeaſe confined to a part, but extended to the whole ſyſtem.

431. Although, in the diſeaſes that have juſt now been mentioned‡, the pulſe is commonly ſaid, and believed, to be not at all affected, that, however is not exactly the truth; for in mania, as long as it continues to be a ſthenic diſeaſe§, more or leſs of ſthenic ſtate can be perceived‖.

The Deſcription of Morbid Watchfulneſs.

432. Pervigilium, or morbid watchfulneſs, is a ſthenic apyrexia¶; in which there is no ſleep, or no ſound

* *See* 20. † *See* 5. 6. 20. ‡ *from* 425. *to* 432.
§ *that is, ſo long as it is really mania.* ‖ *The characteriſtic of hardneſs of the pulſe is never wanting, and therefore alſo fulneſs. See* 334. ¶ *See par.* 425.

sleep, and the mind, in a startled state, is agitated with vivid, strong or uneasy impressions.

433. The hurtful powers, that produce pervigilium, are the same with those, that produce mania, but inferior in force. It is evidently produced by hard thinking, commotion, or disturbance of mind, in preference to other hurtful powers. The degree of thought, that has that effect, is not ultimately excessive; for, if it were, by effecting a temporary waste of the excitability, it would produce sound sleep; or if it repelled sleep, it could only act so, by means of indirect debility, the consideration of which is foreign from this place*. And the same is the degree of disturbance of feeling, that proves hurtful, in so far as it produces this disease: Every ultimate excess of which†, either ends in sleep, or induces that vigilance, of which indirect debility is the cause. But it is not a single operation of the intellectual faculty, or of the state of any passion, or one that happens but rarely, that proves adequate to the effect. For the effect, in that case, would be either too slight, or of too short continuance, to merit the title of disease. It is an often returning, or deeply affecting, irritation upon the brain, and, therefore, one that leaves a lasting impression, which has any considerable force in producing this disease. In this last way, an eager, inordinate, and vast desire for the attainment of high objects of pursuit, the impulse that hurries on to the revenge of a great injury, and the horror that arises upon the perpetration of it, the fear of future punishment for crimes, are held up to us as productive of high commotion of mind, in the examples of Cataline, Orestes, and Francis Spira. As often, therefore, as the mind is so excited in its ideas and passions, as not to be capable of being composed to rest and sound sleep, after a certain short continuance of those, or other stimuli; so often are we to conclude, that this disease takes place.

* *See par.* 141. † *See par.* 141.

434. As the hurtful powers juſt now mentioned*, produce this diſeaſe; ſo there are others, which belong not to this place, *but* are to be mentioned, that alſo repel ſleep.

435. To pervigilium belong all the hurtful powers that have been already mentioned in mania†, whether acting within or without the brain, but acting with leſs force, and which yield to the aſthenic plan of cure.

436. As the powers ſtimulating vigouronſly in this way‡, and without any diminution of their ſum of ſtimulating, produce pervigilium; from that we learn that the cauſe of this diſeaſe is the ſame with that of the reſt of the ſthenic form of diſeaſes§, and that the ſame is the ſtate of body in which every one of thoſe diſeaſes conſiſt: Nor is it underſtood, that different hurtful powers, but preciſely the ſame, with only a variation in the proportion of their force, which often happens to other ſthenic diſeaſes precede *this diſeaſe*.

437. The ſame fact is alſo diſcovered from the functions, of which, though theſe diſeaſes are called apyrexiæ, or without pyrexial ſtate, the pulſe, however, is not altogether free of diſeaſe‖. On the contrary, it is as much ſtronger than in health, or in the prediſpoſition to aſthenic diſeaſes, or in thoſe diſeaſes themſelves, as there is more vigour, and more excitement upholding that vigour, in the ſyſtem¶. And the ſtate of the other functions, except thoſe of the brain, that are chiefly affected, is truly the ſame as in the milder ſthenic affections, or in the prediſpoſition to theſe. But, if the brain in this diſeaſe, and in mania, is much more affected than the reſt of the body; there is nothing unuſual in that circumſtance; it being a univerſal fact with reſpect to

* *See par.* 430. *and* 433. † *See from* 426. *to* 432.
‡ *See par.* 433. § *from* 141. *to* 148.
‖ *See par.* 430. *and* 431. *and the note to the latter.*
¶ *For a proof of their vigour maniacs have often four times the ſtrength they uſed to have in health.*

both diſeaſes and the prediſpoſition to them, that ſome part is more affected *than any other part**.

A Deſcription of Obeſity.

438. Obeſity is a ſthenic apyrexia† ; in which in conſequence of an exceſs of health, rich living, eſpecially in the article of food, and an eaſy ſedentary way of life, the fat riſes to the degree of incommoding the functions.

439. That obeſity, ſo defined, is a diſeaſe, is underſtood from the definition of diſeaſe‡ ; and that it is a ſthenic diſeaſe, appears from the certain ſigns of ſthenic diatheſis in it. Of which, the ſtrong action of the ſtomach, whether the appetite or the digeſtion be conſidered§, and the ſtrength of the other digeſtive organs, are a glaring proof.

440. And as in this diſeaſe, the ſtimulus of the exciting powers, raiſes the excitement above that degree of it which ſuits good health, to that in which ſthenic diatheſis conſiſts, without which laſt there could not be ſuch force in the *action of the* ſtomach, and of the organs that form chyle and blood ; ſo, it is in common to this with the other diſeaſes called ſthenic apyrexiæ that the ſum of all the ſtimuli is much leſs than in the other diſeaſes of the ſame form, that is thoſe with pyrexia and inflammation ; that it never riſes to the extreme height at which indirect debility is produced, and is never indeed ſo great as to be ſufficient to have any conſiderable effect on the heart and veſſels.

441. But it happens to all thoſe diſeaſes, that both theſe laſt and all the other functions, get ſomewhat above the ſtandard of the ſound functions, and a great deal above aſthenic diatheſis. And the ſthenic apyrexiæ differ from the other ſthenic diſeaſes chiefly in this, that the

* *See part firſt, Chap. IV. and in it* 49. *and* 52. 158. 204. † *See* 425. ‡ *See* 4. § *See* 261.

exciting powers keep much within that degree *of force*, that waſtes the excitability much; as is perceived from the proof of the effect; for they are diſeaſes of much longer ſtanding than any other aſthenic diſeaſes.

442. From which fact, however much the brain may be affected by its own proper ſtimuli; however great the quantity of blood in its veſſels may be; unleſs to the excitmeent ariſing from theſe, that *excitement*, which the other ſtimulant powers produce, be added, it is certain, that the general effect will be much leſs, and that the united energy of all the powers has far more effect, than the ſeparate force of any.

443. The diatheſis, then, in theſe diſeaſes, is, upon the whole, leſs than in the reſt of the ſthenic diſeaſes; that of a part, as of the brain in mania and pervigilium, and of the blood-veſſels in obeſity, is pretty conſiderable. The whole is in general as great as that in the prediſpoſition to the other diſeaſes, and exceeding its force in the labouring part. Hence it comes out, that contrary to the nature of thoſe other diſeaſes, and ſimilar to the prediſpoſition to them, they are uſually of long ſtanding and duration, and for this reaſon, that the mediocrity of the ſum of ſtimulant operation never conſumes the excitability, and always produces too much excitement. The great tumult of ſymptoms in the brain and blood-veſſels in theſe diſeaſes does not imply a great ſum of excitement, for this reaſon, that the affection of a part, however formidable, compared with the affection of all the reſt of the body, is infinitely inferior in its degree*. However much, then, any ſtimulus preſſes upon a part, and from that ſpreads at large over the reſt of the body; unleſs, however, other ſtimuli, applied to other parts, ſuſtain its operation, ſo as that the ſum of the operation of them all may deeply affect the whole body; the effect of the ſolitary ſtimulus, making a figure in a part, will be leſs conſiderable in the reſt of the body: In fine, it

* *See par.* 49. *to* 53.

muſt be kept in mind, that every violent diſeaſe always ariſes from the excitement which the united force of ſeveral ſtimuli has produced.

444. In the ſthenic pyrexiæ, as a certain part, the brain in the two firſt, and the blood veſſels in the laſt*, is much more affected, and in greater proportion, than in the other ſthenic diſeaſes, becauſe the affection of the part is much leſs ſupported by ſtimuli acting upon the other parts; ſo the ſtimuli, acting in that way upon the labouring parts, are, however, underſtood to affect the reſt of the body, though leſs conſiderably. That this is the fact, is proved by there being *in this caſe*, no aſthenic diatheſis, and evidently ſuch a ſthenic one, as upholds the prediſpoſition to other diſeaſes of the ſthenic form; by the remedies, which affect other parts, as it will by and by appear, being aiding in the cure here, and by powers of a contrary nature, always proving hurtful. Whence, it is an evident and certain truth, even here, where it might have been leaſt expected, that every ſtimulus that affects a part, affects the whole body, upon account of the excitability being one uniform, undivided, property over the whole.

445. With reſpect to obeſity in particular: that the other hurtful powers, as well as food, have more or leſs effect, one may know from the certain fact of the digeſtive powers, which depend upon the influence of theſe *powers*, being of ſuch force and vigour, as to preform their functions more perfectly *in fat perſons*, than in others, who are, nevertheleſs, not by any means weak. Yet theſe hurtful powers are applied in a degree ſhort of that, which being ultimately exceſſive, or approaching nearly to that, puts an end to excitement by waſting the excitability, or which tend, by a high degree of diſturbance, to exhauſt the body.

446. Thus paſſions are not with ſuch perſons too ſtimulant; a circumſtance known to the generality of

* *See par.* 443.

mankind, among whom it is an adage, that fat perſons are commonly good natured (2 G), while moroſe perſons are for the moſt part lean. Thus it is obſervable, that fat perſons are averſe to thinking, which is a great ſtimulus*. They are averſe to bodily motion, by which all the functions, and particularly that of the veſſels, are much excited, and the perſpiration proportionally promoted; and *they have* ſo far reaſon for it, that all motion is more fatiguing to them than to others. Hence, that quantity of fluids, which under motion is uſually thrown off by the pores on the ſurface, and turned out of thec ourſe to the adipoſe cells, has a great opportunity of acquiting the direction to the former, and of turning aſide, in a ſtate of reſt, to the latter.

447. After explaining the peculiarities of theſe diſeaſes; *it is now to be obſerved*, that, ſince the affection of a part in general diſeaſe, depends upon the general affection, is of the ſame kind, ariſes from the ſame exciting powers, and is removed by the ſame remedies†; it is from that reaſonable to believe, that the affection of a part, whether it be inflammation, or a greater affection of the brain or veſſels, than of any other part, is not different in different caſes, but altogether the ſame in all; that it only differs in ſome trifling circumſtances of no ſignification, and by no means requires a different *plan of* cure, or affords fundamental diſtinctions; and that a miſtake, which has had the moſt ruinous effect upon the art, muſt be done away. It is with propriety, then, that all the diſeaſes that have been treated of, have been reduced not firſt to two genera, and after to ſpecies, but,

* *The moſt poring perſons are the atrabilarians, who, though they are not calculated for the elevation of mind that diſcovery requires, have, by their aſſiduity, contributed much to the improvement of many of the arts. They are commonly very meagre, indeed, and indefatigable in any purſuit, to which they give themſelves up.*

† *See part firſt, Chap. IV. and particularly par.* 53.

without regard either to genera or ſpecies, or only to two forms.

448. Further, as in all thoſe diſeaſes the whole morbid ſtate, either in ſo far as it is univerſal in the ſyſtem, or confined to a part, proves hurtful by giving too much excitement; and as the remedies, that remove the general morbid ſtate, alſo remove the portion of it confined to a part, and never to be directed to a part* with the view of removing, by their action upon it, the diſeaſe, as if all locked up in it; the meaning of all that is, to lay a ſure foundation for the eſtabliſhment of a certain ſeries, or ſcale, of encreaſing ſtrength from perfect health to the moſt ſthenic diſeaſe. In that ſcale peripneumony holds about the higheſt, and obeſity the loweſt, degree.

449. Peripneumony and phrenitis in the upper end are followed by two diſeaſes, that ſometimes equal them; the violent ſmall-pox and meaſles. Theſe two are ſucceeded by a diſeaſe, that ſometimes vies with them, the eryſipelas, when accompanied with a moſt ſevere affection of the head. Equal to this, not in danger, but for the moſt part in the degree of diatheſis; rheumatiſm comes next. Next to rheumatiſm is marked the mild and gentle eryſipelas, *far ſhort of thoſe above it in violence*, and claiming nearly an equal place to the ſthenic cynanche, being much more nearly allied to the latter than any of the former. Thoſe are the diſeaſes accompanied with pyrexia and inflammation.

450. Of theſe two which ſtand loweſt, the mild eryſipelas and the ſthenic cynanche, or common inflammatory ſore throat, are of ſo doubtful a rank with reſpect to each other and catarrh†, a diſeaſe without the accompaniment of inflammation; that it is doubtful which of them all ſhould be ſet above the others. Below them, however, the ſimple ſynocha and ſcarlet fever, in

* *See par.* 56. *and* 92.

† *See* 394. *and the note to it.*

ſo far as the latter is an aſthenic diſeaſe, and in ſo far as the uſual ſtate of them both is conſidered, are to be placed without any heſitation (2 H). The loweſt part of the ſcale of ſthenic diſeaſes with pyrexia, is aſſigned to the ſmall pox and meaſles, in their mild ſtate.

451. Through this whole ſcale it is not ſo much the titles and names, that have been made uſe of, but morbid energy, that is regarded; it being the certainty derived from the cauſe, not the uncertain and perfectly deceitful conſideration of ſymptoms, that was to be conſidered*. The inveſtigation of ſymptoms, which has hitherto been devoid of all benefit, has been of the higheſt detriment to the art; and as much in medicine the moſt productive ſource of fundamental blunders, as the queſtion about abſtract cauſes had been in the other departments of philophyt, muſt be laid aſide, and Noſology damned.

452. Below the laſt mentioned diſeaſes, mania, pervigilium, and obeſity are ſet. Betwixt which, and the diſeaſes mentioned above, is the point of perfect health to be fixed‡.

The Cure of the Sthenic form of Diſeaſes.

453. To apply the indication of the cure of the ſthenic form of diſeaſes to practice; that mentioned before§ will be accomodated firſt to a violent degree of the diatheſis and danger of parts, in ſuch a manner, as that regard only will be had to the degree *of force* in the remedies‖.

* *See paragraph* 58.

† *See par.* 18. *and look into Obſervations on the different ſyſtems of phyſic, and in the introduction throughout.*

‡ *It will be eaſy for the reader with the directions above to make out the table for himſelf.* § *See par.* 88.

‖ *See alſo par.* 92.

454. When, therefore, a violent diathesis is discerned as in peripneumony, phrenitis, the small-pox, the measles, and erysipelas, in the highest degree of these three last, immediate recourse must be had to the most powerful and quickly effectual remedy; and so much blood should not be taken, as many who entrust nearly the whole cure of the disease to it, think*, but more, however, than others are of opinion, should be taken away (21).

455. No measure suits all cases; the quantity to be taken being different in different cases, as those differ in age, sex, strength, and in the degree of force applied by the exciting hurtful powers. In childhood, which, excepting the measles, and small-pox†, is seldom affected with the diseases we have mentioned, and in a very advanced age, which is also in less danger than that at the flower of human life; sparing bleeding succeeds for this reason, that, at both those ages, it is a lesser degree of excitement that upholds the disease as a cause; while in the former, the high degree of excitability, in the latter the necessity for more stimulus or exciting power, than formerly, set bounds to *the measure of the remedy.*

456. A better rule for limiting the degree of bleeding is the relief, or temporary solution, of the urgent symptoms. If, therefore, after blood has been taken, the great heat, the hardness of the pulse, the affection of the head or of the lungs, and dryness of the surface, shall have gone off, or been much abated; and now the temperature is discerned to be much more moderate, the pulse more soft, and less frequent, and the surface of the body more moist, at least less dry; if the pain is every where quieted, the breathing relieved, and the delirium removed‡; then it may be looked upon as certain, that enough of the vital fluid has been shed for the time.

* *Which is the common practice.* † *See par.* 401.

‡ *The references for facts are* 158. 154. 334. 156. 173. 349, *to* 355. 153. 158. 183. 333. *to* 336. 154. 343. 354. 157.

457. To obtain that benefit, in the most vigorous adult state 10 or 12 ounces, and much less *either* before or after *that period of life*, will for the most part be found sufficient. As this rule will not answer in every case, when it fails, recourse must be had to that, which recommends the abatement of the symptoms as a direction more to be depended upon*.

458. Since the local affection depends upon the degree of the general† diathesis, remember, therefore that there is no occasion for any particular direction with regard to it, any farther, than to take advantage of its being accessible to help the general remedy by an application of it to the part‡.

459. When that has been done, and the first violence of the disease is now broken; we must next have recourse to purging the belly, as a great remedy in point of efficacy§. To effect which, we should not employ violent means, such as many formerly employed‖; the stimulus accompanying the first operation of which being liable to be hurtful; but it is the gentle cathartics that should be depended upon, such as Glauber's salts, which are highly debilitating, and carry a great quantity of fluids out of the vessels. Though a man of good sense in the last century used these day about with bleeding; yet, if the violence of the disease should be urgent, there is nothing to hinder the use of them the same day that the blood has been taken.

460. Purging, after a sparing bleeding, has more effect in overcoming sthenic diathesis, than any bleeding without it; because, as it has been mentioned above, in that way the debilitating power (which has always more debilitating effect in the place to which it is first applied

* *See* 406. † *See above* 56. *and* 342. *to* 346.

‡ *Ibid. an instance of such assistance may be the local bleedings over the pained part in the rheumatism and the gout, and some other asthenic remedies are aided by local stimuli.*

§ *See* 282. ‖ *the Alexipharmacs particularly.*

than in any other,) is applied to more parts; and not only to the greater blood-veſſels, but alſo to a prodigious number of their terminations; and the excitability is more entenſive, and therefore, with more equality diminiſhed*.

2. Vomiting, which in aſthenic diatheſis, where it is pernicious, has hitherto never been admitted in the common practice, and in ſthenic ones, where it is of the greateſt benefit, ever neglected, comes in here as a proper part of cure; being of the ſame evacuant nature, and in another part of the ſame canal, and admitting of all the reaſoning that has been applied to purging.

461. At the ſame time that the exceſſive, and therefore hurtful, uſe of the lancet is ſuperſeded by thoſe two laſt mentioned evacuations; its uſe, however, is not altogether to be laid aſide in the diſeaſes of exceſſive excitement; and for this reaſon, that the excitement, by its ſtimulating operation often riſes to that high degree, that, from the conſumption of excitability which puts an end to its exiſtence, threatens inſtant death†.

462. Beſides, thoſe remedies‡, the patient ſhould always be required to abſtain from every ſort of food but vegetable, and in a fluid form, as well as from all ſtrong drink, and *indeed* all but watery drink, accidulated§. This direction does not ſeem to have been ſo much neglected in words by former *writers and authors*, as in fact and actual application to the practice; it having been delivered, ſlightly by the by, and as if it had been thought of no conſequence *with ſuch effect*, that its force made no impreſſion upon the mind of the reader or hearer. No ſtimulus is more powerful, and therefore, *in this part of the practice*, more hurtful, than that of the articles of diet: Conſequently, whatever quantity of blood is taken from its veſſels, whatever quantity of ſerous fluid is carried off by the mouth and anus, if that ſtimulus is

* *See par.* 483. 486. *alſo* 305. † *See par.* 280. 382. *and* 283. ‡ *From* 454. *to* 462. § *See par.* 283.

not roundly guarded againſt, all this evacuation may eaſily be fruſtrated. While that is the caſe, ſtill fluid vegetable matter is not to be diſcharged, and for this good reaſon, that watery matter is not kept in the veſſels; but, eaſily entering the ſmalleſt of them, flows out in all directions by their various outlets; and at the ſame time, ſupports the efficacy of another remedy*, by and by to be mentioned.

463. Conjointly with the uſe of the firſt bleeding, of the firſt vomiting and purging, and that of abſtinence and watery drink, it muſt not be forgot, that particular regard muſt be paid to temperature†: For, if cold always debilitates, and if that is its proper operation‡, if it only ſeemingly acts otherwiſe, becauſe heat ſucceeding to its action, or alternating with it§, converts it into a ſtimulant one, if it alone is adequate to the cure of the ſmall-pox‖, and prevents the violence of that diſeaſe, if it is the beſt remedy for catarrh¶, and, when heat is avoided, of the greateſt aſſiſtance in every ſthenic diſeaſe: it is not to be doubted, but that it is of the greateſt benefit in the diſeaſes of the higheſt ſthenic diatheſis.

464. Its operation in the ſmall-pox, and in the reſt of the ſthenic diſeaſes, is not different, but altogether the ſame. Nay, in all the diſeaſes of this form, as cold alone is ſufficient to effect the cure; ſo, whenever the diatheſis, which is the caſe in the diſeaſes that make our preſent ſubject, riſing to its greateſt rage, demands inſtant relief; becauſe, *in that caſe*, every moment's delay brings inſtant danger; becauſe the remedies, which we have mentioned, are ſufficient for the ſolution of the diſeaſe, of which we have the direct proof in the practice; becauſe that degree of cold, which could produce that effect, is neither always within our reach, nor can be managed by every perſon; and many perſons might not be diſpoſed to believe its effects ſo beneficial: For

* *ſweat.* † *See par.* 281. ‡ *See par.* 206.
§ *See par.* 37. ‖ *See par.* 121. ¶ *See par.* 407.

thoſe reaſons we ſhould not deſiſt from the plan of cure here laid down*, and do our beſt for our patient, by taking off the blankets, and other clothes, by cooling the room, and, inſtead of laying him on a couch or bed, putting him into a chair.

465. This plan of cure ſhould, for the moſt part, be preferred to *that of* the moſt intenſe cold, for this further reaſon, that the ſhortneſs of the time in which any one could poſſibly remain in it, would oblige him immediately to return to higher temperature, which would produce a greater ſtimulus of excitement, *than that he had been under* before *his expoſure*, at leaſt too great a ſtimulus†.

466. Since ſuch is the operation of cold‡, the power falſely imputed to it of occaſioning the ſtriking in of the meaſles, is to be imputed not to cold alone, but to heat and other ſtimuli; giving, as has been explained, more excitement§, than if it had not preceded. And why not? If cold does not interrupt the eruption in the ſmall-pox; but, on the contrary, by an enlargement of the diameters of the perſpiratory veſſels, which are ſhut up by ſthenic diatheſis, highly promotes the diſcharge of that matter‖: Why, in a moſt ſimilar caſe, ſhould its operation be ſuppoſed different, not to ſay, diametrically oppoſite? Muſt we again have the trouble to refute the falſe notion of thinking a cauſe preciſely the ſame ſhould produce contrary effects? Cold diminiſhes the eruption in the ſmall-pox: It makes it diſappear in the meaſles. What then? Take a nearer view of the fact: Is its effect in both theſe caſes to be ſuppoſed the ſame, or different? How comes any perſon to know that the matter, which has diſappeared, is driven into the interior parts? What proof will you bring of that? Confeſs the truth: And be candid enough to acknowledge, that this is another relic of the alexipharmac doctrine, *handed down to*

* *From* 454. *to* 465. † *See* 26. ‡ *Look back from* 463. *to* 466. § *See* 27. *and* 380. ‖ *See* 376.

us, which ſuppoſed, that the ſtimulus of heat as well as other ſtimuli promoted, and that cold impeded perſpiration. And after a great man had ſhown the error of that doctrine, both in the ſmall-pox and other diſeaſes*, becauſe he did not carry the application ſo far as the meaſles, neither has any one of his followers, who never could ſtep a nail's breadth beyond his words. But it might have been obſerved, *if obſervation had been any part of their employment*, that the meaſles was a ſthenic diſeaſe as well as the ſmall-pox. Are not all the ſucceſsful remedies in both, of the debilitating kind? And as it was manifeſt, that in the ſmall-pox alſo cold debilitated, or in the common language, acted as a ſedative; might not ſome ſuſpicion have, from that very circumſtance, occurred to their mind, that cold, in the meaſles, did not ſtimulate, or act as an aſtringent; and in that way, repel the eruption, but performed the ſame operation as in the ſmall-pox? Is it, to ſuch a degree, difficult and up-hill work, to think and uſe one's own good ſenſe, that a great part of mankind, even thoſe who take upon them the buſineſs of teaching and taking the lead of others, in no caſe, ever think of exerciſing a moment's reflection of their own? But, in this caſe, it may be contended, that the action of cold is peculiar, becauſe, after the eruption, *which is ſuppoſed to check*, has diſappeared, all the ſymptoms encreaſe in rage and violence. Conſider what that circumſtance makes for the argument, or whether it makes any thing, and not abſolutely againſt it? Was the action of cold, that is ſuppoſed, followed by *that of* ſtimulant or debilitating powers? If it was by the former, the cauſe of the miſchief muſt be imputed to them; which, as has been ſaid juſt now†, produce exceſſive excitement after a previous application of cold, and more than without it; if the

* *In peripneumony he took his patients out of bed, and ſet them in a chair, for the ſake of cooling them, and avoiding the hurtful effect of heat.* † *in the laſt paragraph but one.*

latter, *or debilitating powers were uſed*, then there would not be wanting a ſuſpicion, that cold had a concern in the effect. But it is not ſo: And, in every caſe, in which the action of cold has been followed by ſthenic diatheſis, the true cauſe of that effect is not ſufficiently guarding againſt the ſtimulus of heat, as well as that of other noxious powers. And this is moſt clearly proved by the uſe of heat being poſitively ordered, inſtead of being forbid, in the common practice. Nor is that to be wondered at: For if the cauſe of catarrh* deceived phyſicians ſo much, the catarrhal ſymptoms in the meaſles could not fail to deceive them. And, if doctrines, diſcarded in words, are often kept up in fact; what was there to hinder this part of the alexipharmac doctrine from meeting with a ſimilar fate?

467. If cold, therefore, can ſcarce be ſo managed, as that the effect occaſioned by the accompaniment, the ſucceſſion, or the alternation, of ſtimulants with it may be prevented, whether that be the fault of the phyſician, or owing to the difficulty of the nature of the thing†; it is, notwithſtanding, a rule in common to the meaſles and other exanthemata of the ſame ſtamp, to avoid heat, and compenſate for the degree by the greater duration of cold, and to guard with all poſſible care againſt every ſtimulant power. It is now then moſt evident, that the opinion of cold being peculiarly hurtful in the meaſles, both in that and every other diſeaſe of the ſame form, falls to the ground.

A Repetition of the Cure.

468. After uſing the remedies which have been mentioned‡, when the ſymptoms are renewed, the ſame train of medicines muſt be again gone through: Blood muſt be again taken, emetics and purgatives again ad-

* *See from* 407. *to* 412. † *Turn back to* 465. *and* 466.
‡ *See from* 454. *to* 468.

miniſtered; nor muſt we deſiſt from the uſe of the refrigerant and attenuant plan: And all theſe particulars muſt be executed, till the tumult of the ſymptoms be allayed, and the healthy ſtate, at leaſt for the time, be reſtored; and perhaps *the repetition may be required* a third time or oftener: After doing which:

469. If the diatheſis ſeems now nearly removed, if the affection of the head, of the lungs, or any internal one, ſeems alleviated or repelled; and yet there is ſome apprehenſion of a likelihood of the return of the diſeaſe: in that caſe, recourſe muſt be had to more gentle debilitating powers. Sweating, the ſtimulus accompanying the firſt operation of which, the body, as the diatheſis is now rendered mild or ended, will be able to bear, muſt be preferred to bleeding, vomiting, and purging. But before proceeding to ſpeak of it, it ſeems proper to ſay a few things upon the ſum total of blood that ſhould be taken *during the courſe of the diſeaſe*.

470. As in ſingle bleedings, ſo alſo in the whole quantity of blood to be taken, the ſum ſhould be a mean betwixt thoſe, which the common run of phyſicians approve, while ſome think too much, ſome too little, ſhould be taken. The reaſon for this recommendation is ſtrengthened, by the conſideration of there being now no leſs occaſion for ſhedding a great deal of the vital fluid, ſince the cure is now more divided among the other remedies that have been ſpoken of. The age muſt be regarded, as was formerly recommended*, the former mode of life muſt be looked to, the quantity of ſtimulus, that may lately have preceded the morbid ſtate, muſt be conſidered, and the ſtate of the body compared with the degree of the ſymptoms and the effect of the cure. From thoſe circumſtances a judgment ſhould be formed of bleeding and other evacuations; and it ſhould be eſtimated, what further of the ſame ſort may ſeem proper to be put in practice, or what difference of ma-

* *See paragraph* 455.

nagement may be required. Upon the whole, it will be found, that there will be the leſs occaſion for any one medicine, the more freely others have been brought into uſe; and it will be underſtood, that the danger of too great evacuation will be thereby avoided, and the health better ſecured*.

471. With reſpect to the kind of bleeding, it ſhould always be made from a very large vein; becauſe the cutting a leſſer one, or opening an artery, does not afford a ſufficient quantity for the relief of the veſſels, and arteriotomy is further attended with certain inconveniencies (2 K). As far as any certain rule, in an affair of ſuch variety can be eſtabliſhed, two pounds of blood in three or four days, with the aſſiſtance of the other remedies, will, for the moſt part, be ſufficient at the middle age of life, and leſs at a more early or later period.

472. All bleeding ſhould be followed by vomiting and purging, ſo long as any conſiderable part of the ſthenic diatheſis remains; nor ſhould the other parts of cure, that have been pointed out, be neglected. But purging, a ſingle doſe of which can any time, bring back a fit of the gout; which cures the ſthenic cynanche, or common inflammatory ſore throat, and the mild eryſipelas, when even the face or head is affected; which is of manifeſt detriment in fevers; which, in dyſpepſia, in aſthma, and every ſort of diſeaſes depending upon debility, whether direct or indirect, does very great and conſpicuous miſchief; and is a great part of the very bad, common method of cure over the whole form of aſthenic diſeaſes; in proportion as it ought to be avoided in all thoſe diſeaſes, ſhould be as certainly laid hold of in ſthenic diſeaſes, and not omitted in any conſiderable one, ſuch as thoſe are that require bleeding, but be managed according to the directions given lately†, and as it was *directed to be* managed before‡. And we muſt, above all things,

* *See* 285. *and* 305. † *See* 455.
‡ *See* 282.

be on our guard againſt that diffidence in the uſe of this remedy, as well as in that of vomiting, where they are ſerviceable, and that confidence in them when of diſſervice, both introduced by the ſpaſmodic doctrine; and know that they were both admitted upon a falſe and abſurd principle (21).

473. As nothing in aſthenic diſeaſes has been more uſed than theſe two modes of evacuation, nothing with more hurt, and often with inſtantaneous deſtruction; ſo, for that very reaſon, nothing is more happy and ſucceſsful *than their uſe* in the cure of ſthenic diſeaſes.

474. It is ſcarce credible to ſay, how far the averſion to the alexipharmac method of cure has had the effect of branding the very beſt medicines, what a depraved uſe of them it has ſuggeſted, and to what a degree is has perverted their proper uſe. Not to repeat what has been formerly ſaid of that kind in other inſtances; ſweating, which is of the higheſt ſervice, and moſt efficacious means of cure, in every moderate ſthenic diathesis, in every degree of it, that is not the higheſt, or where it preſſes not upon any organ of importance to life; that is, in all the diſeaſes of this form, excepting in the beginning of thoſe of which we are here treating, has, however, of late been completely baniſhed from the cure of every one of them, but one, not only, as uſeleſs, but as hurtful; which has chiefly happened ſince the ſpaſmodic doctrine began to be received into this country, and, *for a few years only*, gradually to gain ground*.

475. But, in truth and fact, except rheumatiſm (which, at leaſt as produced by one form of a medicine, it is allowed to cure), if it moſt certainly either relieves or removes the ſthenic cynanche, eryſipelas itſelf, and catarrh, and the ſimple ſynocha, in proportion to the more free or ſparing uſe of it; if that be known to the very vulgar, and moſt certainly to phyſicians, of *any other than the ſpaſmodic* practice; what reaſon, what certain

* *Turn back to* 469.

and well proved fact, will any one bring, *to shew* why sweating should not be used, after the most violent diathesis is much diminished by the other medicines, and is now reduced to that small degree, to which that remedy is adapted; what eloquence would be requisite to bring any man *of sense* into such a persuasion?

476. They will say, that the heat, which accompanies the first part of the operation of sweating, may be hurtful; for as he never made trial of it, he has it not in his power to say, that for certain it will be hurtful (2 M. As that effect will readily be admited in an high rage of diathesis, threatning indirect debility (2 N); it will not also be granted, that in a moderate *degree of* the diathesis, either from the beginning, or effected by the other remedies, and, consequently, after the plan of cure, that we have laid down, has been executed, that such heat will not be compensated by the great profusion of fluids taken away over the whole body; and that, when this part of the vascular system has been freed from a violent stimulus, the diminution of excitement will not be more equal in all the vessels, and over the whole nervous system. If the numerous vessels, that open into the intestines and into the stomach, are so powerful in diminishing sthenic diathesis, how should a similar evacuation in the similar perspiratory vessels have no tendency to produce the same effect? With which reasoning, if the facts just now relaxed be further conjoined, what will any person have to say against the use of sweating, when a degree of heat, not greater than what cannot be avoided, attending the operation of the sweat, can no *longer be hurtful, and the sweat itself certainly to be of great* service (2 O). Let the spasmodic caviller against the use of that remedy, in the cases *of sthenic affection where it is admissable*, muster up all his facts, and all his theories, let him turn himself into all shapes, he will never produce a solid argument against this remedy. But what, again, is all this about? Will there never be an end of running from one extreme of error into the op-

poſite? Shall no mean be found betwixt the alexipharmac plan of cure, and an equally bad or worſe one? If that doctrine heſitated not to preſcribe ſweating in the rage of a peripneumony, and that too by means of the moſt heating ſtimulant powers; does it therefore follow that a plan of cure muſt be admitted, which rejects the certain and ſafe uſe of that remedy, when conducted by the moſt gentle means? If it was the opinion of Dr. Sydenham, that heat ſhould be avoided in the cure of ſthenic diſeaſes, *which was quite right,* as heat certainly encreaſes the excitement; are we, for that reaſon, to avoid that tolerable degree of heat, which accompanies a remedy the moſt powerful in reſtoring the healthy ſtate, and, thereby, deprive ourſelves of great benefit upon the whole? If ſuch perſons did not know, that ſeveral remedies diminiſhed excitement more powerfully than any one; and, if they were to be forgiven for that; were they alſo to be excuſed for not ſeeing, what any empiric might have ſeen, that is, that ſome things were of ſervice, and others of diſcervice, was that want not of genius, which is not required of them, but of common ſenſe, alſo to be pardoned; If thinking without a leader, and making any ſort of diſcovery was too much, and not to be expected from them; is it not ſomewhat ſurpriſing, that out of a thouſand perſons, who had treated of every part of medicine, and entertained different ſentiments from one another in ſome meaſure right, and, no doubt, wrong too, they could ſqueeze no information, but always trod in the footſteps of one ſingle man?

477. Sweat, therefore, after the management that has been mentioned, is to be excited, and ſo much the more determinedly, if there ſhould ſeem ſomething ſtill wanting to the complete return of health, ſome degree of ſthenic diatheſis ſtill remaining, and a ſpontaneous tendency to it ſhould appear.

478. When the ſigns of a ſpontaneous ſweat ariſing are perceived, nothing more is to be done, but firſt to lay the clothes about the patient, remove the ſheets, put

the blankets next to his body, guard againſt the approach of air, and keep up the diſcharge for a ſufficient length of time, at leaſt ten or twelve hours. If, by this management, there ſhall enſue a copious and univerſal flow of ſweat, there will be no occaſion for giving a medicine. After it has ſucceeded, and encreaſed the relief formerly procured; if it ſhould ſink in towards the end it, ſhould at laſt be ſupported by Dover's powder, or by laudanum alone, covering the body, ſo as that it may get as quickly as poſſible to the ſurface, till the expected benefit be obtained. And to this management it muſt be added, that, if a draught of cold water be ſometimes given, and then the body well covered up and properly managed, the buſineſs often ſucceeds to our wiſh. But, as in the other caſes, that belong to this part of our indication, the ſweating muſt then only be ſet on foot, when the mediocrity of the diatheſis, procured by the other remedies, will permit; ſo in the ſmall-pox and meaſles, becauſe there is occaſion for a certain time to allow the mater to paſs away, we muſt alſo keep that in our eye, and never be too early in making trial of this remedy. Laſtly, if the heat ſhould happen to prove hurtful, if at any time the flow of the ſweat ſhould be attended with leſs relief, or with ſome inconvenience, it ſhould be immediately ſtopped; For it was for no porpoſe, but for that of making the remedies ſupply the defects of one another, and of reducing the excitement more equally over the whole body, that a number was recommended.

479. In all the caſes of a violent diatheſis, all the remedies that have been mentioned, are more or leſs, and differently on different occaſions, in proportion as the remaining part of diatheſis may require, each in a larger or ſmaller quantity, to be brought into play, and the curative circle enlarged: And beſides them,

480. Some of ſlighter conſequence, ſuch as acids and nitre; ſome of uncertain uſe, ſuch as leeching, cupping, and bliſtering, are mentioned, as of the firſt conſequence. Of theſe, the acids, in ſo far as they render

the drink more agreeable, and, in an affection of the lungs do not produce cough, and prove, in a certain measure, refrigerant, are to be permitted; and more certainly, if there ſhould be a deſire for them. Every body ſhould know, that the refrigerant, power of nitre is leſs than is commonly thought. In rheumatiſm, and the ſthenic cynanche if the latter ſhould be uſually ſevere, bliſters, leeches, and cupping-glaſſes, applied in the neighbourhood of the inflamed parts, may, in ſome meaſure, be of ſervice. Nor does there ſeem to be any reaſonable objection to to the clapping of a cap of recently dug-up earth upon the head in the caſe of phrenitis.

The other part of the indication of cure.

481. To paſs over the other part of the indication of cure*: When there is a gentler diatheſis in the habit, as in other phlegmaſia, and ſthenic affections, that have not been yet named *in the cure*; as in the mildeſt ſtate of eryſipelas, of the ſthenic cynanche, catarrh, ſimple ſynocha, the ſcarlet fever, and the mild ſmall-pox and meaſles; a ſmaller force of debilitating power is required; and, therefore, neither all the remedies that have been mentioned, nor in general ſo much of each, as in the other part are demanded.

482. In all theſe caſes, not even with the exception of rheumatiſm, which depends upon a very great diatheſis, bleeding is not neceſſary; and with the exception of that diſeaſe, bleeding, with any degree of freedom, is hurtful: For, when the excitement is not the greateſt, and, on the contrary, is moderate, ſcarce exceeding that degree that produces the prediſpoſition to other diſeaſes; in that caſe it is abſurd to make uſe of a moſt debilitating power, by way of a remedy, as if we had to combate a very violent diſeaſe. And, ſince the intention in bleeding is to prevent an ultimate exceſs of exciting

* *See par.* 451.

power from producing a ceſſation of excitement in death, an event of which there is not the leaſt danger, in a moderate diatheſis, ſuch as that, which is the cauſe of the diatheſis here in queſtion; for that reaſon, the cure muſt be adapted to the cauſe, and bleeding muſt be either abſtained from altogether, or very ſparingly uſed.

483. It is not, therefore, only in diſeaſes of debility, which belong to the other form (in moſt of which it has nevertheleſs, been, and ſtill is, the cuſtom, to ſpill more or leſs of the vital fluid;) but alſo in all the diſeaſes of this form, except the very violent ones, that the lancet is to be reſtrained.

484. Though in rheumatiſm the diatheſis often runs conſiderably high, the uſual profuſe bleeding, is not, however, required. For, as every diatheſis is always greater in ſome parts than in any other equal one, ſo it is with the ſthenic diatheſis *in this caſe*; which is found much greater upon the ſurface of the body, than in any other equal ſpace within. And the reaſon is, that the moſt powerful noxious agent, heat, ſucceeding to cold, or ſo alternating with it, that its own ſtimulus is encreaſed by its effect*, directs its principal energy to the ſurface of the body. Hence, after exceſſive bleeding, the diſeaſe, notwithſtanding, often obſtinately recurs. The cauſe of which fact, if the principles of this doctrine be well underſtood, cannot be obſcure. Bleeding diminiſhes the ſthenic diatheſis chiefly in the red veſſels, leſs in any of their extremities, leaſt of all in the perſpiratory veſſels, and thoſe diſpoſed of in the tract of the muſcles; and ſtill leſs in the laſt, becauſe the operation of the bleeding is counteracted by that of heat. Which is an explanation confirmed by the certain teſtimony of phyſicians; who often complain that their favourite remedy fails them.

485. Upon which account, ſweating, which we ſpoke of *ſo* lately, is remarkably adapted to *the cure of* this diſ-

* *See par.* 37.

eaſe: To it, therefore, after a previous bleeding to twelve ounces, and obſerving the rule of temperature and diet before directed, muſt we have immediate recourſe, if the diatheſis happens to be conſiderably violent, and is ſignalized by heat *of the body*, by pains raging moſt in the night time, and by a ſtrong and hard pulſe. In order to render the ſweat univerſal, and of ſufficient duration, it ſhould be brought out by Dover's powder, or laudanum, *as before* hinted, and kept up for twelve hours in full flow, and then ſome hours longer, or till the abatement of the ſymptoms, in the form of a moiſture or free perſpiration, and repeated when the ſymptoms return. The reſt of the cure muſt be entruſted to low diet and an exact temperature.

486. In this caſe, after the ſweating courſe, and alſo in that of a ſimple ſynocha, of the ſcarlet fever, of the ſthenic ſore-throat, of catarrh, eryſipelas, and the gentle ſmall-pox and meaſles, when the diatheſis is ſomewhat conſiderable, but far ſhort of that rage which conſtitutes the caſe of cure firſt taken notice of; we ſhould uſe either a very ſmall bleeding, and then chiefly the evacuations before-mentioned*; then a ſlight and ſhort ſweat ought to be kept up not longer than eight or ten hours; and, during the whole time *of the cure*, we ſhould go on with abſtinence, weak drink, reſt of body and mind, and cold, unleſs in the time of ſweating, and even then, with as little heat as poſſible; and, finally, with tranquility of mind, as theſe were formerly enjoined: The united uſe of which is perfectly equal to the removal of any of theſe diſeaſes; but there will not always be occaſion for them all.

487. Often ſo gentle a diatheſis occurs, that one or two of them, once or twice employed, is ſufficient for the cure: So ſlight a diatheſis that is, in which, unleſs for a little at firſt, the ſhivering, languor, and then heat, is very moderate, pointing out a proportional ſlightneſs

* *See par.* 304.

of diatheſis upon the ſurface; in which there is ſcarce any laſſitude, ſhowing the ſame moderation of diatheſis in the organs of voluntary motion; in which the vigour of the ſtomach remains, manifeſting a moderete exceſs of excitement in it; in which, in fine, the other functions, over the whole body are ſufficiently calm, and only ſuffer conſpicuouſly in the labouring part: In theſe caſes, often a ſingle purge with Glauber's ſalt, often, without that, cold, reſt, and abſtinence, have conducted the morbid excitement to its ſalutary degree. A thouſand times has the ſthenic cynanche, a thouſand times has catarrh and the ſimple ſynocha, nay eryſipelas itſelf with affection of the face, been in that way removed. And the ſcarlet fever is often ſo gentle as to yield to the ſame management.

488. In this way muſt a conſtant regard be had to the degree of excitement and diatheſis in the method of cure, and often terms muſt be diſregarded. For, as it was with this view, that the ſimple ſynocha was before diſtinguiſhed from the phrenitic, and the gentle eryſipelas from the violent; ſo, it often happens, that catarrh riſes to that magnitude that threatens or brings on a peripneumony, and that the latter proceeds with much more gentleneſs than uſual. In which circumſtances, it is the degree of excitement alone, that ought to govern the phyſician, without reſpect to names.

489. Another uſeful caution here is, to judge of the ſtate of the pulſe, or the temperature of the ſkin and of the ſkin in other reſpects, with good ſenſe, and due reflection upon theſe principles. The frequency of the pulſe in all ſthenic diſeaſes is moderate: With that there is conjoined ſome hardneſs and fulneſs. Whenever, therefore, the pulſe ie very quick, it is to be ſuſpected, that the ſthenic diatheſis has paſſed into the aſthenic, the exceſſive excitement into a ceſſation of excitement, or that the diſeaſe has been ſthenic from the beginning. To remove which doubt and aſcertain the truth, the habit of body, the age, muſt be conſidered, and an en-

quiry be made to know, whether the diſeaſe has been preceded, or not, by contagion. Heat of the ſkin is in common to theſe diſeaſes and fevers, which are diſeaſes of an oppoſite ſtamp, and therefore a doubtful mark. Which, as it depends upon an interruption of perſpiration, from whatever ſource, is never to be ſtrained into a proof of the ſtate of excitement. And, ſince dryneſs of the ſkin, which is in common to the ſame diſeaſes however different from each other, in the aſthenic diſeaſes depends upon debility; in order to know the amount of what that ſymptom means, the other ſymptoms and the exciting hurtful powers, ſhould be conſidered. In fine, the only enquiry ſhould be, whether the excitement is abundant or deficient, and all the ſigns ſhould be conſulted with that view; nor are we to judge raſhly of any peculiar form.

490. When, therefore, the ſigns, that have been related, are compared with all the reſt and with the diatheſis, we are then to ſet about the antiſthenic or ſtimulant plan of cure. The violent ſthenic diſeaſes, which we firſt conſidered can ſcarce be confounded with the contrary ones; the more gentle are daily confounded. But, while it is eaſy to diſtinguiſh them from the aſthenic diſeaſes reſembling them; if, however, any perſon ſhould think the *marks of* diſtinction ambiguous, let him know, that, upon account of that gentleneſs, *though the diſeaſe under examination ſhould* be aſthenic, blood is not even to be let, much leſs *under the apprehenſion that they may turn out* aſthenic to which laſt ſo debilitating a power is deſtructive, as it has *ſo* often *already* been ſaid upon former occaſions; and, with that information, let him underſtand, that his method of cure *conducted* in that way, will be fenced and ſecured from all miſtake. For, if the diatheſis, though ſthenic, be ſlight, bleeding will often precipitate it into the oppoſite, and will at the beſt be uſeleſs (2 P). If, on the contrary, the diſeaſe that paſſes for a ſthenic one, ſhould in its progreſs, ſhow itſelf an evident aſthenic one; in that caſe every drop of

blood that may have been taken will go to the encreaſe of the diſeaſe*. Yet this pernicious and daily practice ſends more men out of this world, than all the curſes of human life†.

491. As abſtinence, cold, and the management of the belly are ſufficient to prevent a gentle ſtate of the ſmall-pox, ſo when that proper preparatory plan has been neglected, and now a crowded eruption appears; beſides thoſe, trial muſt be made alſo of the other remedies‡, except ſweat. But ſweat muſt be avoided, becauſe the tendency of the ſtimulus accompanying it, by encreaſing the ſthenic diatheſis on the ſurface, would be to check the perſpirable fluid, and detain the contagious matter unſter the ſcarf-ſkin, and produce that pyrexia, ſymptomatic of the inflammation, which is called the ſecondary fever. This particularity of cure is taken from the particularity of the ſymptom juſt now mentioned, and forms no objection to the principles of this work. In perfect conſiſtency with which, though there is all the proof that can be derived from ſure practice, that the remedies we have mentioned are ſufficient; yet, before the eruption comes on, there is nothing can be objected either to ſweating or bleeding, as remedies in common to this with every other ſthenic diſeaſe (2 Q). In fine, as the ſucceſs of low diet, cold, and purging, in this manner, is certain; at the ſame time, the other remedies, that remove ſthenic diatheſis, in this caſe likewiſe operate to the ſame effect§. It was proper to ſay ſo much for the ſake of ſhowing the unexceptional ſteadineſs and univerſality of the principles of this work. Nor are we to think, that the ſmall-pox and meaſles, differ from other ſthenic diſeaſes attended with pyrexia,

* *See* 268. 280. 289. † *See* 406. *towards the end.*

‡ *See* 453. *to* 468. § *It is not, that low diet, cold, and purging, operate by any peculiarity, but becauſe they debilitate to the degree, and in the manner required, of the other remedies.*

but in the particularity of their eruption in running a certain courſe, and not admitting of an accelerated cure.

492. We are not to wait the arrival of the ſymptoms of debility, that follow a violence of diatheſis, and threaten certain death by indirect debility, with the view, forſooth, that, when they have happened, we may cure them: On the contrary, they ought to be prevented by the early adminiſtration of the remedies, *now ſo* fully commented upon. If that ſhould be omitted, the conſideration of the diſeaſes that will be the conſequence, and which is altogether an aſthenic conſideration, muſt be referred to the aſthenic form.

493. As often as ſthenic diatheſis happens to be conjoined with a pyrexia, which is induced by the operation of ſtimulants, of acrid ſubſtances, of compreſſion, of obſtruction, and ſimilar hurtful powers acting upon a ſenſible part, of which we have examples in gaſtritis, enteritis, nephritis, cyſtitis, hyſteritis, hepatitis, or the inflammations of the ſtomach, of the inteſtines, of the kidneys, of the bladder of urine, of the womb, of the liver*; the diatheſis, becauſe it aggravates the pyrexia, ſhould be removed by its reſpective remedies, to wit, the debilitating ones. And, when neither it nor the aſthenic diatheſis is preſent, nothing ſhould be attempted: But, if the aſthenic diatheſis ſhould be preſent, which very readily may happen; the ſtimulant plan ſhould be proceeded upon, to prevent a very bad diſeaſe (2 R). Nor, when that is as much as poſſibly attended to, are we to forget, that, in ſo doing, the principle affection is not touched; that, on the contrary, it is its effect, not its cauſe, that is tampered with; and that the full conſideration *of ſuch caſes* belongs to the local diſeaſes, afterwards to be taken notice of.

494. Beſides all the remedies now mentioned, it is of advantage in every degree of diatheſis to keep the mind eaſy and unruffled with paſſion or emotion; a practice

* *See par.* 81. 83. 85. 87.

that in the very high degrees of the diatheſis is indiſpenſibly neceſſary. Our attention will eſpecially be directed to this particular, when we obſerve, that the ſtimulus of thinking and of any paſſion, carried to a great height, has had a ſhare in the production of the diſeaſe.

495. In mania, therefore and pervigilium, this direction muſt be particularly, and as much as poſſible attended to. In the latter of which diſeaſes, thinking, and every ſtate of commotion, and more certainly an habitual practice in them muſt be ſhunned, eſpecially before going to bed. When the patient is reſting there, he ſhould have ſtupid books read to him, all inordinate deſire, the propenſity to revenge, the remembrance of every degree of criminality, of which he may have been guilty, ſhould be diverted from his recollection*.

496. That fact of great conſequence, to give corroboration to this whole doctrine, is confirmed by this other, that the ſame things, which are ſerviceable in pervigilium, or the morbid watchful ſtate, are alſo ſerviceable in mania, or madneſs, only adminiſtered in a higher degree, as that is a diſeaſe of a higher degree of excitment. Thus, it is not eaſe and tranquillity of mind that are to be preſcribed here, both of which are quite gone, but a ſtate oppoſite to that high commotion *of ſpirits* and irregular vigour in the exerciſe of the intellectual function: And, as an exceſſive energy of the intellectual powers, or of the animal ſpirits, or both, are the moſt noxious powers in this caſe; for that reaſon the patient ſhould be ſtruck with fear and terror, and driven, in his ſtate of inſanity, to deſpair: As a remedy againſt the great excitement of the organs of voluntary motion, the labour of draft-cattle ſhould be impoſed on him, and aſſiduouſly continued; his diet ſhould be the pooreſt poſſible, and his drink only water†: In water as cold as poſſible, the patient ſhould be immerſed, and kept under it, covered all over, for a long time, till he is near killed.

* *See above* 433. † *See* 328. 430. 435. 436.

497. If, in phrenitis the brain, in peripneumony the the lungs, in rheumatism the external joints, poſſeſs more diatheſis than any other part; why may not mania and pervigilium conſiſt more in an affection of the brain, upon which the principal noxious powers act, than of the other parts, over which the influence of thoſe powers is leſs conſiderable? Laſtly, ſince remedies, the firſt action of which falls upon other parts, are of ſervice in thoſe diſeaſes*, that proves, that not even in them, where you might moſt be diſpoſed to believe it, the whole morbid affection depends upon the part conſpicuouſly affected; but that the whole body is concerned in it, that the excitability is one uniform undivided property over all; that the force both of the exciting hurtful powers and of the remedies is directed to the whole, with the inequality ſo often mentioned†; and that the foundations of this doctrine are ſure and ſtable.

498. As theſe are the principal hurtful powers in mania and pervigilium, and the brain principally affected; ſo in obeſity, the hurtful powers moſt conſiderable are animal food (28) and reſt, or ſedantary life; in conſequence of which laſt, the ſtimulus of exerciſe, which, by wearying and fatiguing the body, tends to indirect debility, is underſtood to be wanting. But, ſince, in conſequence of uſing the ſame food, both in quality and quantity, and the ſame *indulgence in* reſt *and eaſe*, ſome perſons become fat, others continue lean; from thence it is aſcertained, that all the digeſtive powers have more force in the former, than in the latter, and conſequently, that the other exciting hurtful powers have contributed to the effect, and that a proportional excitement follows. Of the hurtful powers, that belong to this place, an eaſy exerciſe of the intellectual faculty, *and* tranquillity of mind, which are moderate ſtimuli, favour obeſity; over ſtrained thinking, and habitual indulgance in paſſion, ſuch as that of anger, *the repetition*

* *Part I. Chap. II.* † *Part I. Chap. IV.*

of which conſtitutes ill nature, oppoſe it. Corporeal motion, which diminiſhes the quantity of fluids in the ſyſtem, and, as often as it is conſiderable, proves fatiguing and debilitating, oppoſes it. Equally unfavourable to it is hard drinking; which, in a ſimilar manner, wears out the excitement, by conſtantly waſting the excitability from the high degree or long continuance of its ſtimulus. On the contrary, the powers that favour it, are thoſe that act gently, and with ſome exceſs: but never attain that high degree of activity, that inclines to indirect debility: They are powers that go on ſoftly and pleaſantly, that particularly keep up moderation in the perſpiration, and thereby fill the veſſels with blood; but, becauſe motion is avoided, they do not very much encreaſe the excitement of the veſſels, and by means of the tranquillity of motion *kept up in the latter*, allow a fluid, that would otherwiſe paſs off by the external pores of the ſurface, to turn aſide into the cells of fat. Hence, though, as it has been ſaid before, an abundance of blood is indeed a very great ſtimulus; yet, without other ſtimuli, and that moſt powerful one, which muſcular motion affords; it is evident, that a conſiderable degree of ſtimulus can be borne without any conſiderable diſeaſe, and that it always produces a prediſpoſition to ſthenic diſeaſes, but does not immediately bring them on. Hence, it is underſtood what place in the ſcale of exceſſive excitement, or of ſthenic diatheſis, obeſity holds; what the degree of ſtimulant power is, and what the ſtimuli in particular, are that produce it.

499. As the degree of curative force muſt be accommodated to the degree of force in the cauſe*; *hence it muſt be obſerved*, that for the cure alſo of this diſeaſe the common indication is ſufficient†; that is, that the exceſs of excitement muſt be reduced to the ſalutary degree, and a remedy oppoſed to every hurtful power, equal to the removal of it.

* *See* 109. † 48. 453.

500, In this caſe, therefore, as food is the principal hurtful power, leſs of it ſhould be given, and more exerciſe engaged in. Theſe are ſufficient for the cure*.

501. But, for the ſake of bringing both *further* confirmation, as well as illuſtration of this doctrine; it is to be obſerved, that all the powers, which very much affect the excitement, and in a greater degree, than the hurtful power of this diſeaſe mentioned above, and that have a tendency, *by their ſtimulant operation*, to indirect debility, have the ſame effect; that they either prevent or cure obeſity, and continue productive of that effect, till *they induce* that degree of meagerneſs which is connected with debility.

502. The beſt method of lowering the diet, is to combine a quantity of vegetable matter with a moderate portion of animal. The next *rule* to that, is to refrain from the latter, and uſe the former in greater abundance. The firſt of theſe is ſuitable to all ſuch perſons as are liable to diſeaſes of debility, ſuch as the gout, the indigeſtion that after a long time ſucceeds to luxury, aſthma, epilepſy, and ſimilar others. The latter management is more accommodated to thoſe, who otherwiſe enjoy great vigour, are under prediſpoſition to ſthenic pyrexia, and in the flower of their age. But, it is not, even in the latter ſtate of the body, to be proſecuted, unleſs for a time; becauſe, ſuch is the debilitating influence of that practice, that, while it is ſufficient to remove any degree of obeſity, eſpecially with the addition of exerciſe, it is found to have ſignal efficacy in producing aſthenic diatheſis, and all the diſeaſes depending on that.

PART THE FOURTH.

THE SECOND FORM OF GENERAL DISEASES.

OR

THE ASTHENIC DISEASES.

CHAP. I.

503. THE form of asthenic diseases, and which is to be called asthenia, for the sake of distinguishing it from the form of sthenic diseases, which is called sthenia, is a state of the living body, in which all the functions are more or less weakened, often disturbed, almost always with a more conspicuous affection of some *function*. In the treatment of which, that order will be observed, in which the progress from the smallest disease *of this kind* to the greatest, through all the intermediate degrees, is to be followed out.

504. *In* this *part of our subject*, there occurs a great variety of symptoms; of which, because it is without meaning, and even misleading, no use is to be made in marking the scale of diseases. But, for the sake of placing what is about to be delivered in a clearer, if not a more specious, point of view, we shall begin with a simple enumeration of the principal diseases to be afterwards fully treated of.

505. The asthenic diseases are macies, inquietude, or restlessness without sleep, the asthenic amentia, the scabby eruption, the slight diabetes, the asthenic scarlet fever, the rickets; the hæmorrhææ, or general bleeding discharges, such as menorrhæa, or a morbid excess of the menses, epistaxis, or bleeding from the nose, hæmorrhois, or the piles: and also three morbid states seemingly in appearance opposite to these, the loitering, impaired, or suppressed menstruation; next come thirst, vomiting, indigestion, diarrhæa, or loose belly, and cholic without pain; after these the affections of children, as the worms, the general consumption, called tabes, dysentery and cholera in the gentle state of these two; angina, the scurvy, the gentle hysteria, rheumatalgia, asthenic cough, cysthæa, or mucus discharge from the bladder; the gout of strongish persons, asthma, cramp, anasarca, dyspepsia with pain, the violent hysteria, the gout of weakened persons, the hypochondriasis, dropsy, chin-cough, epilepsy, or the falling sickness, palsy, the lock-jaw, apoplexy, tetanus; lastly fevers, as the quartan, tertian, and quotidian, *intermittents* or *remittents*, dysentary, and cholera, both in their violent degree, synochus, simple typhus, the gangrenous sore throat, the confluent small-pox, the pestilential typhus, and the plague.

506. This scale of asthenic diseases is to be understood in this way, that those diseases, which in their most usual state are slight, and claim a higher place in the scale, are some times more, sometimes most, violent, and those that in their most common state are severe, such as the gout of weakened persons, the pestilential fevers, and the plague itself, sometimes proceed with the greatest gentleness*.

507. The affections of parts, which often accompany those diseases, such as ulcer, tumor, encreased excretion, bleeding discharge, inflammation, spasm, convulsion,

* *See par.* 450.

point out indeed ſome degree of debility *as their cauſe*, but in ſuch ſort that the ſame degree may happen without them. Hence, becauſe it is the influence of debility that is fundamentally regarded in this ſcale; with the diſeaſes that are often conjoined with theſe affections, others, without them, as hyſteria and the cramp are blended: and, with the caſes that are accompanied with ſpaſm and convulſion, dropſy is conjoined, by keeping to the idea of an equal degree of debility: *and all* this without any regard to remarkable ſymptoms, but keeping the degree of debility only in view. Neither is the violent cholera kept back from its place among fevers, which laſt are diſtinguiſhed by failure in the intellect and affections of the head, becauſe it ſhews a degree of debility equal to the febrile. The idea in proportioning this diviſion is to ſhow, that true morbid energy does not conſiſt in an affection of any parts, but of the whole body; and that the *reſtoration of* health is not to be attempted by a change of *the ſtate of* parts only, but *without excluding that*, by a change of the ſtate of the whole ſyſtem.

Of Leanneſs.

508. Leanneſs is an aſthenia, leſs diſcernible in the other functions, but evident from the weakneſs of the digeſtive function; in conſequence of which, the ſyſtem, though receiving proper aliment, does not become plump.

509. Since the cauſe of this diſeaſe is debility, both in the reſt of the ſyſtem, and in the ſtomach and other organs of digeſtion; it thence *follows*, *that* the general indication for the cure of it, ſhould be chiefly directed to the moſt languid part, that is, the organs of digeſtion and the perſpiratory veſſels. More nouriſhing food, therefore, ſhould be uſed, leſs labour undertaken, and moiſture on the ſurface, or too free perſpiration, ſhould be checked by more reſt of body, by proper geſtation,

and rubefaction, and a plan, quite contrary to that which is suited to the cure of obesity should be pursued.

Of Restless Watching.

510. In the asthenia called inquietudo, or restless watching, the other functions are under some degree of languor, and the patient is affected with a constant necessity to change his posture, and toss about his limbs without being able to fall asleep.

511. As the cause in this case, in the same manner as in every other general disease, is universal over the system; so it affects the organs of voluntary motion, and the brain in particular, with the inequality *so often* formerly mentioned*: Consequently, *to remove the disease*, ultimate excess in either mental labour, or exertion in any passion, as well as the opposite extreme of deficiency *in either*, should be avoided; and that stimulus of both, which is agreeable, ultimately excessive corporeal labour when it has proved hurtful, as well as deficient when it has had a concern in the cause, should be guarded against; and the proper *medium betwixt the extremes of excessive activity and indolence* restored: Or the disease should be repelled by wine, and the other stimuli have, each its proportion, in the cure.

Of the Scabby Eruption.

512. In the scabby eruption, the face is pale, the skin discoloured, dry, lank, and variously disfigured with pustules; there is a lowness of spirits, and the functions of the body weak and sluggish.

513. In this case, while the debility is universal, there is a prevalence of it in the inspiratory vessels. And, therefore, the chief parts of cure are, together with the remedies, *the operation of which is* directed to

* *See par.* 49.

the whole ſyſtem, ſuch as nouriſhing food, ſtrong drink, to ſupport the perſpiration by its reſpective remedies; to bathe the ſurface of the body in tepid water, to render it acceſſible to air, to order clean linen for the patient, and every thing clean about his clothes.

Of the Gentle Diabetes.

514. In that aſthenia, which is named the gentle diabetes, there is an exceſs in the quantity of urine diſcharged, but the profuſion is not immoderate as in the moſt violent caſe of the ſame name. The organ of reſpiration labours under the ſame weakneſs and ſluggiſhneſs, as in the ſcabby eruption.

515. To remove this affection much more frequent than it has been hitherto believed, the ſyſtem ſhould be ſtimulated by food*, by ſtrong drink†, and by proper exerciſe‡, ſuch as is neither immoderately exceſſive, and therefore debilitating nor deficient in degree, and therefore, not ſupplying enough of ſtimulus; And, above all things, the perſpiration ſhould be ſuſtained. The contrivances for checking the flow of urine, which have no exiſtence are to be paſſed from.

Of the Rickets.

516. The rickets is an aſthenia; to the general ſymptoms of which are added an unuſual bulk of the head, eſpecially the fore part of it, and likewiſe of the knees and abdomen, a flatneſs of the ribs and meagerneſs.

517. The rickets is a diſeaſe of children, chiefly ariſing from uncleanlineſs, want of dandling or exerciſe, cold, either without moiſture or with it, food not giving ſufficient nouriſhment, and bad air.

518. For its cure, the common aſthenic indication muſt be employed; remedies, of an oppoſite nature to

* *See par.* 265. † *See* 267. ‡ *See* 269.

the hurtful powers that excite the diſeaſe, muſt be looked out for; the ſurface of the body ſhould be kept clean*, the perſpiration ſhould be carefully reſtored by the ſtimulus of pure air and of heat: the child ſhould be more carefully dandled, and kept much in the open air, animal food ſhould be adminiſtered, vegetable withheld, and ſtrong drink allowed†.

Of Retarded Menſtruation.

519. Retarded Menſtruation is alſo an aſthenia; In which, beſides this diſcharge not making its appearance at that time of life, when it ſhould, other evidences of debility, ſuch as a ſlender make of body, weakneſs, laxity of habit, want of appetite, or a craving for things not alimentary, paleneſs of the ſkin, and ſimilar ſymptoms, appear.

Of Impaired Menſtruation.

520. Impaired menſtruation is that ſtate of aſthenia; in which after it has appeared, and the flow continued for ſome time, the diſcharge is made in too ſparing quantity, or after too long intervals of time, with other ſigns of weakneſs accompanying it.

Of the ſuppreſſion of Menſtruation.

521. Suppreſſion of menſtruation is that degree of aſthenia, in which the diſcharge is totally ſtopt at any period betwixt their natural commencement and the time when, in the courſe of nature they ceaſe altogether.

522. An enquiry muſt be made into the cauſe of natural menſtruation, before *it would be proper to enter upon* that of the retardation, or deficiency, of the diſcharge in any of its degrees.

* *See par.* 513. † *See par.* 294. 302.

Of the Cauſe of Menſtruation.

523. The cauſe of menſtruation is a conformation of the veſſels that pour out the blood *in this diſcharge*, taking place at a certain time of life, that is, about the age of puberty, and a ſtimulant energy in women, more powerful than in the females *of the other ſpecies of animals.*

524. Of other animals there are very few, the females of which undergo any ſort of menſtruation out of the venereal orgaſm.

525. As all the veſſels are gradually unfolded in the courſe of the growth of the body, ſo the ſame thing happens to the genital and uterine veſſels, but laſt of all to theſe. The ends of the latter, terminating, on the ſides of the womb about the age of puberty, are at laſt ſo very much expanded, as now to tranſmit firſt the ſerous part of the blood, and then, after an effort kept up for ſome time, paſs to formal blood.

526. At this time of life a great change over the whole ſyſtem takes place. Now the deſire for coition, a ſtimulus, never experienced before, produces a commotion over the whole body; and in preference to other parts, in the genitals of both ſexes, in the female, over the whole region of the ovaria, womb, and vargina: By this ſtimulus, the uterus, its ſeat, being nearly inceſſantly ſolicited, is the more powerfully affected, the more there is of excitability, hitherto acted upon by no ſuch ſtimulus, exiſting in the ſyſtem. Hence, among other organs, the muſcular fibres of the next veſſels, as well as the nerves interwoven with them, undergo the higheſt degree of excitement: This excitement encreaſing over the whole ſyſtem, again encreaſes that in the uterus: The mutual contact of the ſexes, whether in kiſſing, in ſhaking hands, or otherwiſe, fires both ſets of genitals, and the uterus in a remarkable manner; but the actual embrace produces the higheſt degree of that effect. The remembrance of each embrace re-

mains, renews the dear idea of the delightful ſcene, and continues more or leſs to excite the uterus.

527. This new affection is further cheriſhed and nouriſhed by every ſtimulus that is uſually applied to the ſyſtem: Hence, in the abſcence, in the preſence, of the beloved object, at all times generally, ſcarce with the exception of *that which paſſes in* dreaming, a ſtimulus ſo ſteady, and the more powerful, that its novelty implies, that the excitability in this caſe is entire, rouſes the fibres of the veſſels, already ſufficiently unfolded, to violent contractions. The blood is carried into the region of the uterus with the greateſt rapidity, a rapidity momentarily encreaſed, in proportion as the blood, by powerfully diſtending the veſſels, and agitating them by its impetuous flow, ſtimulates the fibres more and more, and thereby encreaſes the activity by which it is driven on. This is the firſt cauſe of menſtruation: In that way, the two circumſtances, a ſufficient enlargement of the diameters of the veſſels, and the ſtimulus acting more powerfully, from its novelty, upon the unwaſted excitability*, are ſufficient for the whole buſineſs.

528. This ſtate is not inconſiſtent with other ſtates of the body, but bears an analogy to ſome well known ones: Accordingly, different veſſels, from the *mere* difference of their diameters, are ſubſervient to different purpoſes: The perſpiratory veſſels are deſtined to the tranſmiſſion of a vapour, the excretory veſſels of the alimentary canal to that of thin fluid, the renal veſſels to that of a groſſer one; ſo as to take off our ſurpriſe at finding veſſels fitted, by their degree of diameter, for the purpoſe of tranſmitting red blood.

529. The reaſon that the females of other animals do not menſtruate but in their orgaſm, and not at other times, is, that it is only at certain times that they are expoſed to that energy of ſtimulus which produces menſtruation.

* *See par.* 523.

530. How much is owing to the ſtimulus juſt now mentioned*, in the production of menſtruation, is further evident from the following chain of facts: Which are, that, the leſs addicted to love women are, the leſs they menſtruate; the more they give way to that paſſion, the freer do they experience this diſcharge within certain boundaries; that, before puberty, and after the time of life when menſtruation ceaſes (which are the two periods, at which the fitneſs for effective love has not yet commenced, or is now paſſed,) the menſtrual diſcharge is conſtantly wanting; that the privation of enjoyment, which, by *its* debilitating *effect*, produces cholorosis† and other ſimilar diſeaſes, is remarkable for bringing on a menorrhœa, or a retention of menſtruation; and, finally, that girls, who are of a forward growth, of great ſtrength, and large limbs, and, conſequently ſooner ripe for love, are alſo more early in menſtruation; while thoſe, who are weakly, puny, and of a ſmall ſize, and, conſequently, laterin attaining to the period of puberty, are proportionally late in attaining the firſt menſtrual diſcharge. Laſtly, if, like all the other functions, that of love is limited at the ſame time by its duration and degree; and if, as the commencement of the love embraces is more or leſs early, it is proportionally more early or late in coming to its final termination, and if the duration of menſtruation does not uſually exceed that period; that fact alſo, *which it certainly is*, added to thoſe above, gives weight to our concluſion, and ſhows, in a clearer point of view, how much menſtruation depends upon the venereal emotion. It is to be aſſerted, therefore, again‡, that beſides the conformation of the veſſels, ſuited to *the function of* menſtruation, and the ſtimulus which has been mentioned, there is occaſion for no other *circumſtance to explain* either commencement, eſtabliſhment, or continuation, of the menſtrual diſcharge.

† 523. 526. † *or the green ſickneſs.* ‡ 523. 526.

531. The cauſe of full menſtruation, and that of a moderate degree of it, happening within the boundaries of health, is the ſame; only differing in degree; the degree of the latter being ſmaller, and that of the former greater.

532, And, as the ſtimuli, mentioned above, explain, why women menſtruate more than the females of other animals; ſo their immoderate operation upon women ſerves to ſhow, why *their effect*, the menſtrual diſcharge, becomes greater than natural (A).

533. The ſtimuli that produce abundant menſtruation, ſhort of morbid ſtate, are unchaſte ideas, and a high energy of paſſion. In this way, the influence of reading to ones' ſelf, or to others, of converſation, of pictures, contrived to kindle up luſtful appetite, and the uncovering of parts that modeſty conceals, which all produce a lively impreſſion on the imagination of the thing ſo much deſired; can be indiſtinctly felt by none perhaps but eunuchs. The ſame is the effect of nouriſhing food, and generous drink, and high ſeaſoning; and hence the proverb, without meat and drink love ſtarves: Likewiſe, that degree of exerciſe, or even labour, that does not prove fatiguing, but that keeps within the boundary of ſtimulant operation; as alſo an abundance of blood, both from that circumſtance and from rich diet; laſtly, frequent and ardent dalliance, or *inconceſſa hujus imitatio*; all theſe, encreaſe the menſtrual diſcharge, in proportion to the high degree of their ſtimulus, but ſtill do not carry their effect to morbid exceſs.

534. The ſame concluſion applies to the effect of theſe ſtimuli, which has formerly applied to an overproportion of blood producing ſthenic diatheſis: For the ultimate end of all the ſtimuli, that produce exceſſive menſtruation, is ſuch, that, if exceſſive menſtruation and an encreaſe of love be the conſequence of the exceſs of the ſtimuli, one or other of the following muſt be the effect: that is it will either be ſuch as remains within the

latitude of health, or ſuch, as firſt produces ſthenic diatheſis, and then, in a higher degree of it, runs rapidly into indirect debility.

535. That this is the fact, is proved by the hurtful powers that produce exceſſive and morbid menſtruation; and by remedies, that are ſtimulant and ſuited to fill the veſſels, removing the diſeaſe according to our late diſcovery; and alſo by the unfortunate effect of the debilitating evacuant plan of cure in the ſame diſeaſes,

536. As it is ſtimulant operation that produces both proper menſtruation and that which goes to a little exceſs; ſo, when once menſtruation is eſtabliſhed, the conformation and ſtimulus, that have been mentioned, remaining, are ſufficient to ſupport it. The ſame opperation is renewed during every interval of menſtruation: The ſtimulus acts and quickens the motion of the blood in every part, but chiefly in that where it is moſt powerful and moſt required, that is, in the region of the womb: The blood thrown into quick motion, and ruſhing with a more rapid flow, encreaſes its cauſe, the ſtimulus: And, as this mutual ſtimulus continues inceſſantly to affect the women through the whole interval, when they are allowed ſcope of love; the uterine veſſels are gradually unfolded, till at laſt, within three weeks, or a lunar month, they are opened to their ultimate extremeties: And, when the fluid, firſt ſerious for a little, and afterwards ſanguine, and afterwards ſerous again for a little, has flowed one, two, or three days, in healthy perſons, the veſſels are at laſt ſhut up.

537. During the whole time of this proceſs, the more excitability there is, and conſequently at the beginning of each menſtrual effort, the more violently the ſtimulus acts, and produces proportionally more excitement: And it has, from this time, always leſs and leſs effect to the end, in proportion as the excitability is more waſted; though, till the excitability, in ſo far as it has

* See 37.

a relation to the ſtimulus, is altogether exhauſted, the ſtimulus always adds ſomething to the ſum of excitement,*, though conſtantly leſs and leſs. The ſame is the explanation of the operation of food, of drink, and of all the exciting powers.

538. As what has been ſaid of the ſtimulus, productive of menſtruation, is conformable to the effects of all the other ſtimuli; the ſame is its conformity to the whole ſum of menſtrual effect from the beginning to the end of the proceſs. Thus, in the beginning of that long period, the force of ſtimulus is far the greateſt, upon account of its novelty, and the unwaſted ſtate of excitability that relates to it. At this period, above all others, love in perſons in health is exquiſite; and, in conſequence of the ſtimulus which excites it, menſtruation, when once eſtabliſhed, is moſt exactly performed; that is, it does not, either from deficiency or exceſs deviate into morbid ſtate.

539. But after the beginning of this function, and when now the office of menſtruation is eſtabliſhed; becauſe in this, as well as every other function, the excitability is gradually diminiſhed in the progreſs of life, the ſtimulant power alſo has gradually leſs, and, at laſt, no effect: Conſequently, in the ſame gradual way, the power, of love in women, and, in proportion, that of menſtruation, is diminiſhed, and at laſt altogether extinguiſhed.

540. While both the faculties, that of love as well as that of menſtruation, in this way decreaſe from the beginning to the end; ſo, menſtruation is often interrupted, in pregnancy, in ſuckling, in the diminution or ſuppreſſion of menſtruation. This interruption in the two former is natural, and ſuitable to health; *but* in the diminution or ſuppreſſion of the menſtrual evacuation, it becomes morbid.

541. Since the ſtimulus with the conformation of the veſſels is the cauſe of menſtruation, and the latter depends upon the former; ſo again the defect of the ſtimu-

lus, and, therefore, of the conformation, produces both the retardation, diminution, and, at laſt, the complete ſuppreſſion of the diſcharge.

542. Whether ever the defect of menſtruation, like that of perſpiration, or of any internal excretion, as that in the fauces and alimentary canal, is ſometimes to be imputed to ſthenic diatheſis, is uncertain, for this reaſon; that, while the diameters of the ſmall veſſels on the ſkin and in the inteſtines are more nearly allied to ſuch a contraction for a reaſon *formerly* aſſigned*; ſo great a force of excitement, ſo high a degree of ſthenic diatheſis, as would be ſufficient to ſhut up veſſels deſtined to the tranſmiſſion of blood, is not eaſy to be conceived. And the doubt is further encreaſed by *a certain fact*; *which is*, that both in retardation of the menſtrua, and in all the degrees of their diminution to their total ſuppreſſion, when local affection is out of the queſtion, there are evident proofs of a debilitating cauſe.

543. To aſcertain that fact, which is of the greateſt conſequence for this reaſon, that it directly intereſts the method of cure, and, if not explained, would leave a gap in our principles; *we have to obſerve*, that, as ſome men, in conſequence of the ſtimulus of exceſſive love, in the caſe of a moſt beautiful woman being the ſubject of it, have by means of ſthenic diatheſis, been ſo inflamed as to fall into a temporary fit of impotence, and been cured by bleeding; ſo, beſides that is a rare fact†, it is not very probable, that the patulous uterine veſſels can be ſo contracted in their diameters, as to be incapable of tranſmitting their fluid. Nay facts contradict it: The retardation or deficiency of menſtruation receives a temporary alleviation from the debilitating plan of cure; but the diſcharge is not uſually alſo brought back, on the contrary it is more kept off: But allowing an over-

* 57. 62. 112. 113. † *I remember one inſtance in Dr. Whyte, and I think I have only heard of another.*

proportion of blood and an excess of stimulus to be the cause of the first deficiency of menstruation, after it has been removed by bleeding and the rest of the debilitating plan of cure, can it again be the cause of a disease, which resists a degree of evacuant and debilitating plan of cure, that would cure ten peripneumonies? And since any stimulus as well as *that of* an over-proportion of blood, may from its excessive force, go into indirect debility; why may not the same thing happen in a disappointment in love, and first deficiency of menstruation; and, in both cases, atony, ushering in manifest debility, and not excess of tone, be the cause? As peripneumony, where the over-proportion of blood and sthenic diathesis is by far the greatest *that ever happens*, in consequence of indirect debility passes into hydrothorax; why may not a similar cause in this case produce a similar effect?

544. The cause, then, of deficient menstruation, whether partial or complete, is a languid excitement over the whole body, especially in the uterus, from a deficiency of the stimulus of love*, and of all those stimuli that support it†, and from a penury, or under-proportion of blood.

545. That that is a fact, is proved by the hurtful powers mentioned in the retardation of menstruation, and other debilitating ones in every deficiency of that discharge, producing each disease; it is proved by the stimulant and filling plan of cure removing it, and also by the hurtful effect of the debilitating plan of cure‡.

546. The remedies for the cure of retarded menstruation are, rich food, generous drink, gestation, exercise accomodated to the strength, pediluvium and semicupium, or the warm bath of the under-extremities, and gratification in love§.

547. The same remedies are required for the suppression, and the same, but inferior in their degree of force,

* 523. 526. 529.
† 526. 527. 532. 537.
‡ 535.
§ 526.

for the diminution of menſtruation: When there is an unuſual force of the diſeaſe, either in degree or duration, we muſt have recourſe to the aſſiſtance of the diffuſible ſtimuli.

Of Menorrhœa, or the exceſſive Diſcharge of Menſtruation.

548. Menorrhœa is an effuſion of blood from the uterus, or an over-copious menſtruation, or too long a continuance of it in a more moderate degree of the exceſs, accompanied by all the ſymptoms of aſthenia.

549. This diſeaſe is occaſioned not by an over-proportion of blood, not by a vigourous ſtate of body, but by an over-proportion of the former, and an exhauſtion of the latter. The hurtful powers, therefore, that produce it, are food not nouriſhing enough, or too ſmall a proportion of what is ſo, watery drink, or that over-proportion of pure ſtrong drink that produces indirect debility, exceſſive heat, or cold not prevented from its debilitating operation by any ſtimulus, and ſalacity.

550. Its remedies are the reverſe of the hurtful powers; rich food, generous ſtrong drink, heat acting within its ſtimulant range, cold kept from direct debility by the ſtimulus of heat and other ſtimuli, and gratification in love.

551. The effect of the hurtful powers and remedies of which we have ſpoken, that of the former in producing, and that of the latter in removing, the diſeaſe, and the failure in ſucceſs of the debilitating plan of cure, all confirm the fact.

Of Epiſtaxis, or bleeding from the Noſe.

552. Epiſtaxis is an aſthenia; which beſides the general ſymptoms of the latter, is diſtinguiſhed by bleeding from the noſe, without any force behind, an affection troubleſome at any age, but particularly to young perſons under a rapid growth, and to enfeebled old age.

Of Hæmorrhois.

553. The characteriſtic of hæmorrhois, or the piles, added to other ſigns of aſthenia, is a flow of blood from the anus, or the parts around it.

554. The ſame thing, nearly, that has been ſaid of menorrhœa, is to be ſaid of the hurtful powers and remedies of this diſeaſe.

555. The cauſe of the piles is manifeſt, from the hurtful powers producing it, the remedies removing it, and the unhappy effect of the common aſthenic plan of cure; that is to ſay, it is debility of the whole body, from the deficiency of other ſtimuli, and chiefly that of the blood*; Which debility, while it relaxes all the veſſels, and impairs their tone, produces that effect, in a ſpecial manner, upon the labouring veſſels. The reaſon of which is, that, in conſequence of the inequality ſo often mentioned, the chief prevalence of the cauſe operates in the ſeat of the urgent ſymptom†. Nor is it to be thought wonderful, that the blood ſhould flow through the veſſels of the uterus that are patulous, and in the habit of pouring out blood, through the pendulous hemorrhoidal veſſels, and thoſe of the noſe, which are delicate, and weakly ſupported, in preference to others. In this caſe plethora, which has no exiſtence‡, is equally unneceſſary to our reaſoning§.

Of thirſt, vomiting and indigeſtion, as well as the kindred diſeaſes of the alimentary canal.

556. There is a very frequently occuring affection, beginning with thirſt and proceeding to vomiting‖. It often proceeds no farther than thoſe ſymptoms; it often-

* *See par.* 549. † *See* 49. 50. 51.
‡ *See par.* 131. 134. § 231.
‖ 158. 184. 185. *and* 186.

er uſhers in the moſt ſevere affections, ſuch as ſometimes dyſpepſia, or indigeſtion, ſometimes cholic, ſometimes the gout, ſometimes proper fevers, and many other aſthenic diſeaſes. Its moſt frequent ſource by far is weakneſs, being the atendant ſometimes of too long ſuckling, ſometimes of the diarrhœa incident to women, waſted with a long courſe both of that and repeated pregnancies.

557. There are two cauſes of as many affections which have got only one name between them, that of thirſt: The one is ſthenic, and the other aſthenic*. The former ariſes from the ſtimulus of ſalt, of rich and plentiful meals, of heat and labour, and ſome others; never ending in vomiting till the ſthenic ſtate is over, which is ſeldom. Its cure, with which we have here no concern, is cold water, and the ſeveral debilitating powers.

558. The aſthenic thirſt, which is our preſent ſubject, depends always on pure debility, ſometimes indirect, ſometimes direct†. Its tendency is always to ſtomach ſickneſs, and, as that encreaſes, to vomiting‡; and when the vomiting becomes any way conſiderable, the conſequence is that moſt acute pain, which a cramp in the ſtomach produces§, and the other affection formerly explained‖. This progreſs is ſpontaneous, direct, and for the moſt part rapid.

559. The hurtful powers here are all debilitating. The indirectly debilitating hurtful powers are, debauch in eating and drinking¶, drunkeneſs, extreme fatigue, ultimately exceſſive heat**, violent paſſions††, exceſſive exerciſe of the intellectual faculty‡‡, debilitating food§§, an over proportion of blood now converted into an under-

* 158. 184. 185. 186. † 184. ‡ *See* 186. 187.
§ *See par.* 188. ‖ 189. *to* 194. *and from that to* 197. ¶ 128. 130. ** 115. †† 161. ‡‡ 139. §§ 128.

proportion, together with the converſion of the ſthenic diatheſis that attended the former, into the aſthenic, the inſeparable attendant on the latter. The following powers act by a directly debilitating operation; cold corrected by no ſtimulus*, cold drink, vegetable food†, penury of blood‡, of other fluids§, want of pure air‖, anxiety, grief, fear¶, and in fine, that weakneſs of the ſyſtem, which ariſes from all thoſe. The affection is often of a mixt origin, from a mixture of both theſe ſorts of hurtful powers: For, as direct debility always increaſes the indirect, ſo does the latter the former, both in this and all caſes**.

560. A corruption of the common maſs of fluids, whether it be called acrimony, or putrefaction, has no concern in the cauſe; becauſe, while life remains, and the action of the veſſels upon their reſpective fluids continues, ſuch a faulty ſtate of the fluids cannot make its havock over ſuch an extent of the ſyſtem, that being only the effect of a ceſſation of motion of the fluids under heat; nor can it happen, but in the extreme veſſels and excretory ducts, which, by their atony, do occaſion ſuch a ceſſation of motion, and likewiſe in the alimentary canal.

561. The cauſe of this thirſt is the common one of every aſthenia, but predominant in the throat and ſtomach, upon account of the atony of the ſalivary, and other excretory ducts††.

562. The remedies are alſo the common ones of every aſthenia, to be accomodated to the degree of debility in the cauſe. In a ſlighter degree of thirſt a glaſs or two of brandy, or of any ſimilar ſpirit, or, which is a better rule, given till the complaint is removed, is ſufficient. It ſhould be either pure, or diluted with a very

* 122. † 128. ‡ 134. § 137.
‖ 146. ¶ 145. ** 47. 71.
†† 181. 186.

little hot water*. That ſhould be followed by eating ſome animal food (B); and it ſhould afterwards be ſupported by other ſtimulants taken moderately, and in the degree that ſuits good health. After which the proper practice is, to proceed to the uſe of the permanent ſtimuli.

563. When the thirſt, not quenched by theſe means, proceeds directly to vomiting, and when, by and by, an excruciating pain ſupervenes upon the vomiting; which, excepting the pain, is an affection, that, together with the ſymptoms that have been mentioned†, ſhould receive the appellation

Of Dyſpepſanodyne, or indigeſtion without pain.

And when, beſides the pain of the ſtomach, now induced, the affection going downward to the inteſtines, ſometimes produces a looſe, ſometimes a bound, belly, at other times only a looſe belly, and at others only a bound one; which is an affection, when unaccompanied by coſtiveneſs that is diſtinguiſhed by the title,

Of Diarrhœa.

564. And, when accompanied with coſtiveneſs, is entitled to the denomination,

Of Colicanodyne, or cholic without pain.

565. In all thoſe caſes recourſe muſt be had to a larger doſe of the drink: And, when that does not ſucceed to our wiſh, we muſt next fly to opium, and other more diffuſible ſtimuli, if they are not to be found: When, by theſe, relief is procured, rich and pure ſoups, without greaſe, ſhould from time to time, be poured in, and the canal carefully bathed all over with them. After

* *The addition of cold water counteracts; that of hot coöperates with, the effect, which has been aſcertained in a thouſand trials.* † *From* 556. *to* 562.

which, the other ſtimulants ſhould be added; in the uſe of which, a ſtraight direction between direct and indirect debility ſhould be held, without the leaſt deviation towards either: And our efforts muſt always be continued till the diſeaſe is radically removed.

566. The neceſſity for this direction in the cure is ſo much the greater; that, by neglecting it, or depending upon the common purgative debilitating plan, the conſequence is, that often a proper general diſeaſe degenerates into a local affection. To proceed to the conſideration

Of the kindred diſeaſes of the alimentary canal.

567. Among them, beſides thoſe that have been mentioned above*, there are not wanting, others, which, when compared with them in the ſimilitude and nature of the cure, abſolutely claim this place in the ſcale.

Of the diſeaſes of children.

568. The diſeaſes of children are, dryneſs of the ſkin, ſudden ſlaver, or ſalivation of ſhort continuance; a ſimilar rejection of milk, without effort†; green ſcouring; at other times coſtiveneſs; both commonly with gripes; the uſual mark of which is, a pulling up of their knees towards their ſtomach, with very ſevere crying; unequal heat. A little more ſevere than thoſe are the two following caſes, the one of which has the name

Of worms.

569. Which are diſtinguiſhed by a thickning of the columna naſi‡; by a cuſtom of picking the noſtrils; by

* *From* 556. *to* 566. † *See* 403.

‡ *It is that longitudinal depreſſion which runs down from the partition of the noſtrils perpendicular to the upper lip.*

loſs of complexion; by paleneſs of the face and of the reſt of the ſkin; by a ſwelling of the belly; and, laſtly, by the diſcharge of worms by ſtool. The moſt diſtinct ſymptoms of the other affection, or

Of tabes, or the general waſting of the body,

570. Are meagreneſs all over the body, an unuſual bulk of the abdomen, almoſt conſtant watching, ſuch a weak, diſtreſſed, aſſiduous, and hoarſe manner of crying, as excites tenderneſs and compaſſion.

571. The hurtful powers, producing all thoſe affections, are in common to them with every aſthenia; that is, they are every thing that has an effect of debilitating the whole ſyſtem, and eſpecially the alimentary canal: Such as, at this age, are, milk not nouriſhing enough, and at the ſame time aceſcent and flatulent; want of food, or made of watery matter and bread; cold, and moiſture, the latter encreaſing the effect of the former; habitual vomiting and purging; too little dandling; miſtiming ſleep, and meals, and every part of management; naſtineſs; impure air, a neglect of natural likeings and diſlikeings.

572. The remedies are the converſe of all thoſe, nouriſhing exciting milk; three or four meals a day, conſiſting chiefly of warm milk, pure unimal ſoups, not weak, with a mixture of flour or bread of the ſame kind; heat, without being carried ſo far as to produce ſweat, or too much redneſs, and free from moiſture; laying aſide every ſort of evacuation; a great deal of dandling and geſtation; a proper timing of ſleep, of food, and of every part of management of theſe delicate ſyſtems; cleanlineſs; tepid bathing in cold weather, and cold bathing in warm; and pure air, being out in the fields as often as poſſible in all but moiſt weather; ſuch a judicious attention to deſires and propenſities as not to neglect ſcratching any part that itches*.

* *See above* 518.

573. Theſe directions ſuit the gentler caſes *under conſideration*. To remove the more violent, while they alſo are not by any means to be neglected; at the ſame time others are to be ſubjoined. When the green ſcourings, great looſeneſs, and boundneſs of the belly, are vexatious; recourſe muſt be had to pure wine, ſpirits, more or leſs diluted as the occaſion may require, or if there ſhould be need, not diluted at all: More of the ſoup that has been mentioned and alſo of a richer kind.

574. If thoſe ſhould not ſucceed to the *phyſician's* mind, which will ſeldom be the caſe; in the ſame affections, and more certainly in worms, and ſtill more certainly in the tabes, or general conſumption, with the remedies that have been ſpoken of, the more diffuſible ſtimuli of opium and muſk ſhould be alternated. Both ſorts of remedies*, ſhould be ſo accomodated to the violence of the ſymptoms, as not to be dropped till the whole morbid tumult is allayed, and the healthy ſtate replaced; which will, upon trial, be found more practicable, than has yet been imagined from the employment hitherto of the contrary plan of cure, to the great comfort of mankind in their ſufferings.

575. From what has been ſaid it will appear, that theſe affections of children, *all* flow from the ſame cauſe, are removed *all* upon the ſame indication of cure, as any other aſthenia, or diſeaſe of debility, that has either yet been, or is to be, mentionted in this work. The unhappy termination of them hitherto, is to be imputed not to their cauſe, but to the depravity of the common method employed for their cure (c): Nay, though they do degenerate into local affections, as in the inſtance of the tabes, or general conſumption, ending in an obſtruction of the meſentery; in that of cholic at every age, terminating in an inflammation, tumor. or complication of the inteſtines; and in thoſe of both cholic and long-

* *The durable and diffuſible.*

neglected diarrhœa, running into a gangrene in the same part; that is a misfortune that never happens, when a proper method of cure is early enough used to remove primery disease: And, on the contrary, it most commonly arises from the perversity of that plan of cure, or the neglect of this, which is the proper one. To the same kindred diseases of the alimentary canal*, further belong *the two following ones*, under the title,

Of the gentle Dysentery and Cholera.

576. To which, every thing that has been said of those kindred ones, will apply: Or, if there be occasion for any particular observation upon them, it will be taken up, after we come to treat of them in their more *severe and* violent state: Of a similar nature to all these, but of a degree so much higher as to merit the next place in rank below them, and, *at the same time*, not unconnected with them, as having the seat of its predominant symptom in the same canal, is the disease to which I have given the name.

Of Angina.

For the symptoms and method of cure of which turn back to number 221. where it is introduced, in the explanation of asthenic symptoms.

Of Scurvy.

577. Scurvy is an evident asthenia: The principal symptoms of which are, want of appetite, loathing of food, laxity of the living solids considered as simple solids; an oozing of blood, both from other parts, and particularly from the gums; aversion to labour; low spirits, and a languor in all the functions.

* *From* 566. *to the present paragraph.*

578. The hurtful powers producing this diſeaſe, are the common aſthenic ones, appearing in the following form: It is cold in this caſe, but conjoined with moiſture in the northern ſeas, and, as *we may well ſuppoſe*, in the parts of the ſouthern ocean of the ſame temperature, that generally produces the peculiar form of the diſeaſe. But with it all the other debilitating powers contribute their ſhare: Such are, grief for the loſs of liberty, relations, kindred, and friends; a horrid diſlike to their preſent ſtate of life; a longing deſire for that which they have parted with; the awe which the ſeverity of diſcipline keeps them in; *the effect of* a calm, where there is nothing to do, producing direct debility on them; a ſtorm, where they have to labour above their powers, *as certan a cauſe of* indirect debility; their not having been allowed, till of late, freſh meat, which is the only nouriſhing envigorating*, *form of it*; their being kept upon ſalted and ſpoiled meat, and not even corrected by reſcent vegitable aliment, ſuch as that is†; watery or ſmall drink; the terror which the expectation of a battle at ſea inſpires.

579. All thoſe particulars prove, that ſcurvy is ſo far from being the effect of one or two hurtful powers, and from reſting upon ſo narrow *a baſis of* the cauſe producing it, as has hitherto been imagined; that it is rooted in a multiplicity of debilitating powers, and is a real aſthenia, *or univerſal diſeaſe of debility*.

580. And this fact is confirmed both by the true and falſe method employed for its cure: For, though nearly all the common powers concur in the production of ſcurvy; if, however, it be conſidered, how eaſily, upon the removal of the hurtful powers, and the patient getting aſhore, the diſeaſe is got under, by freſh meat either with or without greens, by wine, geſtation, and exerciſe, in fine, by the recovery of his uſual manner of living; it will be impoſſible to entertain a doubt of

* *See* 124. † *See* 128.

its being both an asthenia, and by no means a violent one. The pretence of its cure being effected by greens, roots, sour crout, and similar things, so much boasted of lately, which, without the remedies just now enumerated, could not fail, by their debilitating operation, to aggravate the disease, is derived from a noted blunder among physicians, by which they are led to overlook the most certain, simple, and evident facts, and take up in place of them, the greatest fallehoods, or such facts as have a very narrow foundation in truth,

Of the gentle Hysteria,

581. The gentle hysteria is a form of asthenia, of frequent occurrence among women, but very rarely happening to men; in which a noise is heard in the belly, and the patient has a sensation of a ball rolling within the *bowels*, rising up to the throat, and there threatning the patient with suffocation.

582. The striking symptom in this disease is a spasm, not fixed in a part, but running the course *just now* described. The disease attacks in fits, for the most part leaving long intervals betwixt them, and often never recurring more than once or twice.

583. The fits are soon removed by small doses of opium, repeated at short intervals: The intervals should be secured from danger by full diet, and a moderate and naturally stimulant manegement.

Of Rheumatalgia, or the chronic Rheumatism.

584. Rheumatalgia is an asthenia, not so much a sequel of rheumatism when left to proceed in its own spontaneous course, as of the profusion of blood and of other fluids employed for the cure of it, and of too debilitating a cure; with a change of the sthenic diathesis and the inflammation, which is a part of that, into the asthenic diathesis and inflammation. Paleness of the skin takes

the place of complexion: The appetite is diminiſhed, the involuntary motions are impaired, debility and torpor prevail over all. So far the diſeaſe is underſtood to be chronic. As in rheumatiſm, the joints are pained and inflamed: As that, which has been aſſigned, is the moſt frequent cauſe of rheumatiſm, ſo it ſometimes ariſes not from a ſthenic origin, and an exceſs in the means of reducing that.

585. The cauſe of the diſeaſe is the uſual one of any aſthenia, predominant in the moving fibres of the muſcles, ſituated below the ſkin over the whole ſurface of the body.

586. Its worſt morbific powers are, penury of blood, cold, eſpecially with the addition of moiſture, impure air, and beſides theſe, as many of the other powers that act by a debilitating operation as happen to be applied, contribute, in proportion to the degree in which they are applied to the morbid effect. Of theſe, exceſſive indolence and the reverſe are particularly hurtful:

587. As all ſtimulants contribute to the reſtoration of the healthy ſtate; ſo the moſt powerful of them in this caſe is nouriſhing food, friction, geſtation, wine, taken in moderation, exerciſe, rather frequent than violent, and being as much as poſſible in the open air. If it is an acknowledged fact, that rheumatalgia is one of the reproaches of phyſicians, it is more ſo than has been hitherto underſtood; it being an aſthenic diſeaſe, while they at all times made uſe of the ſame kind of cure, as if it had been the moſt ſthenic, or even upon the whole more debilitating (D).

Of the Aſthenic Cough.

588. The aſthenic cough is an aſthenia, which with the conſtant ſymptoms of the latter, depends upon a frequent expectoration, that the cough excites; affecting every age which has been under the influence of either direct, or indirect debility, and therefore old age, which is unavoidably the prey of indirect debility.

589. As conſiſting in indirect debility, it is the effect of an exceſſive violence of all ſtimuli that have been applied either for a ſhort time, or for a great part of life, their operation coming to the ſame amount, that of the former from its degree, and that of the latter from its long continuance*. In ſo far as its cauſe is direct debility, a deficiency of all the ſtimuli, leaving the excitability to be accumulated, allows this form of aſthenia to happen from the ſpontaneous tendency of nature, of which life is only a forced ſtate (E).

590. The cough, which depends upon indirect debility, is cured by reducing the ſtimulus which occaſioned it, gradually and cautiouſly to the proper and natural degree. And when it originates from indirect debility, the encreaſe of the ſtimulus, *the want of which occaſioned the diſeaſe*, till the degree of excitement, which conſtitutes health is replaced, effects the cure,

591. Such is the nature of direct and indirect debility; that if the remedies of the former be puſhed beyond the boundary, the cough appears again; and the ſame is the event of the ſame exceſs in the uſe of the remedies of the latter†.

592. Frequent and violent cough with copious expectoration has been always held for a ſure mark of a vitiation or faulty ſtate in the lungs. That faulty ſtate was eſteemed to be of a ſthenic nature, and to give aſſurance of the preſence ſometimes of phthiſipneumony, or conſumption from an ulcer in the lungs, ſometimes baſtard peripneumony, ſometimes of a burning inflammation in the alimentary canal. In the former caſe an ulcer, or, in their way of ſpeaking, and what amounts to the ſame thing, tubercles were believed the cauſe of the diſeaſe; in the ſecond caſe inflammation either in the intercoſtal muſcles, or a different one from that,

* *See above* 29. 30. *and* 401.

† *See par.* 33. 34. *and* 43. 30. 134. *and eſpecially* 232. *to* 233.

which in true peripneumony, was, in their opinion, its primary cauſe, was conſidered as the cauſe ; and in the laſt caſe, no one of them would have heſitated a moment to have aſcribed the ſtate of the bowels to the only inflammation they were acquainted with, that which requires bleeding and evacuation for its cure. And no other enquiry was made, but whether the matter that was ſpit up, was mucus or pus. To aſcertain that, premiums were propoſed.

593. But, in fact, beſides that no phthiſipneumony, no baſtard peripneumony, as they call it, no inflammation in the alimentary canal, was ever cured by antiſthenic or debilitating remedies ; and that, in the ſeveral trials that have yet been made, the firſt of theſe caſes has been evidently aſſiſted, nay frequently completely removed, and the two latter throughly cured in numberleſs inſtances, and in all in which it has been uſed by the ſthenic, or ſtimulant plan of cure ; I ſay, beſides theſe large and comprehenſive facts, ſo little ſignification is there, either in the quantity or appearance of the expectoration, that in certain fevers, in other diſeaſes of debility, quite free of all local affection, and finally in this very cough of which we are ſpeaking, there is often a more violent cough, and a greater expectoration of matter putting on every form and every appearance, than uſually happens in a confirmed conſumption, and where every hour is expected to be the laſt. And yet the whole tumult, hitherto ſo alarming, could be ſtopt in a few hours, and quite cured in as many days.

594. And, who does not know, that there are many perſons, who have an immoderate cough, and proportional expectoration for a whole and long life time, whoſe lungs, however, are ſound, and free from any organic taint ? How often in phthiſipneumony itſelf, after finiſhing its courſe, and at laſt terminating in death has the whole fabric of the lungs been found upon diſ-

ſection as ſound as ever happens in death from any cauſe (F)?

595. The cauſe of cough has hitherto been unknown. To paſs over the ſthenic cough, with which we have nothing to do in this part of our ſubject*; the cauſe of the aſthenic is the ſame as that of any aſthenia, but more vehement in the fountain of epectoration, to wit, the exhalant and mucus arteries, the ſecreted fluids of which, inſpiſſated by ſtagnation *in the bronchia*, compoſe the matter to be expectorated.

a The moſt powerful of the aſthenic hurtful agents in exciting aſthenic cough, is cold, juſt as heat has been demonſtrated, the moſt hurtful agent in catarrh†. Nay, in the aſthenic cough, ſuch is the rage of cold, that the ſlighteſt breath of air reaching the body, excites a moſt prodigious tumult of coughing, and brings out the whole ſeries of ſubſequent ſymptoms; and heating the body in the bed as ſoon allays the cough, prevents the threatning, and cures the urgent diſturbances.

596. In this as well as the ſthenic cough, it is the ſerous and mucous fluids that chiefly flow to the bronchia. Which bear their preſſure for a little, till, diſtended by the load, they can bear it no longer. The diſagreeableneſs of the ſtimulus excites a commotion in the excitability of the labouring part, and, therefore, over its whole ſeat, and rouſes the excitement. A cough ariſes, and throws off its cauſe, the collected humours.

597. This diſeaſe is always to be treated for its cure, firſt with ſtimulant remedies, and then with ſuch as alſo fill the veſſels. If indirect debility has been the morbific power, ſtill we muſt ſtimulate, but at firſt with a force of ſtimulus little leſs than that, which occaſioned the diſeaſe, and then with ſtill leſs; and, after changing, from time to time, the form of the ſtimulus, with leſs ſtill; till we come down to the ſtimuli that are agreeable to nature, thoſe that ſuit the moſt perfect

* *See* 159. 232. † *See par.* 407. *to* 412.

health*. In that way is ebriety, in that way is every form of temperance, to be treated. If direct debility has been the cauſe, the cure will be a good deal more eaſy: That is we muſt go on to ſtimulate more and more, till we get up to that point of excitement, to which we came down in the caſe of indirect debility. In this way is the firſt ſtage of phthiſipneumony, as well as its middle courſe, and alſo baſtard peripneumony, nay, moſt caſes of the debility affecting young people, and the diſeaſe to which the name

Of Chincough

598. Is given, to be encountered in practice. Chincough is attended by a contagious matter; which varies in its degree, but in ſuch ſort, however, that a ſthenic plan of cure, adapted to the degree of the diſeaſe, for certain cures it. The change of climate or place is a tale, the practice of vomiting is death (G). And, ſince the diſeaſe is an aſthenia, vomiting, which is ſo very debilitating an agent, cannot fail to be of the higheſt detriment†.

Of Cyſtirrhœa, or the Mucous diſcharge from the bladder of Urine.

599. Cyſtirrhœa is that mode of aſthenia; in which, to the general ſymptoms of aſthenia, and the particular ones of aſthenic cough, there is an addition of mucus, rendering the urine turbid, without any previous pain or ſymptom of internal local affection.

600. In ſo far as this is a general affection, the laxity proportioned to the atony muſt be removed equally in it, as in other caſes of encreaſed excretion; and particularly the ſtimuli of health muſt be accurately adminiſtered.

* *See par.* 103. † *See par.* 137. *and* 293.

Of the Gout of ſtronger perſons.

601. The gout of ſtronger perſons is a form of aſthenia; in which, after a long habit of luxury and indolence and eſpecially, when to thoſe hurtful powers directly debilitating ones, have been recently ſuperadded, indigeſtion, or diarrhœa, or rather both conjoined, with manifeſt ſigns of a diminiſhed perſpiration, precede; then the lower extremities are affected with languor. Of the leſſer joints, almoſt always the one or other foot is ſeized with an inflammation, which, if not reſiſted by a piece of art quite new, will prove moſt ſevere, moſt painful, and of a ſhort duration, comparatively to its ſtate in that reſpect in the after part of the diſeaſe.

602. This diſeaſe may be called the indigeſtion or dyſpepſia of the luxurious, that is, depending upon indirect debility; while dyſpepſia may be denominated the ſame diſeaſe, that is the gout of perſons under direct debility, as having every ſymptom of the gout, except the inflammation (H). For, in diſeaſes, ſo little is there in names, that not only thoſe diſeaſes of which we have been juſt now treating, but likewiſe aſthma, hyſteria, the cholic, and moſt of the diſeaſes, which have taken their appellations from any remarkable diſturbance of the alimentary canal, are equally prevented and cured by the ſame method of cure preciſely; Which is indeed the reaſon why the gout has been ranked in the number of diſeaſes of the ſame canal.

603. A taint tranſmitted from parents to their offſpring, and celebrated under the appellation of hereditary, is a tale, or there is nothing in the fundamental part of this doctrine. The ſons of the rich, who ſucceed to their fathers eſtate, ſucceed alſo to his gout: Thoſe who are excluded from the former, are alſo from the latter, unleſs they bring it on by their own merit. Nay, if there be but only two diſeaſes in the ſtrict ſenſe *of the word*, they muſt be either all, or none of them, here-

ditary. The former ſuppoſition makes the hurtful powers ſuperfluous, which have been proved to be every thing *reſpecting diſeaſe*; and, as it is, therefore abſurd, ſo the truth of the latter muſt be admitted. The ſtamina, or bulk of our ſimple ſolids, are ſo given in our firſt confirmation, that ſome perſons are diſtinguiſhed by a groſs, others by a ſlender ſtate *of the whole maſs*. That variety of the ſtamina, of the exciting powers, upon which the whole phœnomena of the life depend, be properly directed, admits each its reſpective ſtate of health, ſuited to its reſpective nature, and ſufficiently commodious, if the excitement ſuited to each, from a proper direction of the ſtimuli *producing it*, be properly applied. Though Peter's father may have been affected with the gout, it does not follow that Peter muſt be affected; becauſe, by a proper way of life, that is by adapting his excitement to his ſtamina, he may have learned to evade his father's diſeaſe.

b. If the ſame perſon, who from his own fault and improper management, has fallen into the diſeaſe; afterwards by a contrary management, and taking good care of himſelf, both prevents and removes the diſeaſe, as it has been lately diſcovered: What then is become of hereditary taint.

Laſtly, if the gout is the ſame diſeaſe as dyſpepſia, ariſes from the ſame hurtful powers, is removed by the ſame remedies; and the only ſymptom, in which it can poſſibly be thought to differ, the inflammation, is only a ſlight part of the diſeaſe, depending upon the ſame original cauſe, and ready to yield to the ſame remedies; what ſignify diſtinctions about either, that do not apply to both (1)? Nothing by them further is ſet forth, than, that a certain texture of ſtamina is favourable to certain forms of diſeaſes, which (forms) are of no conſequence, in ſuch ſort, that, when the excitement is adapted to the ſtamina, even thoſe forms can be prevented or cured.

604. The hurtful powers producing the gout are, firſt indirectly debilitating, not effectual all of a ſudden, nor commonly before the meridian of life, that is, before the thirty-fifth year of one's age. Rich food, too much eaſe, have a great effect, drink has leſs. To that all that have a tendency, to wear out life, to conſume the excitability, contribute. But the firſt fit ſcarce comes on till directly debilitating hurtful powers have been ſuperadded to the indirect (K). The following are particularly hurtful, abſtinence, vegetable food, the hurtful effect of which is in proportion to the imbecility of the matter that compoſes it. The farinaceous ſubſtances, which are by no means ſafe*, and leſs hurtful than roots, and theſe leſs ſo than greens (L); but fruits are the moſt hurtful of all†. Cold water, in the height of the diatheſis, given to quench thirſt, immediately produces nauſea, vomiting, and other diſtreſſing ſymptoms of the ſtomach and of the reſt of that canal, and hurries on a formal fit‡. The mixture of an acid with pure cold water encreaſes the hurtful effect. Of the ſtrong drinks; thoſe prepared from barly by fermentation, that is, the different ales and beers, all the white wines *in common uſe*, except Madeira and Canary; and among the red wines claret, indeed all the French wines, and punch with acid, all theſe are remarkably hurtful. And as indolence helps on with the firſt fit, ſo fatigue, eſpecially that of walking, hurry on all future ones. Want of a ſufficient quantity of blood is ſo hurtful at all times, that, though the theory of phyſicians led them to the notion that the diſeaſe depended on plethora and vigour, yet no body ever thought of taking blood§. Vomiting

* *A meſs of porridge, a diſh uſed in Scotland, with ſmall beer poured upon it, and taken over night, would bring on a fit of the gout next day.* † *Apples and pears are ſuch: But the cold fruits, as melons, cucumbers, are almoſt inſtantaneous in their hurtful effect.* ‡ *See* 183. *to* 189. 236.

§ *This is one of their many contadictions between theory and theory, and theory and practice.*

is bad, and indeed one of the natural ſymptoms of a very bad ſtate of the diſeaſe; but purging the belly is worſe*. Every evacuation has a ſimilar bad effect, with this diſtinction, that the artificial are much more hurtful than the ſpontaneous.

605. One is to be excepted, that is, exceſs in venery, to which, though it be a ſpontaneous and natural not an artificial, evacuation, gouty perſons are ſo addicted, and ſo exceed others in power, that in the very middle of a very bad fit, they are not ſparing of it. That effort at firſt is not perceived; but in the advance of age, and after many returns of the diſeaſe, it is felt at laſt with a vengeance (M). Great heat, by its indirectly debilitating operation, does ſome hurt†, but great cold, by its direct debility, much more‡. Impurity of air is inimical§, as well as an interruption in the train of thinking‖; but hard thinking is more hurtful. A deficiency in the ſtimulus of paſſion is a pretty conſiderable hurtful power¶: But a high intenſity of it will convert this moderate degree of the gout into that higheſt degree of it, that attacks the head; lays a ſnare to life, and brings on certain death**.

606. Long ſleep is bad††, as producing direct debility, by deferring the re-application of the ſtimuli, which the watching ſtate afford; but ſhort ſleep is much more hurtful, leaving behind it a degree of fatigue ſtill remaining from *the effect of the* ſtimuli of the former day‡‡. Often after the upper parts of the body have been recruited with enough of ſleep, after getting up, the *podagric* feeling a ſtate of languor in his lower extremities, and a demand for more ſleep to them, is obliged to go to bed again, and give the unrecruited limbs

* *At any time I can bring on a fit by a ſingle doſe of Glauber's ſalt, unleſs I happen to be very ſtrong, and quite free of all diathesis.*

† 115. ‡ 118. § 146. ‖ 139. ¶ 141.
** *ibid.* †† 244. ‡‡ *See part II. Chap. VII.* 236.

their reſpective ſhare of ſleep. When a perſon is torpid from ſhort ſleep, how great is the luxury to cheriſh again by the heat of the bed clothes all the parts that have been expoſed to cold, that is, the whole ſurface of the body and thighs, but eſpecially the legs and feet, which laſt during the preſence of the fit, is the ſeat of the inflammation; and, how delightful *in that* way, to make up the neceſſary compliment of the ſleep that is wanted.

607. To prolong the intervals *of health*, and prevent a fit, the remedies are all the reverſe of the hurtful powers: They are, rich food taken in plenty*, but remaining within its ſtimulant range, conſequently of the animal kind, with a rejection of all ſorts of vegetable matter, or a very ſparing uſe of it; ſtrong drink, not taken cold, unleſs when there is no danger of the diſeaſe (N) (at which time cold water is ſafe after a good meal), not mixed with acid, not aceſcent, not under a turbid fermentation while it is taken†; geſtation‡, exerciſe ſhort of bringing out ſweat, or giving fatigue§, a full quantity of blood, which is procured by food and the motion juſt now mentioned‖, no evacuation¶, ſparing venery, if that be made good in ſuch perſons**, a moderate temperature††, kept equally between *the extremes* of direct and indirect debility, and inclining to neither; pure air‡‡, conſequently cleanlineſs, and being much in the open fields, a happy train of thinking§§; ſuch a ſtate of excitement as to paſſion, as keeps between fiery exceſs and ſtupid apathy, with as great tranquility of mind as poſſible‖‖; moderate ſleep, rather inclining to be long *than ſhort*, *a rule which ſhould* be ſo much the more *obſerved*, as the diſeaſe is of longer ſtanding and greater ſeverity: In fine ſleep ſhould be allowed to continue till the moſt vigorous watching ſtate is procured¶¶.

* *See par.* 265. † 267. ‡ 268. § *Ibid.*
‖ 289. 294. ¶ 289. ** 619. †† 112.
‡‡ 302. §§ 513. 518. ‖‖ 140. 302.
¶¶ 600.

608. From what has been said *it muſt appear* certain, that the gout of ſtronger perſons is not alſo itſelf a diſeaſe of ſtrength, or a ſthenic one; and that it does not depend upon vigour of the conſtitution and plethora, as it has been commonly hitherto imagined; but that it is manifeſtly aſthenic, like all the reſt of the caſes belonging to aſthenia, and proved to be ſo by the ſtrongeſt evidence; and that it is not to be treated by an antiſthenic, as it has hitherto been the notion, but by a ſthehic plan of cure; and that there is every encouragement *for treating it in that point of view.*

609. What had hitherto deceived phyſicians, *and paſſed* for a cauſe of the gout, was the appearance of vigour and an over-proportion of blood; in moſt podagrics, from the bulk of ſimple ſolids in conſequence of their way of life, and often from *great* ſtrength. But, good men! they never recollected, that vigour and a great quantity of blood was not a property inherent in animals, but that it depended upon foreign circumſtances every day and every hour*. If any one, *according to that idea*, who has happened to get a great bulk of ſimple ſolids, and who has had abundance of proper diet, and lived in that way to the thirty-fifth or fortieth year of his age, ſhould all at once be deprived of all the articles of diet; and if a dwarf two foot high, who has lived poorly, and is, therefore meagre, and ſlender ſhould equally ſuddenly be put upon rich living; will there be the leaſt probability, that the former will, notwithſtanding *his preſent* abſolute want, continue plethoric and vigorous; and that the latter, from being now crammed with unuſual plenty, will continue empty, as he had been before? Is the fundamental propoſition of this doctrine, in which it has been demonſtrated, that we are nothing of ourſelves, and that we are altogether governed by foreign powers, to be forgot? Is a perſon liable to the gout, who has for twenty years undergone an exceſs

* 10. 11. 12. 13.

of ſtimulant operation, about the fortieth year of his age, or even afterwards, to be reckoned fuller of blood and more vigourous, either than another perſon who has lived lower, then himſelf twenty years before? Where, pray, was the neceſſity of comparing gouty perſons with others free from *all bias to* that diſeaſe, and not comparing them with themſelves (o)?

Of the gentle aſthma.

610. Aſthma is an aſthenia; in which, to the ſymptoms in common to all aſtheniæ, there is ſuperadded a difficult reſpiration, returning at uncertain ſpaces of time, often unequal, without any unuſual expectoration accompanying the fits.

611. The ſame are the hurtful and curative powers here, as in the gout: In the ſame manner are the fits *both* prevented and removed (p).

Of Cramp.

612. Cramp is alſo one of the caſes of aſthenia; in which, often from pain, often from drunkenneſs, and not ſeldom from ſweat, and diſagreeable ſoaking heat, ſometimes the wriſts, ſometimes one of the calves of the leg, in fine any external part, are affected: Of the internal parts, *it is* ſometimes the ſtomach, ſometimes ſome part in the inteſtinal canal, ſometimes the bladder of urine, *that* ſuffers: The diſeaſe is not confined to indirectly debilitating powers, as producing it; it alſo ariſes from directly debilitating ones, *ſuch as* abſtinence, vomiting, looſe belly, and drinking water contrary to cuſtom.

613. To remove this diſeaſe; when it does not exceed the gentleneſs that is here underſtood, the whole body muſt be invigorated by moderate ſtimuli, every moſt urgent exciting power ſhould be taken out of the way; geſtation, and that exerciſe, which does not exceed the

ſtrength ſhould be put in practice. A more ſevere degree of the diſeaſe will by and by be treated of under tetanus.

Of Anaſarca.

614. Anaſarca is a form of aſthenia, diſtinguiſhed by water betwixt the fill and the fleſh, occaſioning an external ſwelling of the body, without the ſigns of any ſuffuſion *of the ſame fluid* into the interior parts.

615. In the cure, the body muſt be invigorated, and in that part of it chiefly, where the greateſt laxity and atony prevails, that is the ſkin. This indication is anſwered by ſtimulating heat, by friction, by pure and dry air, by nouriſhing ſtimulant diet, and the Peruvian bark: No internal *local* affection gives occaſion to it, which may be known from the ſymptoms yielding to this plan of cure.

Of Cholic with pain.

616. Cholic with pain is a form of aſthenia, and a higher degree of the cholic without pain; in which, to the ſigns of debility in common to all the aſthenic caſes, are ſuperadded a greater violence of the ſame ſymptoms, and twiſting pain about the naval, with pain in ſome part of the belly, often enormous, and ſometimes with a tumour that can be felt externally*.

Of the Dyſpepſodynia, or Indigeſtion with pain.

617. Indigeſtion with pain is an aſthenia, which adds to the ſymptoms of indigeſtion without pain, a pain and gnawing feeling in the region of the ſtomach, and is highly expreſſive of a very ſevere diſeaſe.

* *immediately above the brim of the pelvis on the right ſide, at the place of the blind head of the colon.*

Of the violent Hysteria.

618. The violent hysteria is a higher degree of the gentle hysteria: in which, besides the *symptoms* there described, mobility and changeability of mind, disposition to sleep, convulsive state, and a great resemblance to epilepsy, are conspicious. The temperament that favours hypochondriasis, is of an opposite nature to this, which is commonly called the sanguine. Both the temperament and predisposition in this case are produced by a moist, lax, set of simple solids.

Of the Gout of weakened Persons.

619. The gout of weakened persons, which is an encreased degree of the gout of strong persons, is that asthenia, in which the inflammation runs out to greater length, and at last, does not form at all; and the general affection encreases in violence, in obstinacy, and, at last, attains its highest degree; exhibiting, towards the end of the disease, almost all the symptoms of debility, every form of asthenia, and sometimes by a false resemblance, counterfeiting synocha.

620. As the diseases affecting the alimentary canal, formerly mentioned*, have, in a great measure, a common nature; so, these also, that is, the colicodynia†, the dyspepsodynia‡, the violent hysteria§, and the gout‖, are equally participant of the same, differing only from the former in their higher degree of violence. Their most distinguished symptoms are either spasm, which takes place in the cholic, and indigestion, both with pain or spasmodic convulsive affection, distinguishing the rest. But neither in that respect, do these differ from each other in any thing essential; since they *all*

* *From* 556 *to* 576. † 610. ‡ 611.
§ 612 ‖ 613.

without diſtinction, depend not only on debility, but alſo nearly upon an equality in the degree of it, as the ſimilarity of their morbific powers and remedies proves. For a very full explanation of ſpaſm and convulſion go back to the following numbers, 187. to 194. and from the latter to 200.

621. For the cure of them all*, abſtinence, fatigue, evacuations, acids, and aceſcents, cold, directly and indirectly debilitating paſſions, the debility ariſing from exertion of the intellectual function, and impurity of air, muſt be avoided. The cure of every one of them muſt be ſtimulant: When each of them is but ſlight, beef ſoup and ſimilar rich ones, which act partly by dilution, partly by a nouriſhing and ſtimulant operation, in the weak ſtate of the ſtomach, and by ſupporting the ſyſtem, and afterwards, when the ſtrength is ſo far recovered, ſolid animal food, and moderately diluted drink, which, at laſt, confirm the ſtrength, are ſufficient. In a higher degree of violence of any of them, while the ſoups ſhould ſtill be continued, at the ſame time pure ſtrong drink ſhould be adminiſtered. And when the violence of any caſe baffles this whole form of ſtimulus, recourſe muſt be had to muſk, volatile alkali, camphor, æther, and opium. Theſe muſt be adminiſtered in large doſes; and all acid and fermenting things, every thing cold, though accompanied with ſtimulus, muſt be guarded againſt.

622. For the patient's management in the intervals, all debilitating powers muſt be avoided, ſuch as fatigue, abſtinence, cold, and exceſſive heat†; and take it for a certain and demonſtrated fact, that *the* fits *of recurrent diſeaſes* do not return from any inherent power of nature, but from human folly. Accept of that as a joyous piece of news, and ſuch as nobody ever expected. The recurrence of fits of the gout itſelf is not unavoidable‡;

* *Peruſe the whole of Chap. IX. Part II. from numb.* 280. † *See again the ſame chapter, which compare with the preceding, the VIIIth of the ſecond part.* ‡ 597.

but, by guarding againſt the hurtful powers mentioned, may be repelled for any length of time; and, when it happens at any time to come on from the fault of the patient, it can often be removed in two hours, and almoſt always in as many days, and the *ſtate of* health ſecured in every reſpect. In all the ſame diſeaſes of ſimilar vehemence, whenever any ſtimulus, from a long continuation of its uſe, has begun to have leſs effect, we ſhould *lay it aſide, and* proceed to the uſe of another, from that ſtill to another, and in that way go over the whole circle*.

Of Hypochondriaſis.

623. The hypochondriaſis is an aſthenia, in which, with the ſymptoms of dyſpepſy, there is a noiſe in the belly, flatulency, and uneaſineſs, and a rooted opinion in the patient, of the diſeaſe being always worſe than it is. The way is paved to the diſeaſe by a dry ſet of ſimple ſolids, and that temperament, in which there is a natural ſlowneſs to paſſion: which, however, once excited riſes to the higheſt violence, and continues long with obſtinacy. It is further diſtinguiſhed by a fixed attention of mind, whereby the patient is liable to dwell to exceſs upon any purſuit or ſtudy, and not to be eaſily diverted to another, as alſo by a dry ſtate of the ſurface of the body, a rough ſkin, with black hair, and black eyes, and always a dark complexion and ſerious aſpect.

624. From the definition given of it by hypochondriacs, it is beyond doubt an aſthenia, as being accompanied with a noiſe in the belly and flatulency; and the courſe of the diſeaſe diſtidguiſhed by ſlowneſs, to paſſion, keenneſs in thinking, and that ſtate of the ſimple ſolids, which requires a high force of ſtimulant operation to procure, and keep up a ſufficient degree of excitement.

See par. 41.

625. Since the ſtate of the ſimple ſolids is a ſtate given by nature, and not to be changed by art, and the only indication of cure is left in the phyſicians power, is to fit a certain degree of excitement to that given ſtate, which is exactly the caſe in this diſeaſe; *it follows*, therefore, that the ſtimulus of food, drink, and others, ſhould be employed in the cure of hypochondriaſis. The patient ſhould be kept cheerful, by *being placed in* agreeable company, and gay entertainments, by entering upon a journey, and amuſing himſelf with the various ſcenes of nature and art through which he paſſes. He ſhould ride, that in guiding the horſe, his mind may be more occupied. His ſtudies and every ſubject of his *ordinary* contemplation ſhould be often changed and varied. He ſhould have generous wine given him to relieve the ſymptoms of his ſtomach and inteſtines, and to raiſe his animal ſpirits. And if theſe ſhould fail of ſucceſs, the diffuſible ſtimuli, as opiates, ſhould have their turn for a time, for the purpoſe of ſtriking a ſtroke at once. And their uſe again gradually laid aſide in proportion as the ſtrength can now be ſupported by the more natural and accuſtomary ſtimulants. Darkneſs and bad air ſhould be ſhunned; pure light, and all lively objects, ſhould be ſought after. No hypochondriac, even in a fit of delirium, ſhould be provoked, but by every contrivance ſoothed (Q).

Of Dropſy.

626. Dropſy is an aſthenia, commonly in the form of an anaſarca, with a ſwelling in ſome viſcus, which, for the moſt part, at leaſt in the beginning, attacks ſome place in preference to others, and more than any other.

627. The cauſe of dropſy, in ſo far as it reſpects the collection of water, is eaſily explicable upon this doctrine, but altogether inexplicable upon any other. For the univerſal debility, that is laxity and atony, is chiefly predominant in the extreme red arteries, and the exhal-

ants immediately continued from these; as well as in the commencements of the absorbent veins; and, of the same kind of vessels, it is often urgent in a particular part in preference to others.

628. As all the debilitating hurtful powers concur in producing this, as well as any other asthenia; so those powers have the greatest influence in this case, that press most urgently upon the vascular system. Hence, as *we see* in the conversion of peripneumony into the dropsy of the chest, profuse bleeding, and a large draught of cold water, when the body is fatigued, overheated, and burned up with thirst, are the most powerful agents in bringing on this disease. The hurtful effect of the latter of which, in every case of debility, when its operation is followed by no stimulus, has been more than sufficiently explained above*. Besides, in this case, when all the vessels are open, the water flowing to their most weak terminations, passing out by these, and being not at all transmited from the exhalants into the absorbents, is collected into every neighbouring cavity†. And hence the commencement of the urgent symptom in this disease.

629. To this asthenia belong all the watery effusions, which do not arise from a local affection, but depend on pure debility. And, therefore, if at any time any other form of asthenia, whether from wrong treatment, or other hurtful powers, in its progress terminates in this effusion; every such case should be held as a proper dropsy‡; and it should be ever present to our recollection, that there are only two general diseases, and that the distinctions hitherto received, are devoid of all solid foundation. Accordingly, both from other improprieties, and particularly from bleeding, epilepsy, palsy, the gout, terminate in real dropsy. Nay, the same is the termination of peripneumony itself, when it is either converted into indirect debility, from the debilitating

* *See par.* 117. *to* 124. † 59. 60. 61. ‡ *See* 81.

plan of cure having been puſhed to exceſs, or into direct debility, from having been left to itſelf, and the body not ſufficiently debilitated. The affections, confined to parts, which are conſidered as the remote cauſes of dropſy, will be treated among the local diſeaſes, to which they belong.

630. After this explanation of the nature of dropſy, the cure of it, provided that it be a proper one, and early enough ſet about, ought by no means to be ſo much deſpaired of, as it ſhould be when local affection, with a ſimilar effuſion, and the general diſeaſe are blended together without diſtinction, *and conſidered as one and the ſame**. If long before the effuſion there was no internal complaint, if the diſeaſe rather came on ſuddenly, and in conſequence of evident hurtful powers, and yields to the firſt part of the curative means, there is no reaſon to doubt of a cure.

631. Beſides the general indication of cure for aſthenia, that *ſuited to this caſe* muſt be particularly directed to the whole vaſcular ſyſtem, and eſpecially about their terminations, and the commencements of the abſorbent veins. The remedies are alſo the uſual ones; that is diet, as nouriſhing and ſtimulant as poſſible; firſt in a fluid form, when the ſolid cannot be admitted upon account of the debility of the ſtomach; then, alſo in a ſolid; and together with both, ſtrong drink, ſuch as the beſt wine that can be got, fermented ſpirit, ſometimes pure, ſometimes diluted. If the diſeaſe does not yield to theſe, after their uſe has been continued for a proper length of time: recourſe muſt be had to the diffuſible forms: By this means, when the effuſion has not yet attained to that high degree that conſtitutes a local affection, not to be altered by any ſtate of the excitement, this aſthenia can be as eaſily cured as any other.

* *Sometimes the predominant ſymptom riſes to the degree of being above the power of the excitement, as in the tumor of ſchirrhus, and the effuſion here.*

632. But, when a great quantity of water has now got into ſome large cavity, it ſhould immediately be removed by the catheter; when that has been done, and the emptied cavity ſecured with as much care as poſſible, and the ſtrength ſupported by wine, ſtrong drink, and any ſtimulus more diffuſible, we muſt return to the management mentioned a little above. And if it ſhould likewiſe fail now, our judgment muſt be, that either the general diſeaſe has degenerated into a local, or that the affection has been local from the beginning.

Of Epilepſy.

633. Epilepſy is an aſthenia; the diſtinguiſhing ſymptoms of which are, ſome heavineſs of intellect, dullneſs in the exerciſe of the ſenſes; and then a very impaired ſtate, or temporary extinction of the latter, accompanied with various convulſions over the body: Fits, conſiſting of ſuch a concourſe of ſymptoms uſually return afterwards at uncertain ſpaces of time, and *each of them* terminates in a foaming at the mouth.

634. As all the debilitating hurtful agents are productive of this diſeaſe; ſo the loſs of the blood and other fluids, exceſs in venery, paſſions, ſuch as fear, terror, aſſiduous and intenſe thinking in great geniuſes; a deficiency of that kind of ſtimulus in ſtupid perſons, are particularly ſo*. Theſe powers that produce the firſt fit, more eaſily bring on after ones: And beſides them, certain unuſual impreſſions upon the ſenſes, ſome of them diſagreeable, ſome highly agreeable; ſuch as the flavour of ſome foods, the ſmell of a roſe, have the ſame tendency; and certain poiſons† are ſaid to have the ſame effect.

635. But the appearance of ſymptoms is a thing full of fallacy, and, unleſs the nature of the hurtful powers producing them, and of the remedies removing them, be thoroughly underſtood, it is incomprehenſible. To

* *See above* 134. 137. 139. *and* 142. † *See* 20

ſolve the preſent difficulty about poiſons, and to ſettle *the queſtion*, whether the ſymptoms belong to univerſal or local diſeaſe; we muſt conſider, whether the latter one produced by a vitiated ſtate of a part, ſuppoſe that part either the ſtomach or brain, ſuch a vitiated ſtate, as in ſome point of the lower extremities proves the cauſe of the aura epileptica; and whether this vitiated ſtate reſiſts the virtue of the remedies, that perform their cure by changing the excitement; or whether all the ſymptoms are either relieved or removed by the change of excitement. If the former is the cauſe, the affection muſt be conſidered as local*; if the latter be the truth, the diſeaſe muſt be held for a general one, and a true, but a great aſthenia. Nor muſt we forget, that a great many ſymptoms of general diſeaſes, from the ſame origin, are diſſimilar; and many from different, nay oppoſite cauſes are ſimilar; that many local ſymptoms have a great reſemblance to thoſe of general diſeaſes, and that they ſometimes, by a moſt falſe appearance, counterfeit epilepſy, ſometimes apoplexy, ſometimes certain other general diſeaſes beſides.

636. For the purpoſe of preventing this diſeaſe, we muſt both avoid other debilitating powers, and thoſe that have the greateſt power in producing it. The veſſels ſhould be filled, by giving food as nouriſhing, and as effectual in producing blood as poſſible; the indulgence in venery muſt be moderated, cheerfulneſs and tranquillity of mind muſt be favoured, an agreeable train of thinking muſt be found, and all the objects of the ſenſes, which give them diſturbance, guarded againſt; the ſtrength muſt be fortified by recruiting exerciſe, by the Peruvian bark, if the approach of the fits can be perceived, and by wine and the more diffuſible ſtimuli. A length of ſleep, that is, a medium betwixt too long and too ſhort a continuance of it, ſhould be kept up. Stimulant heat ſhould be applied; and all exceſs of it as

* *See above* 223.

well as cold avoided*. The purest air, such as that in the fields, which is free from moisture should be sought after. The surface of the body should be excited by friction, and cleanliness, for the purpose of cherishing the organs of voluntary motion, that are most closely connected with the animal power in the brain.

637. The same remedies, which radically cure the gout, also cure epilepsy, and precisely in the same manner (R).

Of Palsy.

638. Palsy is an asthenia, in which, with the other proofs of the usual debility, often with some degree of apoplectic fit, commonly all on a sudden, the motion of some part of the body, and sometimes the sense of *feeling* is impaired. When the fit is slight and of short continuance it terminates in health; but the consequence of a higher degree and greater duration of it, is death.

639. The hurtful powers that usually produce epilepsy and apoplexy, also tend to produce palsy. And besides these, all the common debilitating powers that produce any asthenia, directly or indirectly; great commotion of the nervous system by means of too diffusible stimuli; more affecting the circumference of the body, where the organs of voluntary motion are chiefly seated, and the internal parts and the brain less; as is evident in ebriety, gluttony, and every sort of intemperance; likewise an indolent way of life, which as commonly connected with these hurtful powers, have all the same tendency.

640. When the disease has once taken place, as it is kept up equally by directly and indirectly debilitating powers; so

641. For the indication of cure, which is precisely the same as in epilepsy as the energy of the cause ope-

* *See* 124. 127. 227. 276. 137. 130. 237. 238. 260.

rates more immediately upon the ſurface of the body, conſequently according to what has been ſaid upon the ſubject of epilepſy, the principal remedies are thoſe, that have the greateſt power in invigorating the ſurface of the body: Such are friction, geſtation, that degree of exerciſe which the ſtrength can bear, for the purpoſe of rouſing by their powerful operation, the languid excitement in the fibres of the muſcles; likewiſe a proper degree of heat, of pure air, and therefore, as much as poſſible, the open air; laſtly, as none of the powers endued with ſtimulant virtue, by any means ſhould be omitted, in order that the excitement, which is of great conſequence in every cure, be more equal and vigorous all over; ſo in that extreme debility which produces ſuch an impotency of voluntary motion, as it is of the greateſt conſequence to make an impreſſion upon the principal ſymptom; we ſhould therefore *employ* a great deal of an opiate, (130. and 229.) the influence of which, upon the ſurface, is the moſt conſiderable *of all* other powers, and preſs the cure, till ſome commencement of returning motion be procured; and then, without neglecting of the aſſiſtance of any of the other ſtimuli, but uſing them all in concourſe or ſucceſſion, for the ſake of rendering their common effect more powerful and more equal to eradicate the diſeaſe.

642 Debilitating and evacuant powers are to be avoided for this reaſon, that it is not vigour, it is not an over-proportion of blood, but a ſcantineſs of the latter, and a deficiency of the former, that is the cauſe.

Of Apoplexy.

643. Apoplexy is an aſthenia, reſembling the two juſt now mentioned, in its cauſe and cure, differing in the appearnce of the ſymptoms, which makes no difference in the truth*: In which, beſides the ſymptoms in

* *See par.* 81. 529.

common to it with them and the other aſtheniæ, all of a ſudden, ſenſe, intellectual energy, and the voluntary motions, are impaired, the reſpiration remains, but with ſnoring, the pulſe is weak, and the whole fit is finiſhed with the appearance of a profound ſleep*.

644. The heads of the patients are large and not well formed, their necks ſhort and thick: The diſeaſe ariſes from both direct and indirect debility, but chiefly from the latter. Of the indirect debilitating powers, the moſt powerful is the luxury of food, drink, and ſloth, which after its courſe of ſtimulating and filling the veſſels is run, is truly debilitating and productive of a penury of fluids: And, as each ſort of debility is encreaſed by the other, and conſequently the indirect by the direct, ſo that is remarkably the caſe in this diſeaſe. Hence the effect of the debilitating plan of cure is ſo pernicious in apoplexy, that it is received as a rule, that the third fit is not often, the fourth never, got the better of.

645. The cauſe of epilepſy, palſy, and apoplexy, is the ſame with that of every aſthenia; affecting the head leſs in palſy, excepting in the beginning and end, but greatly in the two others; and in all the three producing a diſturbance in the organs of voluntary motion. This diſturbance, whether the motion be deſtroyed or diminiſhed, in convulſion ſeemingly encreaſed, amounts to the ſame thing, and, as was formerly explained, depends upon debility†.

646. The ſame here too is the indication of cure; with that, which runs through this whole form of diſeaſes, and the force of the remedies is eſpecially, and as much as poſſible, to be directed to the parts moſt affected. To prevent, therefore, the fits, in every reſpect alarming and full of danger, we ought to recollect, how far indirect debility has a ſhare in producing this diſeaſe, and how far the direct concurs with it; and alſo conſider the operation of a greatly advanced age. All exceſſive

* *par.* 152. 199. † *See par.* 58. 229.

ſtimulus, therefore, muſt be avoided in ſuch a manner, that the body may be invigorated and direct debility guarded againſt, the ſtimulant plan of cure ſhould be ſet on foot with moderation and accuracy; and, in the place of the forms of ſtimuli, that have, either from long or exceſſive uſe, loſt their ſtimulant operation, according to the rule of nature, others, which the excitability, yet not worn out with reſpect to them, can receive, ſhould be ſubſtituted, that is, the kinds of food, of drink, and of diffuſible ſtimuli, ſhould be changed all round, and upon the failure of each lately uſed one, to return to thoſe that have been long ago laid aſide*.

647. The three diſeaſes we are treating of, are commonly ſuppoſed to ariſe from a plethora, attacking the head, and proving hurtful by compreſſion upon the brain. But, beſides that, plethora has no exiſtence in any caſe where it has been ſuppoſed†, at that extreme age at which thoſe diſeaſes happen; or ſometimes in epilepſy, when it affects weak and ſtarved children, how can the blood be in over-proportion? Can penury of blood, which alone is the matter that forms blood in the latter, and in the former a vigour long gone, create an over-proportion of blood, and not, on the contrary, a penury of it?

648. As plethora has then no ſhare in inducing thoſe diſeaſes, ſo neither is an effuſion of blood or of ſerum‡ upon the brain, to be accuſed of it. Nay, a ſimilar effuſion happens in every caſe of the veſſels, from great debility as well as in this caſe.

Of the Lock-Jaw.

649. The lock jaw is a leſs degree of tetanus, its ſpaſm being confined to the lower jaw and the neighbouring parts. This is a rare affection, without others equally conſpicuous; as being a formidable ſymptom of

* 301. † 131. 134. 549. 555. ‡ 137. *and the addition.*

fevers and wounds. When the former of these happens, it will be treated of in fevers; when the latter, it will give occasion to an enquiry, whether it belongs to local or general disease.

650. Since it never arises immediately after a wound is inflicted, but usually happens, either when the latter is healed up, or after a considerable interval of time; *the inference from that* is that it either arises from the violence and duration of the pain, which is always a cause of very much debility, or from that debility, which the usual antisthenic plan of cure produces, or from an unknown taint in the substance of the nervous system.

651. That it depends upon debility we have reason to believe, from every sort of spasm always depending on debility*; from tetanus, which is precisely the same affection, only differing in degree†, having no other origin; and, in fine, from the success of the stimulant plan of cure in this as well as all other spasms; and the want of success of the antisthenic, or debilitating evacuant one. All the other particulars regarding this subject will be taken notice of under *the* next *head of disease* tetanus.

Of Tetanus.

652. Tetanus is an asthenia, and, therefore, always affecting persons under debility, whether direct or indirect; in which, sometimes with consciousness, sometimes not, sometimes with difficulty, sometimes with freedom of respiration, the whole body, or the neck and its neighbourhood only, are bent sometimes forward, sometimes backward, and held fast by a rigid spasm.

653. Tetanus is the off-spring of cold countries, as the northern parts of Europe, but rarely; more frequently of the warm southern regions of that division of the world; but most frequently of the torrid zone. The

* *See par.* 188. 111. † *par.* 227.

rare *caſe*, ſuch as that among us, is the ſequel of a debility ſcarce uſual in other general diſeaſes: On the contrary, it almoſt always ariſes from that unuſual debility, which is occaſioned by a lacerating wound, through which fractured bones are daſhed, encreaſing the ſum of that debility that exiſted before, or that happened to be induced in the courſe of the cure. To produce the more frequent *caſe*, or that moſt frequent one of all, which is quite common in the torrid zone, the moſt powerful of the debilitating power, and a very great many, if not all of them, concur. The moſt powerful of theſe is, that degree of heat, which is intolerable, to perſons engaged in exerciſe or labour*, to whom almoſt only, and therefore to the ſlaves, it is hoſtile. Hence, even under the flighteſt corporeal motion, fatigue, and ſweat, are produced†, and from the ſweat a ſcantineſs of blood and other fluids. From all theſe ariſes a languor over the whole body, and therefore, in the ſtomach‡: From the languor of the ſtomach there is a puny appetite, and food, which is another cauſe of penury of the fluids, is either not taken in, or thrown up again. All theſe *affections*, as well as that indolence both in mind and body, which is inſeparable from ſuch a ſtate of circumſtances, are followed by the higheſt degree of debility over the whole body: And, as the moſt noxious power, the intenſe heat diſtreſſes the head more than any other part, as well as the organs of voluntary motion, whether in the neighbourhood of the head, or more diſtant from it; that is the cauſe of the urgent ſymptom, the ſpaſm, occupying the parts that have been mentioned.

654. As tetanus *is* occaſioned by all the debilitating powers, according to the different degrees *in which they poſſeſs that effect*, and, conſequently, like every other aſthenia, depends upon debility as its cauſe; and, as all the aſtheniæ are removed by remedies, exciting the

* 127. † 125. ‡ 185. 193. *to* 197.

whole ſyſtem in ſuch a manner, as to exert the greateſt influence poſſible upon the labouring part; the ſame, accordingly, is the nature of tetanus, however little that diſeaſe has been underſtood, the ſame ſimplicity of nature found in it: And if there is occaſion in it for the very higheſt remedies, that circumſtance ſhows, that the whole diſeaſe does not depend upon the ſpaſm, *and* that the labouring muſcles are not its whole ſeat, but that there is vaſt debility in every part, *only* greater in the muſcles, than in any other equal part, according to the law we have mentioned*.

655. From what has been ſaid, after tetanus has taken place, and upon account of the teeth being ſhut by the lock-jaw, there is neither acceſs to the weaker and leſs powerful ſtimuli of food, drink, and ſuch like, which are often ſufficient for the cure of diſeaſes of leſſer debility, nor any *ſenſe in* uſing them; we muſt, therefore, immediately have recourſe to the moſt powerful and the moſt diffuſible ſtimuli poſſible, and continue their uſe without regard to quantity, not even that of opium itſelf, till the whole tumult of the diſeaſe is allayed†.

Of Intermittent Fevers.

656. Paroxyſms, conſiſting of a cold, hot, and ſweating fit, are a ſort of phœnomena that occur in every intermittent; and, in a certain proportion, in ever remittent fever. They often come on in conſequence of a certain taint received from neighbouring moraſſes, or from a ſimilar ſtate of a neighbouring ſoil; *but they alſo happen and* often *too*, after an application of cold only (s); at other times after that of heat only (t), when the common aſthenic hurtful powers accompany either: And they return with a remarkable exacerbation, after a temporary ſolution of the diſeaſe, or an abatement of it; in the cold fit, exhibiting maniteſt debility; in the hot,

* *par.* 99. † *par.* 294. *to* 301.

counterfeiting a deceitful appearance of vigour; and ſcarce ever obſerving any ſtrict exactneſs in the time of their return*; but returning ſooner in a higher, and later in a lower degree of the diſeaſe; and not unfrequently, beſides the remittent, alſo gradually aſſuming a continued form; and, on the contrary, ſometimes without interference, oftener in conſequence of an improper method of cure, before the diſeaſe is ended, changing into quintans†, ſeptans‡, nonans§ or into ſextans, octons, and decans‖.

657. The fever of this kind, which returns every fourth day, and is therefore called a quartan, is milder than that which receives the name of tertain, from its recurrence being on the third day, and the latter is milder than that which, from its return every day, is denominated quotidian. The diſeaſe that degenerates into a remittent or continued form, is of a worſe nature than that which is regular in its returns, or that which puts off fits, and protracts the intervals *betwixt them*: And, the form and type of each caſe being given, the whole ſet is both of more frequent recurrence, and of a more ſevere kind in hot, than cold, climates.

658. That this ſort of fever depends upon debility throughout the cold fit, is proved by the ſymptoms, by the exciting hurtful powers, and by the method of cure, whether ſucceſsful, or the contrary.

659 The whole diſeaſe, as well as every paroxyſm, begins with a ſenſe of cold, the greateſt deſire for a warm ſituation (u), with trembling, and that ſhaking motion

* *Dr. Sydenham was content to count the periods by the day, which was even too particular, but Noſology has refined the matter into the wonder of exactneſs to an hour.*

† *Where the fit does not return till the fifth.*

‡ *Where its return is not till the ſeventh day.*

§ *Where the intermiſſion continues till the ninth day.*

‖ *That is, prolonging their intermiſſion till the ſixth, eighth, or tenth day.*

in which the whole body is lifted up from the bed*, with paleneſs, dryneſs, and ſhriveling of the ſkin, with the diminution of tumors, and drying up of ulcers, that the patient may happen to have had *before the arrival of the diſeaſe*, with an impaired ſtate of the intellectual faculty, a want of ſteadineſs in its exertions, and ſometimes delirium, with a dulneſs of ſenſation, languor of ſpirits, torpor of the voluntary motions, a liſtleſneſs of mind and body in all the functions, in fine, a manifeſt debility.

660. If terror, horror, cucumbers, cold melons, famine, debauch in eating and drinking, food of difficult digeſtion, have been found for certain, to have a great effect in bringing back paroxyſms, after a long intermiſſion of them; if in cold ſituations, where cold is the principal hurtful power, it is the poor people, who are ill cloathed, ſtarved in their diet, and enfeebled by labour, who in general are only affected with diſeaſe; if in warm regions of the globe, thoſe who have been moſt expoſed to debilitating hurtful powers of all kinds, who in preference to others are ſeized with it†; if in moiſt places, thoſe who live well in their diet, and cheer themſelves with their bottle, eſcape the diſeaſe (x), and water drinkers and perſons in a ſtate of inanition from low living peculiarly experience it; all theſe facts ſhow, how far this diſeaſe is from depending upon heat and moiſture alone; *and prove*, that it alſo ariſes from cold, and not from either alone, but alſo from all the uſual hurtful powers, like every other aſthenia.

661. Further, if every kind of evacuation, as often as it has been tried, is found, without the poſſibility of a doubt, to be hurtful; if no perſon in his ſenſes has ſcarcely ever attempted bleeding (y); if, before the Peruvian and ſome other barks of ſimilar operation were found out *to act as remedies*, a variety of ſtrong

* *By authors and lecturers, in Latin abſurdly called rigor.*

† *See par.* 647.

drinks (z) were uſed with ſufficient ſucceſs; and if it now alſo is found and demonſtrated in fact, that the diffuſible ſtimuli are by far more effectual than any bark; nay, that the bark often fails, while they are perfectly effectual in the re-eſtabliſhment of health; from this ſort of argument and certainty in point of fact, we derive the moſt ſolid conviction, that there is nothing in this diſeaſe different from other aſtheniæ, but that it perfectly agrees with them in the exciting hurtful powers, in the cauſe, and in the cure. And, if it differs in the appearance of the ſymptoms, that ſhews no difference of nature, and not even any thing unuſual; as all the aſtheniæ that have been mentioned, however much they have been proved to be the ſame*, differ notwithſtanding, in a ſimilar manner, from each other, and ſymptoms lead not to truth, give no real information. For, though preciſely the ſame ſound functions flow from the ſame ſtate of perfect health; yet when the latter is ſo changed, as that the excitement is either encreaſed or diminiſhed, the functions are changed from the ſtandard into every ſort of appearance, in ſuch ſort, however, that they point out no difference in the cauſe as has been commonly believed, and not always even a difference of degree†.

662. Accordingly, *the following demonſtrated* facts of ſpaſm, convulſion, tremor, inflammation from weakneſs, deficiency of menſtruation‡, bleeding diſcharges§, loſs of appetite, thirſt, nauſea, vomiting, diarrhœa with pain, and diarrhœa without pain, all the other aſthenic affections‖, ariſing from one and the ſame cauſe, and being removed by one and the ſame operation of the remedie¶, and not even in their morbid ſtate, expreſſing

* *See par.* 71. 81. 629. † 504. 607. ‡ 545. *and the following paragraph.* § 548. ‖ 175. *to* 194. *and to* 196. ¶ 221. 656. 561. 571. 573. 574. *to* 695. *and from that to* 698. *Look alſo carefully over the whole IVth chapter of the ſecond part.*

degrees of debility in such a manner, as that it can be thought proper to take any order of arrangement from that *mark*; all these serve to confirm the observation just now made, and by their analogy, to demonstrate, that the fevers also are distinguished by intervals of freedom from febrile state, sometimes greater, sometimes scarcely perceived in common with what happens to many other diseases, not from any peculiarity in the cause, but from a variation in its force. If fevers sometimes intermit their febrile impulse, sometimes exert it more remissly, and sometimes, by performing the latter imperceptibly, go on almost in a continued carreer*; do they, in that respect, differ from the gout (2 A), which never goes on with an equal force, but abates from time to time; and even, when it has interposed an interval of health returns with more severity than ever? Or do they differ from asthma, as well as many other diseases, in all which the same thing precisely happens? And what is more usual, in indigestion, and often violent vomiting (2 B), accompanied with a rage of other symptoms, than the intervals of the greatest relief? The same is the nature of the chin cough† the same as that of the asthenic cough‡. In fine, where is there one of all the asthenic diseases, the morbid carreer of which continues the same from beginning to end? There is none (2 C). For, as life in all its states§ is always in proportion to the action of the exciting powers, upon the excitability, and both predisposition to diseases, and diseases themselves supervene in proportion to its being greater or less than the proper degree; so the course of diseases follow the same rule; and, according to the degree of that action, is one while encreased, another while diminished, another while exhibits a temporary eruption; just like what happens in this sort of fevers.

* 650. † *See* 579. ‡ *And from* 587. *to* 597.
§ *See par.* 9.

663. The cauſe of them is the common one of all aſtheniæ, whether febrile or not; but under ſuch direction and application *to the ſyſtem*, that, after an interval of ſome hours, all their morbid enery departs entirely, or in ſome degree. And the reaſon of that is, that the exciting hurtful powers in the ſame proportion are either removed, or more gentle in their operation; in one word, the excitement is encreaſed for the time. The variation of types is not owing to a matter, ſubject to the ſame variation: For, if that were the caſe, how could the ſame caſe run through all the forms, ſometimes of intermiſſion, ſometimes of remiſſion, and at other times of nearly going on with a continued movement and the contrary? Is the matter, which is ſuppoſed to produce each form, in order to produce ano-another form, changed into that matter, which is ſuppoſed neceſſary to the latter (2 D)? Is the vapour, or, as they call it, the effluvium, proceeding from animals, which is ſuppoſed to produce any typhus or continued fever, and, therefore, the Ægyptian one, when this is changed into an intermittent, or remittent nature, alſo, together with the change of type, changed into a marſh miaſma, or defilement ariſing from moraſſes, which is ſuppoſed to produce that form *of fever?* Or rather does the matter, which at firſt produced each type, *ſtill* continue *the ſame*, and become the cauſe of another form? If any perſon ſhould fix upon the latter *as being the truth*, how ſhould the ſame cauſe produce different effects? *But*, if he inclines to adopt the former ſuppoſition, what proof is there, that can be admitted upon any principle of reaſoning, that, as often as the form of the fever changes, ſo often its cauſe, the matter, is alſo changed? It has been already proved, that marſh miaſmata, or defilements, are not the cauſe*. And it ſhall be by and by evinced, that the animal effluvium, or vapour, ariſing from the body, when affected *with a con-*

* 653. 654. 655.

tinued fever, is not: Nay, it has been proved by the moſt ſolid arguments, that neither is any other matter taken into the body, either in this or any caſe, that which produces the diſeaſe, and that the change of excitement alone is the univerſal ſource of all general diſeaſes*.

664. To enquire into the return of fits; it is not peculiar to this form of fevers, to have a return of the general affection after its temporary ſolution; the ſame thing happens to the gout, as often as a return of the diſeaſe again ſucceeds to a return of health†, and for the ſame reaſon‡: For, as thoſe diſeaſes are repelled by invigorating means, ſo as they are brought back by the debilitating powers, which were their firſt cauſe. Accordingly, when the diſeaſe is left to itſelf, when it is treated by a debilitating plan of cure, it perſeveres in returning; when it is treated with Peruvian bark, and ſtill more certainly by the forms of wine and diffuſible ſtimuli, and when that mode of cure is perſiſted in, till the ſtrength is quite confirmed, it never returns.

665. The tertian vernal fevers of Scotland go off without medicines, in proceſs of time, firſt in conſequence of the heat of the bed, and then, as the ſummer ſets in, by baſking in the rays of the ſun, and by a moderate uſe of food and ſtrong drink, *their duration* commonly *not exceeding* the ſpace of three months. In all the ſouthern regions, and even in England, the Peruvian bark, when the whole cure is entruſted to it, often fails, they are not removed but by very diffuſible ſtimuli (2 E).

666. The debility during the cold ſtage is the greateſt, that of the hot leſs, and that of the ſweating ſtage, which ends in health for the time, is the leaſt of all. Hence, in a gentle degree of the diſeaſe, a cold is the moſt hurtful power, the conſequence is, that its effect is

* *See the paragraphs* 22. 23. 62. 69. 70. 72. 73 *and* 88. † 656. ‡ 657.

gradually taken off by the agreeable heat of the bed or of the ſun, and the ſtrength, thereby gradually drawn forth. The heart and arteries, gradually excited by the ſame heat, acquire vigour, and at laſt, excited in their perſpiratory terminations by the ſame ſtimulus the moſt hurtful ſymptom being thereby removed, they reſtore the hot fit, and afterwards carry on the ſame proceſs to the breaking out of ſweat.

667. When the force of the diſeaſe is greater, theſe powers are ineffectual; and, unleſs the moſt powerful remedies are applied, the diſeaſe, inſtead *of producing* intermiſſions, ruſhes head-long into the remittent ſtate only, or even into thoſe very obſcure remiſſions, which give the appearance of a continued diſeaſe.

668. And, ſince in every caſe of diſeaſe of any energy, the diſeaſe returns, for this reaſon, that either the leſſer force, by which it is kept up, is not ſtopt by a leſſer force of remedies, or the greater force of the former by greater force of the latter*; the remedies, therefore, ſhould be given both before the cold fit, and during it, as alſo through the whole courſe of the intermiſſion to the next paroxyſm, and they ſhould be continued even through this, and after it is over. Laſtly, like the practice in every other cure of aſthenic diſeaſes, we ſhould gradually recede from the uſe of the higheſt ſtimuli, in proportion as the body can now be ſupported by the leſſer and more naturalt.

Of the ſevere Dyſentery.

669. The ſevere dyſentery, or bloody flux, is an aſthenia; in which, beſides the ſymptoms in common *to that whole form of diſeaſes*, ſo often now repeated, there are pains in the inteſtines, gripes, innumerable dejections,

* *For the curative force muſt be always accomodated to the morbific, or cauſe of the diſeaſe. See above* 92. 109.

† 105. *and* 107.

chiefly mucous, sometimes bloody, for the most part without the natural *matter that passes that way*, all which happen often after contagion has been applied.

Of the severe Cholera.

670. The severe cholera adds to the common symptoms of every asthenia, *those of* vomiting and purging, alternating with a great violence, and for the most part consisting of bilious matter.

Of Synochus.

671. Synochus is a very mild typhus, and such as chiefly happens in cold countries and cold seasons; in the beginning deceiving physicians by a certain resemblance of synocha, but a counterfeit one.

Of the simple Typhus or nervous fever.

672. The simple typhus, or nervous fever, is such a synochus, as appears in warm countries or seasons, but somewhat more severe, and yet sufficiently simple.

Of the Cynanche Gangrenosa.

673. The gangrenous cynanche is a typhus, a little more severe than the symple typhus, or nervous fever, with an eruption upon the skin, and a red tumid inflammation of the throat, and with mucous crusts of a whitish colour, and concealing ulcers below them. The end of the angina, formerly mentioned*, equals or exceeds the violence of this disease.

Of the confluent Small-pox.

674. The confluent small pox is a typhus chiefly depending upon indirect debility. It is preceded by a great

* 221. 213.

eruption of the distinct kind, and an universal crust of local inflammation over the whole body; *which*, by their local and violent stimulus, convert the sthenic into the asthenic diathesis, and the inflammatory affection into a gangrenous one. Its cure is to be conducted upon the stimulant or antisthenic plan, but in such a way, however, as is suitable to indirect debility.

Of the pestilential Typhus, the jail, putrid, or the petechial Fever, and the Plague.

675. The pestilential typhus, or the jail, putrid, and petechial fever, is an asthenic disease of the highest debility, scarce excepting the plague itself; in which the surface of the body is first dry, pale, hot, shrivelled; then, chiefly towards the end, moist, drivelled with spots, and colliquative sweats, diversified with vibices, or long strokes like those laid on by a whip, and wasted with colliquative diarrhœa; in which the stomach is affected with the want of appetite, loathing of food, nausea, often with vomiting; in which the belly is first boundish, and then, as it has been said, subject to colliquative evacuation; in which the intellectual function is first impaired, then becomes incoherent, afterwards delirious and that often in the highest degree; in which the spirits are dejected and wasted with sadness and melancholy; in which the voluntary motions are impaired, and then so destroyed, that the patient cannot be supported in his posture in bed by his own muscles, or prevented from slipping down, from time to time, from the upper to the lower part, and the senses are either blunted or preternaturally acute. In fine, the urine, the fœces, the breath, and all the excrementitious discharges, have a singular fœtid smell.

676 The plague begins, holds on in its course, and ends with similar symptoms: To which, however, carbuncles; buboes, and anthraces, or fiery sore, are ad-

ded. Theſe are moſt frequent in the plague, but not ſo confined to it, as to be excluded from the peſtilential fever*.

677. Contagious matter ſometimes accompany typhus, always the plague: The former is of a common nature, or ſuch as is liable to happen in any part of the globe; the latter is thought peculiar to the eaſtern part of Europe, and the weſtern of Aſia, poſſeſſed by the Turks, called the Levant.

678. With reſpect to the contagious matter of typhus; the corruption of the fluids is by no means to be imputed to it†, nor is heat ſo much to be blamed; for cold has an equal power in producing that effect as heat‡, as has alſo every thing, as well as heat, that either directly, like cold, or indirectly like it, debilitates§. Nay, the emptineſs of the veſſels, from want of food, or from the incapability of the digeſtive organs to take it in and aſſimulate it, as alſo that debility which is induced by melancholy and grief, though, *in theſe* caſes no matter at all at preſent, admit of the ſame application. By means of that debility in the extreme veſſels, internally, as well as externally, and, therefore, eſpecially in thoſe of the alimentary canal and in the perſpiratory veſſels, the fluids ſtagnate; and by ſtagnating under the heat of the body, degenerate into that foreign quality, which, in a more extenſive ſenſe, is called corruption, but in a more uncertain one, putrefaction (2 F).

679. As the cauſe of all theſe diſeaſes is the ſame with that of diſeaſes not febrile, to wit, debility; differing only in this, that it is the greateſt debility comparable with life, and not long compatible with it; ſo,

680. The indication alſo of cure is the ſame as that of the other aſtheniæ, but muſt be conducted with a good deal of more attention than is neceſſary in them, upon account of their much greater mildneſs (2 G). It

* 219. † *See above* 115. 122. 234. ‡ *ibid. and* 261.
§ *See again par.* 235.

is, then, debility alone, that is to be regarded in the cure; and ſtimulant or antiſthenic remedies alone, that are to be adminiſtered. Nor is there occaſion for any diſtinction in the method of cure, but what direct or indirect debility requires*.

681. The indirect debilitating powers, are the violent and local ſtimulus of the eruption in the confluent ſmall-pox†, ſo often inducing proſtration of ſtrength, and drunkenneſs‡, heat§, or long continued luxury‖. To theſe hurtful powers, thus indirectly debilitating, all the others may more or leſs be added¶.

682. And as it never happens, that either direct or indirect debility alone proves hurtful, *hence we have* a third caſe given, where we have to combat *both ſorts of debility* (2 H).

683. The directly debilitating powers are known, to wit, cold**, low diet††, bleeding, and other evacuation‡‡, reſt of body and mind, and want of paſſion and emotion§§, and impure air‖‖.

684. As both thoſe ſets of powers act by debilitating; be, at the ſame time, on your guard from believing, that ſome of them are ſeptic, and prove hurtful by fermentation, and are to be cured by antiſeptic, or powers that reſiſt putrefaction; and that, among the former, heat is to be reckoned; among the latter, cold, wine, the Peruvian bark, and acids¶¶.

685. In the gentle caſes, as in the agues of cold places, and eſpecially the vernal agues***, and likewiſe in ſynochus, in the ſimple typhus, and in the plague itſelf, when mild; ſcarce any ſtronger ſtimulus than wine is required; and the reſt of the cure is to be conducted

* *See par.* 103. 107. † 174. 214. 215. 216. 217. ‡ 130. § 115. ‖ *See above* 127. ¶ *Look for them in Part I. Chap. I.* ** 117. †† 128. ‡‡ 134. 137. §§ 137. 139. *and* 142. ‖‖ 146. *Compare the whole with Part II. Chap. X. all from* 289. *to* 315. ¶¶ *See* 678. *** *See* 650. 654. 660.

according to the directions so often now laid down in the mild asthenic diseases.

686. In the most severe fevers, such as the remittent* in the warmer regions of the earth, and in the torrid zone, and in the severe typhus, when it is pestilential, in the very violent dysentery and cholera of the same places, and the most violent plague itself†, the cause of all which affections is in general direct debility; or in gentler cases of the same disease at first, and that have now acquired a great deal of virulence in their progress from the neglect of the proper, or the use of an improper plan of cure; we ought immediately to begin with the highest diffusible stimuli, such as opium, volatile alkali, musk, and æther, in small doses but often repeated‡; and afterwards, when the strength is restored, and the force of the stomach confirmed by their use, to proceed to *the use of* food, drink, gestation, pure air, cheerfulness, and, last of all, to the usual offices *and occupations* of life.

687. When indirect debility has had more concern in the cure, as in agues, or more continued fevers, occasioned by drunkenness, and in the confluent small-pox; the same remedies are to be employed, but in an inverted proportion *of dose*. We should consequently, set out here in the cure with the largest doses, and which, are next in quantity to that degree of stimulus, which produced the disease (21); then recourse should be had to lesser stimuli, and a greater number of them, till, as was said just now§, the strength can be supported by the accustomary and natural stimuli‖.

688. To give some estimate of the dose in both cases¶; in direct debility, where the redundancy of excitability does not, for the time, admit of much stimulus (2K), ten or twelve drops of laudanum given every quarter of an hour, till the patient, if, as is usually the case, in

* 450. 660. 664. 665. † 41. 43. 113. 660. *to* 664.
‡ 684. § 307. *to* 311. ‖ 686. *and* 687.

such a higher degree of debility, he has wanted sleep long (2 L) falls into it: After sleep, when now some vigour is acquired both by that and the medicine, and now some of the excessive excitability is worn off, a double quantity of the diffusible stimulus should be added, and, in that way, gradually encreased, till the healthy state can now be supported by stimuli lesser in degree, greater in number, and more natural*.

689. In indirect debility an hundred and fifty drops should forthwith be thrown in; and then the super-addition *to be made*, should be less and less, till *we arrive at* the boundary just now mentioned†. Both the measures recommended‡, are in general applicable to adults; but less will suffice at an early or late age. Nay, the rule further varies according to the habit, the way of life, the nature of the place, and the peculiarities of the patient (2 M).

690. And since the use of the diffusible stimuli only succeeds, when life cannot be preserved by the usual and more congruous to nature, and a due quantity of blood and other stimuli soon become sufficient to finish the healthy state; we should, on that account, even from the beginning immediately give animal food, if not in a solid form in which it can neither be taken nor digested, at least in a fluid form, in that of soups; which should be alternated with all the doses of the diffusible stimulus: Then, in a gradual way, proportioned to the return of vigour, first a very little of something solid, and afterwards more and more should be thrown in, and the other stimuli, each at its proper time, brought into play; till the whole cure terminate in the management commonly observed in good health, where there is less occasion for medical injunctions.

691. When the affection is more a mixture of both sorts of debility, these proportions of the doses must be blended together.

* *See above* 103. 107. † 688. ‡ *in* 688. *and this.*

692. Contagion, which either adds nothing to the effect of the uſual hurtful powers, or proves hurtful by the ſame operation *by which they are ſo*, is not otherwiſe to be regarded, than that time be allowed for its paſſing out by the pores, together with the perſpiratory fluid, and, therefore, the perſpiration be properly ſupported; which as it is affected by ſtimulating is no addition to the *general* indication*.

693. Laſtly, the corruption of the fluids in the extreme veſſels muſt be obviated† not by means, that by a direct operation remove it, but by the powers that act upon the excitement of the ſolids, and that encreaſe excitement over the whole body, and therefore, *among other parts*, upon the labouring veſſels.

693. Having now run over the whole ſcale of decreaſing exciting power from peripneumony to the plague, and from death by indirect, to death by direct debility; *and having ſo executed the work, as to preſent the public* with a new ſcience, if not finiſhed off in an elaborate, elegant, and highly poliſhed manner, at leaſt marked in outlines, and, like a rough ſtatue, to be poliſhed afterwards, in ſome meaſure faſhioned in all its limbs, and embracing an entire plan of a work, connected in all its parts; we muſt next paſs over the conſideration of local diſeaſes.

* *See par.* 88. *and* 98. † *See* 235. *and* 273.

THE FIFTH AND LAST PART.

LOCAL DISEASES.

CHAP. I.

Of Local Diſeaſes.

695. LOCAL diſeaſes* are divided, according to an order of nature, into five parts; the firſt of which conſiſts of organic affections, where no diſeaſe over the whole ſyſtem ariſes, none but in the hurt part. This is a ſort of affection, that happens in parts leſs ſenſible, according to common language, or more devoid of excitability.

696. The ſecond part, likewiſe made up of organic affections, occurs in parts *of the ſyſtem*, whether internal, or external, that are very ſenſible, endued with a great deal of excitability (A); where the effect of the local affection is propogated over the whole body, over the whole nervous ſyſtem and where a very great many ſymptoms ariſe, ſimilar to thoſe which are peculiar to univerſal diſeaſes.

697. The third part of local diſeaſes, *takes place* when a ſymptom of general diſeaſe, that at firſt aroſe from encreaſed or diminiſhed excitement†, arrives at that height of degree, at which, being no longer under the influence

* 5. 6. 7. † *like all the other ſymptoms, of which it was one.*

of excitement, it cannot be affected by remedies that correct the excitement.

698. The fourth part, *or diviſion* of local diſeaſes, conſiſts of thoſe, in which a contagion, externally applied to the body, is diffuſed over all, without affecting the excitement*.

699. The fifth part of *local diſeaſes*, ariſes from poiſons *that have been* applied to the body, and flow through all the veſſels in ſuch a manner, that they are underſtood not immediately, nor at firſt, to have any tendency either to encreaſe or diminiſh the excitement, but falling upon parts ſome on one, ſome on another, hurt the texture of theſe in different manners; and, after occaſioning that *local* hurt, by means of it produce diſturbance over the reſt of the body.

CHAP. II.

The firſt part of Organic local Diſeaſes, where no effect, but in the hurt part, ariſes.

700. WITH regard to the firſt part of local, organic diſeaſes; the hurting powers, that produce them, are ſuch as produce a ſolution of the continuity of a part, by wounding, eroding, or poiſoning; or that derange a part by contuſion, compreſſion, or ſpraining.

701. The hurting powers, producing ſolution of continuity, are all cutting, pricking, or miſſive, weapons: Acrid bodies and poiſons produce ſolution of continuity in another manner.

702. When any of theſe hurting powers ſlightly divide the ſurface, and ſcarcely, or not at all, get to the bottom of the ſkin; for the cure of ſo trifling an affection, there is occaſion for nothing but ſhutting out the air,

* *If it affected the excitement its effect would be general diſeaſe, which ſometimes happens, as in the ſmall-pox, meaſles, contagious typhus, and the plague.*

and cold, and exceſſive heat, and avoiding every irrating ſubſtance. For the only uſe of the cuticle is, by means of its inſenſibility*, (it being a ſimple† ſolid, and devoid of all excitability), to keep of the air, and all excefs of temperature, and every rough or rude matter, which are all inimical to living ſolids (B), whether external or internal.

708. When the ſurface, therefore, is hurt in its texture, either by being cut, or bit, or ſtung by venemous animals, or by being burned, or by a very high degree of cold; in that caſe a thin, mild, oily plaiſter is ſufficient for the cure.

704. The diviſion, therefore, of phlegmaſiæ, into phlegmone, or erythema, is without foundation, and miſleading, both as to the cauſe, and as to the the cure, from the knowledge of the truth (C): For, however much they differ in their remote cauſe, as they call it, and in their ſeat, and in their appearance; ſince the excluſion of the air and of other ſtimuli is their effectual cure; it, conſequently, follows, that their cauſe is the ſame, that is, that the nature of all theſe affections is the ſame.

705. In *the cure of* contuſion, compreſſion, and ſprains‡, the ſame, in general are the remedies; and beſides them, there is occaſion for the reſt of *of body*, and blanded tepid fomentations.

706. Through this whole diviſion of local affections, there is a certain energy of nature, that tends to the reſtoration of the healthy ſtate; but it is not the celebrated vis medicatrix naturæ of phyſicians: For in this caſe nothing elſe happens, but what *equally happens* in the cure of general diſeaſes. If proper remedies are applied, the ſound ſtate in both ſorts of diſeaſes follows: If the remedies be neglected, the ſolution of continuity degenerates into a worſe and worſe nature, and then into gan-

* *See* 696. *and the note.* † *not a living,*
‡ *See par.* 700.

grene, or the death of the part (D). It is the excitability, or that property of life, by which the functions are produced, that, wherever life, whether in a part, or over the whole body, is hurt, procures *the return of* the healthy ſtate by means of the external powers acting upon it. *It is*, then, the excitability, affected by *the action of* thoſe powers, that is to ſay, the excitement, *that* governs the ſtate of the ſolids, both in parts, and over the whole body (E).

CHAP. III.

The ſecond diviſion of Local Diſeaſes,

707. THE local organic diſeaſes of the ſecond diviſion are the inflammation of the ſtomach*, and that in the inteſtines† ; as alſo bleeding diſcharge, with an inflammation ſubſequent to it ; and, in fine, an inflammation in any very ſenſible part, in conſequence of a wound, producing commotion over the whole body.

Of the inflammation in the Stomach.

708. The principle ſymptoms in gaſtritis are, pain in the region of the ſtomach, a burning heat, deep ſeated, encreaſed by every thing that is either ate or drank, or in any ſhape taken into the ſtomach ; hiccup, an inclination to vomiting, and the ſudden throwing up what is taken in ; and the pulſe ſoon getting into a ſtate of debility, quickneſs, ſwiftneſs, and hardiſhneſs.

709. The exciting hurtful powers, and which produce the ſolution of continuity *in this caſe*, are ſuch as act by cutting, pricking or eroſion. Such are the ſmall bones of fiſhes, ground glaſs, or Cayenne pepper and ſuch like things.

710. Inflammation is a conſequence of the wound or eroſion, that are the effect of the operation of thoſe *ex-*

* *or gaſtritis.* † *or enteritis.*

citing powers: The effect of which, in the very ſenſible organ of the ſtomach, is to diffuſe the diſturbance before-mentioned* over the whole ſyſtem. The burning heat and pain, inſeparable from every inflammation, and the anxiety†, are the offspring of the inflammation‡: And, of them, the anxiety is more peculiar to the ſtomach, the latter being its accuſtomary ſeat§, and the pulſe becomes ſuch as has been related, becauſe it is peculiar to every rude, fixed, and permanent *local* ſtimulus‖; to weaken, and *to be* ſo much the *more liable to that effect*, the greater the excitability *of the part* is. Hence, in the external parts of the body, that are leſs endued with excitability, a pretty conſiderable inflammation by no means affects the pulſe or the body any way generally; though even there, when a part is ſenſible, as in the caſe of a burn ſpread to any extent, or of a thorn having been thruſt below the nails, an equal diſturbance ariſes over the whole body¶, which confirms a former propoſition, *in which it is aſſerted*, that the more abundant the excitability is**, the leſs ſtimulus can be born.

711. The diſeaſe is eaſily known, both from the ſymptoms above deſcribed, and, with not a little more certainty, from the known taking in of the hurtful powers; and, over and above, by this particular ſign, that as it has been ſaid before, without ſuch marks, inflammation ſcarce ſeizes upon an internal and ſhut part (F).

712. As this is a local diſeaſe, and does not, like the general ones, depend upon the encreaſe of diminution of excitement; conſequently, the indication ſuited to the latter, to wit, to diminiſh encreaſed, or encreaſe diminiſhed, excitement, over all, will not apply. On the contrary, unleſs a general diſeaſe happen to be combined with it, nothing elſe is to be done, but, by throwing in bland, demulcent liquors, to defend the tender part from the rude contact of the ſtomach's contents,

* 696. † 170. 345. ‡ 170 § 345.
‖ 17. ¶ 344. 345. ** 36.

and give the inflammation time to finish its course; and, if the physician is called soon enough, to wash off the hurtful matter with a diluent drink.

Of the Inflammation in the Intestines.

713. The inflammation in the intestines is a local affection; in which there is an acute pain in the belly, and distention, and sometimes a sort of twisting of the pain around the navel, with vomiting, and an obstinate costiveness, and such a pulse as in the inflammation of the intestines.

714. The hurtful powers, exciting this disease, are precisely the same, as those that have been said to excite the inflammation of the stomach, that is:

715. The inflammation arises in a similar manner, as in the inflammation of the stomach, and the more readily, that the intestines are more sensible than the stomach*. And hence also, in a similar manner, is a state of disturbance diffused over the whole body.

716. The acute pain of the belly depends upon the inflammation: Its distention and the costiveness is the offspring of the detained fœces. The same is the cause of vomting; for the peristaltic motion being prevented, upon account of the obstruction, to proceed downward in its usual way, from its restless nature recoils in the direction upward; as affecting neither direction, unless in so far as the stimulus, by the impulse of which it is regulated, either commences from above, as health requires, or from below, as happens in other diseases, and in this in particular†. The pain twisting about the navel, is produced by the inflammation, for this reason, that the principal, and by far the greatest part of the intestines, is thrown in a convoluted state about the navel.

* *Baron de Haler, from some experiments that he made, found the intestines more sensible than most parts of the body, more than the stomach, and equal in sensibility to the brain.*

† *See par.* 187. 188.

717. The diagnosis is the same as in the gastritis; excepting, that the seeds of fruits, hairs, and similar foreign bodies, sometimes upon account of the torpor of the peristaltic motion, adhering to the sides of the intestinal canal, gradually, by their irritation, kindle up an inflammation: Which is a fact, that if examined attentively, and once rightly considered, will not disturb our diagnosis.

718. The cure is precisely the same as in the inflammation of the stomach.

719. All the rest of the pretended phlegmasiæ, distinguished by the appellation of "*itides*," as the splenitis* hepatitis†, the true nephritis‡, the cystidis§ without a stone, or the hysteritis, not arising from schirrhus‖, and the peritonitis¶, do not belong to this place; as, besides the doubt of their ever being inflamed, not arising from stimulants and acids, neither of which have access to the shut viscera (for these substances are not carried in the vessels, or can be carried), but from the relics of other diseases, of which we are to speak afterwards, with the following exception:

720. The exception is, that if any one falls from a height, if he is run through any part of his bowels with a sword, if a poisoned arrow, thrown by any savage, has pierced any of his inward parts, he will, in

721. The case of the inflammation affecting the liver, be affected with pain in his right hypochondrum, with vomiting and hiccup. If

722. The inflammation affect his spleen, the pain will be in his left hypochondrum; in

723. The case of the true nephritis, or inflammation of one of the kidneys, he will be pained in the region of the kidney, and seized with vomiting, and a stupor of his leg; in

* *or inflammation of the spleen.* † *or the inflammation of the liver.* ‡ *or inflammation of the kidneys.* § *or inflammation of the bladder of urine.* ‖ *or inflammation of the womb.* ¶ *or inflammation of the peritonæum.*

724. The case of the inflammation happening in his bladder, he will have a tumour and pain in the under belly.

725. Bleeding discharge, followed by inflammation*, such as happens in the inflammation of the womb, or of any neighbouring part, and in abortion, and in the wound of any internal part, is easily distinguished by the pain of the affected part, and by the preceding accident.

726. In the inflammation of the womb, or any neighbouring part, the lower belly is affected with heat, tension, tumor, pain, and *these symptoms accompanied with* vomiting (G).

727. The hurtful powers, that excite the hysteritis, or inflammation of the womb and parts in its neighbourhood, all amount to violence done to the womb. Thus using violence during the labour, hurrying the birth, often produce a solution of continuity, and wound the womb with a tearing *rudeness*.

728. And, since a great deal of blood is often lost in that way, and the local affection followed by debility of the whole system† ; for that reason bleeding, according to the common practice, any mode of evacuation, are not to be practised, nor is the patient to be forbid to eat, but, in the first place, regard is to be had to the affected parts, the body must be laid in an horizontal posture, she must be kept from motion, and be allowed rich soups and wine : By and by more solid animal food should be used morsel by morsel, but frequently repeated, and she should have her belly bathed : And, if the debility should get a head, recourse must be had to more wine, drink still stronger, and opiates : The use of which last should not be neglected, even at first.

Of Abortion.

729. In abortion, the back, the loins, the belly, are pained, like what happens in child-labour ; and there is

See par. 707. † *Pain and loss of blood are in one degree or another inevitable causes of debility.*

either an unusual flow of the menses, or an extraordinary discharge from the vagina.

730. The hurtful powers, that force abortion, are falling from a height, slipping a foot, a rash step, intense walking, running, going up and down hill. This disease seldom, however, happens but to persons previously weak; and the most powerful agent in bringing it on, is some taint left since a former abortion, which encreases in proportion to the number of abortions. When the disease happens in consequence of the local hurting powers just now mentioned, in that case it is perfectly local: But when debility is blended with the effect of those powers it is a case of combination of general with local affection.

731. The indication for preventing the disease is to guard against all the hurting powers that induce the disease; to ride out, when the patient has any degree of strength: but, *in case of any apprehension of danger from weakness*, to go in a carriage; which will be more safe; to be upon guard from the third month of pregnancy till the seventh is passed; to invigorate the system, and keep up the patient's spirits, and intellectual amusements.

732. The indication of cure is, to keep the body in a horizontal position, with the buttocks higher than the head; to be studious to keep the patient easy in body and mind; to repair the loss of blood with soups, to secure the vessels, for the purpose of contracting their enlarged diameters, with wine and opiates, and in that way, take off, at the same time, the atony and laxity, which are the principal cause of the discharge.

Of difficult Child-labour.

733. In difficult child-labour, the most common cause of which by far is weakness, and which always produces weakness when it proves lingering; the laying-in woman should be supported with wine, and when the

labour proves more difficult, and is now like to be tedious, opium ſhould be adminiſtered.

734. When now ſome part of the uterus is hurt by the hurting powers that have been mentioned*, and the child and placenta are now both delivered, the woman ſhould be kept in an horizontal poſture, as *was recommended* in abortion; ſhe ſhould be invigorated by ſoups, chicken, wine and the *ſtill* higher ſtimuli; every thing contrary ſhould be avoided; and the healing up of the wound waited for.

Of deep ſeated Wounds.

735. In deep ſeated, *or gun ſhot*, wounds, when the ball, if a ball occaſioned *the wound*, is not extracted, or though it ſtill remains in the *body*, in a place not neceſſary to life; firſt of all the whole ſyſtem is very much irritated, heated, pained, chafed, and diſtreſſed with reſtleſſneſs and toſſing, the pulſe is ſtrong, full, and more frequent than in health. The cauſe of all thoſe ſymptoms is the commotion, which, as we have ſaid, the local ſtimulus, either of the ball or of the inflammation ſupervening upon the wound, by its conſtant irritation of a ſenſible part, gives to the whole ſyſtem.

736. Becauſe, in this caſe aſthenic diatheſis is commonly ſuppoſed to ariſe over the whole body, upon account of the irritation from the wound; the antiſthenic plan of cure is, therefore, always employed through the whole courſe of the diſeaſe; and the uſe of opium, which, *in this caſe* is conjoined with the antiſthenic, or ſtimulant remedies, is admitted only for the purpoſe of acting as a ſedative, and duller of pain, is admitted: Conſequently, upon account of the fear of a fever being to ſupervene, though often a great quantity of blood is loſt by the wound; ſtill large bleeding is practiſed, the belly is purged, nouriſhment is withheld, abſtinence

* *See par.* 730.

enjoined: The moſt frequent conſequence of which treatment is death, and never a recovery that is not owing to accident.

737. But all this is a method of cure *conducted upon* an erroneous theory, which is proved by all the principles of this doctrine, and by the very unfortunate iſſue of that practice. In a perſon, who has loſt a great deal of blood, an over-proportion of blood, can never be the cauſe of ſthenic diatheſis: Neither can any tolerable reaſon be aſſigned for the profuſe evacuation of the ſerous fluid, or for not *rather* ſupplying new fluids by the uſe of food. It is in vain to accuſe frequency of the pulſe, as a ſign of an exceſs in the quantity of blood, and of too much vigour, or of any irritation that wants an antiſthenic plan of cure: For, beſides its hardneſs, if the pulſe is not, at the ſame time, ſtrong and full; it has been now often above demonſtrated, that all its celerity depends upon debility and penury of blood*. Finally, as the ſthenic diatheſis depends upon the general ſthenic hurtful powers, as the energy of pain, from local affection, and particularly inflammation, has no tendency to induce that diatheſis, but *the contrary one of* debilitating†; that is another reaſon for the ſuppoſition of the habit, either remaining ſuch as it was before the wound *was received*‡, or, which is more probable, of degenerating into the aſthenic diatheſis. Laſtly, the true explanation of the diſtinction betwixt irritation and ſthenic diatheſis is in confirmation of the ſame *concluſion*; the ſthenic diatheſis being that ſtate of the ſyſtem, which is produced by all the powers, the operation in common to which is ſtimulant, over the whole ſyſtem, and, by fulneſs in the veſſels producing the ſame effect, and to be removed by debilitating powers weakening alſo the whole ſyſtem, and by evacuant remedies acting by the

* *See par.* 178. *to* 180. † *par.* 710.

‡ *Which can hardly happen if blood has been loſt, which muſt diminiſh the excitement, and in proportion to its degree.*

ſame general operation; whereas, on the contrary, it is irritation or that ſtate, in which the whole body is often, without any ſtimulus debilitated (H); and often a local ſtimulus, ſuch as diſtention exciting ſpaſm, or a concentrated acid, inducing convulſion, or the pain of a wound that producing the general commotion here (I), and effect enormous motions in a weakened ſyſtem. But, whether the debility be without ſtimulus, or excited by it there is never occaſion for debilitating evacuant remedies, but always for moderately ſtimulant ones: And we have only to take care, that the ſthenic diatheſis be not produced by the method employed from the cure, and thereby a general diſeaſe, at leaſt a prediſpoſition to general diſeaſe be ſuperadded to the local, which could not fail to aggravate the latter.

738. As, therefore, the antiſthenic plan of cure is not to be practiſed, from an apprehenſion of a fever being about to come on, with a view to allay the diſturbance *ariſing* from it; which has the contrary tendency, that of inducing the fever, and of exciting the diſturbance *apprehended*; ſo, neither is the ſtimulant plan to be attempted, till the wound is healed, or the diſeaſe has arrived to an advanced ſtage, and a great deal of debility is now induced by the continuance of the pain, leaſt, *if that method ſhould be ſooner employed*, the blood ſhould be carried with more rapidity than the caſe would admit of, and with an encreaſed momentum, into the *ſtill* open terminations of the veſſels: For it is underſtood, that neither diatheſis takes place in this caſe, and that the only *affection* preſent is a commotion over the ſyſtem, depending upon local affection; and that, conſequently, there is no occaſion for the remedies of either; excepting this ſingle conſideration, that as the loſs of blood, in proportion to its degree has a tendency to produce more or leſs of aſthenic diatheſis; there will, therefore, in that proportion, be occaſion for ſome ſthenic remedies.

739. During the firſt days of the diſeaſe, becauſe the patient, *all at once*, does not any longer engage in geſtation, exerciſe, and the other functions both of the body and mind, and of paſſion or emotion, according to cuſtom, and, of courſe, leſs nouriſhment and recruit is now required; therefore, there ſhould be ſuch an abatement in his allowance of the uſual ſtimuli, as to accommodate what is uſed to the preſent condition of the ſyſtem and the ſtate of the wound juſt now deſcribed*. Therefore, to prevent too great an impetus in the veſſels, ſilence ſhould be kept around the patient, he ſhould not ſpeak, he ſhould lie quiet and without motion, his poſture ſhould not be changed, but to avoid the diſagreeable feeling of too long continuance of it, and even then it ſhould be done as warily as poſſible. He ſhould make his water lying, and in a urinal; he ſhould rather uſe ſoups, than ſolid meat; his wound ſhould be examined every day, for the ſake of keeping it clean; its progreſs ſhould be obſerved; it ſhould be dreſſed with freſh, ſoft, and bland matter; and if even at this early period, any faintiſhneſs appears, a glaſs of wine ſhould not be withheld.

740. After ſome days, *which may be* more, or fewer, according to the ſtrength of the patient, when now the habit is ruſhing into debility, upon account of the greatneſs or long continuance of the pain; *in that caſe*, beſides the ſoups formerly allowed, meat as rich and delicate as poſſible ſhould be given; wine ſhould be adminiſtered ſparingly at a time, but often, and upon the whole in large quantity; and then at laſt, recourſe ſhould be had to opium, which, in the common practice, is uſually given from the beginning *of the diſeaſe*, and to the other diffuſible ſtimuli: and the diſeaſe ſhould be treated preciſely in the ſame way as a typhus.

* *See laſt paragraph.*

741. When very tender external parts are violated by any rude matter, such as *happens* in that case, where a thorn is pushed below any of the nails, and an inflammation spreads from the affected part to a considerable extent, and then, upon account of the great sensibility of the part, the whole body is drawn into consent; the injured part should be fomented with warm water, and dressed with lint, and soft, and bland ointment: And as long as the disturbance of the system remains, the patient should be kept quiet, and free from motion, and nothing more attempted.

CHAP. IV.

Of a part of a general disease, degenerating into a local.

742. TO set about the treatment of that division of local, organic, diseases; in which a part, *or symptom*, of general disease degenerates into a local one; we next proceed to

Suppuration.

743. Suppuration, with which we begin, is for most part a consequence of any general inflammation, whether sthenic, or asthenic, or that inflammation, which is a symptom of general diseases, or it is a consequence of local inflammation, whether sthenic, or asthenic, as a symptom of local affection. In it the pulse is softer, fuller, and a little slower, than in sthenic disease when that precedes it; but a great deal slower, than in asthenic disease, if it happen to supervene upon it, and it is accompanied with an undulatory, and, as it were, a pulsatory, motion of the labouring part; these symptoms are commonly preceded by a shivering: If the affection is internal, the patient should be kept quiet, and free from motion, and be stimulated; if it be ex-

ternal, the affected part ſhould, over and above, be fomented, dreſſed, and covered, and the pus, when ripe, let out.

Of Puſtle.

744. A puſtle is a purulent veſicle, turgid, and at laſt of its own accord opening in conſequence of having become tender, and full of pus.

745. It follows the ſmall-pox, ariſing from the contagion peculiar to that diſeaſe: In the ſmall-pox the number of the puſtules, is greater or leſs in proportion, as more or leſs ſthenic diatheſis, occaſioned by improper treatment, or a neglect of the proper, has preceded*.

746. The indication of cure for them is, firſt to remove ſthenic diatheſis, and then, if that has paſſed into the aſthenic, to remove it, each by its reſpective remedies; and to beſprinkle the puſtles with a ſtrong ſpirit, or with laudanum, and in the former caſe to guard againſt cold, in the latter againſt heat, and to open the puſtles and foment them.

Of Anthrax.

747. Anthrax is a glandular tumour under the ſkin, gangrenous in the top, and inflamed in its edges all round.

Of Bubo.

748. Bubo is a glandular tumour, eſpecially affecting the one or the other groin, and of a tendency to ſuppuration.

749. Theſe two affections *the anthrax and bubo* as well as carbuncle, are almoſt always combined with a

* 21. 76. 96. 97. 98.

general diſeaſe, to wit, ſometimes with typhus, much oftener with the plague. They depend upon a contagious matter, and, in ſo far as they do not ſufficiently yield to the general remedies, they muſt be treated with a very ſtrong ſpirit poured upon them, and with laudanum, and opening them.

Of Gangrene.

750. Gangrene is an imperfect inflammation of a part, not terminating in ſuppuration, diſcoloured, ſcarce painful, conſiſting of puſtules of a bad matter, and at laſt inducing the death of the part.

751. The hurtful power, that precedes gangrene, is always inflammation, often ultimately violent in a ſenſible, leſs ſupported by the powers of life (K); it is ſible part, oftener languid, and occupying a part leſs ſenſometimes a ſymptom of the phlegmaſiæ, ſometimes of fevers, ſometimes of local phlegmone*.

762. The method of cure, when the gangrene is ſeated in the alimentary canal, is to pour in ſpirit and laudanum; when the ſhut viſcera are affected, to place ſome hope in the ſame and other ſtimuli, but leſs. And, as the ſame remedies alſo ſuit gangrene, when it is external, conſequently liquid opium ſhould be rubbed in upon the dying part, ſpirit ſhould be poured upon it, the parts already dead ſhould be cut out, the edge of the living part all round ſhould be ſtimulated, and an inflammation made in it.

Of Sphacelus.

753. Sphacelus is a more perfect and more extended gangrene, with an extinction of ſenſe, motion, and heat, in which the part becomes ſoft, blackiſh, completely

* 347. 650. *to* 694.

black, putrid, and at laſt thoroughly putrid to the very bones, thoroughly cadaverous, and ſhifts rapidly to the neighbouring parts, and quickly extinguiſhes life.

754. The remedies are in general the ſame as in gangrene, but they ſhould be ſtronger, and adminiſtered in greater quantity, and with greater nicety, and in leſs expectation of a cure. When any limb is greatly affected, it ſhould be immediately cut off, to prevent the found parts from being infected.

Of Schrophulous Tumor and Ulcer.

755. When a ſcrophulous tumor and ulcer has been of long ſtanding, has disfigured the parotid gland and neighbouring parts, and all the remedies, that have any effect in removing ſcrophula, have been employed; after that no more is to be done, but to keep the ailing part clean, bathe it often, and defend it from the injury of the air; unleſs that, as local debility alſo takes place here, ſpirit and laudanum, applied to the part, may be of ſervice.

Of Schirrhus Tumor.

756. When the tumor, which, while it was moderate, was a part or ſymptom of the general diſeaſe, called ſchirrhus, has now attained a certain bulk; if it be external, or ſituated in the exterior or convex part of the liver, it ſhould be cut off, and the ſyſtem invigorated: If it be internal, nothing can be attempted, but to prevent its encreaſe by ſtimulant remedies, and in that way keep the patient as long alive as poſſible, and in as good health as the preſent circumſtances will admit of.

757. The two heads of diviſion that remain*, are of ſo obſcure and abſtract a nature, that if ever they are to be attempted, they muſt be paſſed over at preſent. The

* 698. *and* 699. † 697. 742. *to* 757.

third head† is here only imperfectly ſketched and ſcarce begun: But, becauſe it both admits of a complete execution, and when ſo executed, will make an important addition to the work; ſhall be prepared for the public peruſal, as ſoon as I ſhall be happy enough to find as much leiſure and ſcope for thinking as are requiſite to reſcue the ſubject from it preſent intricacy, diſorder and obſcurity.

APPENDIX.

PART I.

CHAP. II.

(A). THAT is, since sense, motion, mental functions, and the passions are the only, and a constant, effect of the exciting powers, acting upon the excitability; and since that happens, whether one, or more, or all the powers, or which soever of them, act the irresistable conclusion, that arises in the mind, is, that the effect of the powers being the same, the mode of operation of them all must be the same. This mode of reasoning, which is certainly as just as it is new in medicine, will often occur, and, we trust, will stand the test of the most scrupulous scrutiny.

CHAP. III.

(A). THIS proposition of frequent occurrence in this work, that identity of known effect, always produces identity of cause though unknown, will be found to be a mode of reasoning of equal service in guarding our reader from the deceitfulness of abstract reasoning, and in leading him into a proper mode of investigating solid and useful truth.

(B) Suppose a certain power, as 40, to mark the degree, in which the sum total of proper stimulant operation consists, and the excitement, produced to that degree, to arise from different exciting powers, all of them conducing to the same effect, by the operation of each bearing an agreeable relation to the excitability, or producing an agreeable sensation on it; the inference to be drawn from that fact is, that a certain suitableness in

the mixture of the whole to the excitability, as well as the degree of ſtimulus, produces the effect. Again, ſuppoſe certain ingredients, which cannot be denied to be ſtimulant, added to this given mixture, the effect of the added article will be one of two: it will either increaſe the excitement firſt produced, without altering the agreeable ſtate which that had induced, or it will, ſtill without any reaſon for ſuppoſing it not ſtimulant, diminiſh the excitement that had ariſen from the combination of the agreeable articles. And this will happen merely from the effect of a diſcordant combination of exciting powers, while that, which diminiſhes the exciting effect of the others, as well as theſe others, that conſtituted its given ſum, are both ſtimulant; but the former in a higher, the latter in a lower degree, and therefore acting over all as debilitating powers. Muſtard taken with meat, or onions with beef-ſteaks, are agreeable to moſt taſtes; but they are, though ſtill ſtimulant, diſagreeable to others, and debilitating. Peas-ſoup and peas-pudding, though, independent of the animal juice infuſed into them, they are far from being ſalutary, will be borne by many; while in others, eſpecially thoſe who have been accuſtomed to more ſtimulant meals, and in perſons who are gouty, and liable to complaints of the firſt paſſages, they will produce morbid affection. The ſame thing is to be ſaid of beef-ſteaks with onions, which agree with the ſound ſtate, and diſagree with that of the firſt paſſages juſt now mentioned. With regard to all theſe enfeebling matters, there is no queſtion about their being ſtimulant; the whole effect is to be referred to their rendering a mixture, ſtimulant in a certain degree, leſs ſo.

(c) A gentleman, engaged in a literary compoſition, which required an uninterrupted exertion of his mental faculties for more than forty hours, was enabled to go through it with alacrity, by ſupporting himſelf in this manner. After dining well and ſetting to buſineſs, he took a glaſs of wine every hour. Ten hours after he

ate ſomething nouriſhing, but ſparing in quantity, and for ſome hours kept himſelf up with punch not too ſtrong. And, when he found himſelf at laſt like to be overcome by an inclination to ſleep, he changed all his ſtimuli for an opiate; and finiſhed his buſineſs in forty hours. What he had wrote was now to be put to the preſs. He had next to watch and correct the proofs, which coſt him four or five hours further continuance of vigilance and activity. To effect this he took a glaſs with the Maſter Printer, while his men were going on with their part of the work. The ſucceſſion of ſtimuli in this caſe was firſt food, next the ſtimulus of the intellectual function, then wine, then the food varied, then punch, then opium, then punch and converſation.

(D) The principle upon which the operation of the cold bath depends has never been underſtood, and therefore all reaſoning, as well as practice, with reſpect to it, has been conducted in quite a vague and random manner. Suppoſe a range of excitement, the middle and healthy point of which is 40 degrees of excitement, the ultimate degree of its exceſs 70. It is, therefore, the intermediate degrees between theſe extremes, to which the practice of cold bathing is applicable. From 80 to 70, the former of which is the head of the ſcale, and conſtitutes the range of indirect debility; and likewiſe through all the intermediate degrees from 40 down to 0, the cold bath, which is a weakening power, as well as every other, is improper. It is a miſtake prevalent among ſyſtematic writers and lecturers, that cold is of ſervice in the fevers and other diſeaſes of the Torrid Zone. The truth is, that, in that country, there is no acceſs to the uſe of actual cold. All, that can be done there, is, by various means, to diminiſh the exceſs of heat, which is conſtantly ruſhing from thoſe degrees of it which ſtimulate and excite, to thoſe, in which its ultimate ſtimulant power deſtroys excitement, and leaves nothing but indirect debility.

(E) This is altogether a negative circumſtance. The accumulation, encreaſe, or abundance of excitability, take any term you pleaſe, is not occaſioned by any action or operation, but by the want of action, the want of operation. To form an adequate idea of it, ſuppoſe a ſcale of excitability of 80 degrees, as in the line here drawn.

EXCITING POWER.

0 10 20 30 40 50 60 70 80

EXCITABILITY.

80 70 60 50 40 30 20 10 0

At the commencement of life, the ſum total aſſigned is underſtood to be 80, becauſe no part, as yet, is waſted by the action of ſtimuli. Next it is waſted in proportion as theſe are applied from the beginning to the end of the ſcale. Its waſting is, therefore, owing to action and operation, but its accumulation to the reverſe, the want of the action or operation of the exciting powers, as is expreſſed by the numbers placed above thoſe firſt mentioned. Thus one degree of exciting power applied takes off one degree of excitability, and every ſubſequent degree impairs the excitability in a proportion exactly equal to its degree of force. Thus a degree of ſtimulant or exciting power equal to 10, reduces the excitability to 70; 20 to 60; 30 to 50; 40 to 40; 50 to 30; 60 to 20; 70 to 10; 80 to 0. And, on the contrary, the ſubſtraction of ſtimulant power allows the excitability to accumulate. Thus, when the excitement is at 79, conſtituting only one degree of life, take off one degree of exciting power, and 2 degrees of excitability will ariſe. As 80 degrees of exciting power leave no excitability, ſo 70 degrees of exciting power leave 10; 60 20; 50 30; 40 40; 30 50; 20 60; 10 70; 0 80. Hence death takes place from nothing poſitive, but from the negation of the only means by which life is ſupported; which are the ſeveral exciting or ſtimulant powers, now fully explained.

(F) For instance, persons accustomed to drink wine, and eat well-seasoned nourishing animal food, will be more hurt by a water and vegetable regimen, than those who have not lived so high in that respect. The inhabitants of Britain could not live long upon the diet of the Gentoos. Persons in genteel life could never undergo the work of day labourers upon their fare.

(G) Vegetable aliment, and fruits and cold roots as cucumbers, melons, acid drinks, and many other things not sufficiently stimulant, will bring on a fit of the gout, all or any of them, at any time; while there are other persons free from taint which distinguishes that disease, who can use them with impunity, or, at least, with much more freedom and less harm. Something similar to this observation applies to most diseases.

(H) This proposition is of the utmost importance, as holding out the true principle, upon which so many actions and feelings of human life, both in health and disease, are to be explained, and particularly as laying down an indication, which applies to nineteen twentieths of all the febrile diseases, and includes our artificial as well as our natural desires and appetites.

(I) An instance of a worn-out excitability is that debility that arises from intoxication; one of an accumulated excitability is that which dram-drinkers experience the day after a debauch, in consequence of which their hands shake till they are re-excited by their favorite cordial.

(K) Suppose, that in place of an excitement of 40 degrees, the excitement is gone down to 30, and the excitability mounted up to 50, and a debilitating power, such as the cold bath, or any of those that are just now to be mentioned in the text, has been superadded, reducing the excitement to 25, and accumulating the excitability to 55. Suppose also, that any stimulus is next employed, with a view to raise the excitement, and sink or reduce the excitability; what will be the result? As an accumulated excitability ad-

mits of a very ſmall degree of ſtimulus at any given time, while the accumulation of excitability, and ſinking of excitement, even to death itſelf, can be effected in the ſhorteſt ſpace of time, and by any one of the debilitating powers; conſequently, the loſs of vigour by the firſt practice, and the reparation of it by the laſt, will bear no proportion to one another; there will be no poſſibility of regaining the vigour thrown away, much leſs any hope of procuring more than exiſted before it was lowered.

(L) By fevers here are meant thoſe diſeaſes, ſo named, which depend on evident debility, and not any of thoſe, which, though moſt injudiciouſly ſo named, depend upon an oppoſite cauſe. Inſtances of the former we have in all the fevers of the intermittent or remittent kind, in ſynochus, typhus, and the plague itſelf, with others that have never been conſidered as fevers. Examples of the latter occur in ſynocha, or the common inflammatory fever, in the ſeveral diſeaſes of the ſame ſtamp accompanied with inflammation in a part, as in the throat, lungs, various parts of the external ſurface.

(M) Indirect debility appears in the range of ſcale from 70 up to 80; the direct, in all the degrees below 40 to 0. The only caſes, that admit of debilitating operation, are thoſe of exceſſive excitement from 40 up to 70. For the cure of diſeaſes within this latter range, all the directly debilitating powers are proper, and, for the moſt part, they only; becauſe there is no acceſs to the uſe of the indirectly debilitating powers; till they have run their full courſe of ſtimulant operation from 40 to 70, at which laſt only they become debilitating; and, though ſometimes, and under certain circumſtances, they may be employed, the ſafeſt general rule is to avoid them.

CHAP. IV.

(A) If a ſmall quantity of an opiate, a large one of any ſtrong ſpirit, taken into the ſtomach, can inſtantly

alleviate an excruciating pain in a part the moſt diſtant from that to which the remedy is applied, and, in a ſhort time after, remove it altogether, as is now well known, how is that to be explained but by the above propoſition; it being impoſſible to pretend that it is carried in the veſſels? Nor is any other of the many hypotheſes, that have been thought of for the ſolution of this fact, more admiſſible. Should it be imagined, that it moves along the nerves according to the laſt opinion, we demand proof of that aſſertion; which have not yet, and will not eaſily be produced; while the fact juſt now aſſigned carries its own demonſtration in its boſom. The queſtion reſolves itſelf wholly into the ſolution; Why does opium at once relieve the gout in the ſtomach, on the external ſurface? Becauſe the property in the living ſyſtem, upon which and by which it acts, is one and the ſame over all.

(B) The hurtful powers, which produce peripneumony, in common Engliſh, the inflammation of the lungs, are exceſs in eating, drinking, expoſure to heat or to the alternation of heat with cold, an over-proportion of blood from inactivity, or an encreaſed velocity of its motion from violent labour, &c. the effect of any or all which muſt fall as much upon every other part of the ſyſtem as upon a ſmall portion of extreme veſſels in the lungs, and therefore the morbid affection produced cannot be confined to the latter, but muſt be extended to the former. The whole body muſt partake of the morbid change; it muſt be one common affection pervading the whole. If this is not probation, let any thing left on record by authors, or any living phyſician, produce a ſingle hurtful power, that, without affecting the ſyſtem over all, can penetrate into the inmoſt receſſes of the lungs, and there produce an inflammation. I ſhall be content with one ſuch hurtful power, and in exchange for it, when produced, give up my whole doctrine.

(c) A wound in the lungs, among other effects of it, may produce an inflammation. But that is not a peripneumony, or a general diſeaſe at all. It is, on the contrary, a local one, ariſing from a local cauſe, and to be removed by local remedies, if acceſs could be had to them. And though nothing has been more common than blending ſuch caſes of local and general diſeaſe, at the ſame time no error that has hitherto crept into the art, needs more to be corrected. Such an accident is as much a peripneumony, as an inflammation from a contuſion in the foot is a gout, or the ſwelled legs of women heavy with child is dropſy. But of all this more hereafter.

(d) For the ſame reaſon, i. e. the ſenſibility of the genital ſyſtem, wine and other ſtrong liquors, as well as opium, operate in direct debility ſooner upon theſe parts than others.

(e) The pain of the thorax in peripneumony, which is the ſign of the inflammation within, never appears ſo ſoon as the general affection, and in more than in one half of many hundred caſes, where this fact has been painfully ſcrutinized, it did not appear till one, two, or three days after the commencement of the general affection. Likewiſe the pain of the gout is not the firſt of the phænomena of that diſeaſe. But all theſe, and many more particulars, will be brought in with more advantage in their proper places afterwards.

(f) When the affection of a part is external, and, therefore, acceſſible, the application of a remedy over it, in conjunction with the internal remedies, is of ſervice, in conſequence of their mutually aſſiſting each other. A rag drenched in a liquid opiate, helps the operation of the remedy taken internally; but that is ſtill by operating upon the excitability over all.

CHAP. V.

(a) Experiments has been made by Baron Haller and others, to aſcertain the comparative ſtrength of muſcular

fibres, and the criterion of judgment was their greater or leſſer diſpoſition to break by appended weights; but the power by which any body reſiſts ſtretching, is the denſity of that body. Thoſe experiments ſhow that the fibres in the living body are prodigiouſly ſtronger than the dead.

CHAP. VI.

(A) Their old name is phlogiſtic; but as that word is abſurdly metaphorical from an old notion of that ſort of diſeaſes depending upon fire or flame; and becauſe it was not a proper contraſt to the term here to be oppoſed to it; as alſo becauſe it is ſtill more ridiculous when applied to plants, which are comprehended in this doctrine; for theſe reaſons it has been thought proper to reject it, and ſubſtitute the other in its place.

(B) The ſame hurtful powers produce, and the ſame remedies remove, both Catarrh and Peripneumony, only differing in degree. The powers producing them are exceſs in the uſe of ſtimulants, and the remedies whatever moderates that exceſs. Evacuation, cold, and ſtarving, are the means. All the difference is, that more of the means are employed for the cure of Peripneumony than for that of Catarrh. The hurtful powers producing indigeſtion and fevers, are alſo the ſame, to wit, debilitating; and the remedies the ſame, to wit, ſtimulant. Only a ſmall degree of the remedies, proportioned to the ſlightneſs of the degree of the cauſe, is ſufficient for the cure of indigeſtion; while the moſt diffuſible ſtimuli are required to effect the cure of fevers. Stimulants, in one degree or other, make the cure of all aſthenic diſeaſes; evacuants and other weakening means in different degrees, form the whole cure of the ſthenic form of diſeaſes. Might not this have been known long ſince?

CHAP. VII.

(A) The inability to perform motion in peripneumony, arises not from debility, for two good reasons; first, no powers but those that produce all the other symptoms, produce it; and the same remedies, that remove the other symptoms, are equally effectual for the removal of it.

(B) Stimulants are the proper remedies for curing the gout; but they may be carried so far as to produce so much sthenic diathesis as to border upon indirect debility, A consequence of which is vomiting, purging, a feeling of burning in the intestines, intermission of the pulse, and strangury; which are only to be cured by substituting watery drink and low diet in place of those opposite remedies: Nay, the stimulants may be carried so far, as to effect the establishment of indirect debility. Hence, will arise paralytic affection, anasarca, &c. The evacuants and other debilitating remedies, by which the diseases of sthenic diathesis are removed, may, by being pushed to excess, produce the last mentioned diseases, as depending on direct debility.

(C) Pushing the remedies of sthenic diseases too far, may reduce the patient to an incipient dropsy; and the remedies of the latter may be urged to such excess, as to pass the range of sthenic diathesis, and terminate in indirect debility. A is affected with a disease of debility, where the excitement has gone down to 10, the excitability mounted up to 70, degrees in the scale. What is to be done? by a proper use of high stimulants the 30 degrees of lost excitement may be restored, and as many of superfluous excitability discharged, and the excitement and excitability made to meet again at the middle point of 40. If the remedies are carried up to any degree betwixt 40 and 55, they have gone too far, and produced predisposition to sthenic diseases; if still farther, but not exceeding 70, they will have produced one

or other of these diseases. But carried beyond 70, the diseases, which their operation produces, are those of indirect debility. Any disease of this sort, when treated according to a rule lately delivered, will be cured. But if the stimulants adapted to this purpose be urged further; the sthenic diathesis will again be produced: and the debilitating power, suited to the removal of it, may carry down the excitement below 40 into the range of predisposition betwixt 40 and 25; and then by a further abuse of remedies, which should only be used in the range betwixt 40 and 70 the excitement may return to the same point from which it set out, to wit, the point of 10, and the excitability rise to its original point, that of 70.

CHAP. VIII.

(A) The small pox and measles are cured by the same means as peripneumony or any other sthenic disease; and, excepting the contagious matter, arise from the same stimulant hurtful powers; they must, therefore, with the same exception, be the same. The only difference is, that they are accompanied with a contagious matter, and the other sthenic diseases are not The amount of which is altogether unimportant. For, if the ordinary powers have not operated, the affection does not come under the definition of general disease; none of the functions receding from their natural state, and the eruption amounting to no more than a slight local complaint. It is, therefore, only of use to regard the general circumstances of these diseases, making no more account of the local part, than to consider, arrange, and treat it as such. It is as well known, that, when by the means used for the cure of sthenic diseases without contagion and their sequel, eruption, the sthenic diathesis is prevented or removed, the local part gives no trouble; and that the disease is never dangerous but from the neglect of that management, But the management

is nothing else but the ordinary one in any sthenic case. If it should be contended, that, all that being granted, still the eruption may contribute a little: Be that so, and it can be but very little; what is the effect? The cure shows it; which is exactly the same as in sthenic diseases without eruption. The disease, therefore, being the same (for its mere local part is out of the question, as only requiring a peculiar exposure to cold, which is equally proper in every sthenic disease); every part of reasoning respecting it, and consequently, that affecting the question about predisposition, must also be the same. If, therefore, other general diseases have their predisposition, so must the small-pox, the measles, and the plague itself. If it should still be said, that the eruptive diseases, though in other respects the same with the non-eruptive, differ, in so far as predisposition is required as a common circumstance between them; the answer is, that that difference only respects their local part, which, without the powers producing the disease, is insignificant and a mere local complaint. As general sthenic diseases, the small-pox and measles, and as general asthenic ones, contagious fever and the plague, to the full extent of their generality, have their period of predisposition; we may have occasion afterward to establish the question about predisposition to them even as local diseases, but this is not the place for it; all that was required here being to settle the question about predisposition to them as general diseases. In the same point of view all that has been said of contagious diseases, will apply to diseases in which poisons may have been concerned.

(B) The distinctions of the powers producing predisposition, and of those that excite disease, under the general appellation of predisponent or occasional causes have been multiplied and refined upon without end. But the whole system of remote causes, as they have been called, is false in its first idea. The hurtful powers, whatever they be called, that produce diseases, also produce the predisposition to them. Which being once admitted,

as it henceforth muſt, the whole ſabric of aitiology or of the doctrine of remote cauſes muſt fall to the ground: Conſequently, ſimply remote cauſes, not diviſible into prediſponent and occaſional; relative remote cauſes, or ſuch as are ſo diviſible; internal and external prediſponent, internal and external occaſional cauſes; approaching cauſes, or cauſæ propriories proximate cauſes, of which, not only one, but often ſeveral, are aſſigned to every diſeaſe, muſt ceaſe in medical language, and the ſtudent's attention be turned away from the endleſs purſuit of diſtinctions without a difference, to the ſtudy of the ſolid and uſeful facts that nature holds up to his contemplation in great abundance, when once his eyes are fairly opened to behold them.

(C) Such is the ſimplicity to which medicine is now reduced, that when a phyſician comes to the bed ſide of a patient, he has only three things to ſettle in his mind. Firſt, whether the diſeaſe be general or local; ſecondly, if general, whether it be ſthenic or aſthenic: thirdly, what is its degree? When once he has ſatisfied himſelf in theſe points, all that remains for him to do, is to form his indication or general view of the plan of cure, and carry that into execution by the adminiſtration of proper remedies.

(D) An inflammation in ſome part of the ſtomach, or as it has been commonly called, "the Inflammation of the Stomach," as if it were always of the ſame kind, produces many ſymptoms, that bear ſo great a reſemblance to general ſthenic diſeaſes, ſuch as peripneumony, that by ſyſtematics and noſologiſts, it, as well as many other inflammations of interval cavities, have been united into an order of diſeaſes, ſuppoſed all to partake of one common nature. The gaſtritis, however, which is its noſological name, is eſſentially different, both from Peripneumony and all the other general diſeaſes of the order with which it is aſſociated, both in other reſpects, and in that of which we are ſpeaking. As ariſing from certain local hurtful powers, it is not preceded by pre-

diſpoſition. So when I come to the bed-ſide of a patient under theſe circumſtances, though I had no previous knowledge of the nature of his diſorder, whenever I hear that he has ſwallowed ground glaſs, ſmall fiſhbones, or, perhaps, a great quantity of Cayene pepper, I can be at no loſs to diſcern the nature of the diſeaſe, and to find, that it is altogether local; and that for two of the beſt of all reaſons; firſt, the perſon having been in perfect health immediately before that accident; and ſecondly, that the ſubſtances which he had ſwallowed were ſuch as would naturally divide a ſound part, or, in the language of our profeſſion, produce a ſolution of continuity in it. From this, again, inflammation is an inſeparable conſequence. And it is equally an univerſal fact in the animal economy, that, when any part, whether internal or external, which poſſeſſes great ſenſibility, is wounded, or otherwiſe injured in its ſubſtance, the pain ariſing from the inflammation ſuperinduced, ſpreads ſymptoms of diſorder over the whole ſyſtem, which are liable to miſlead thoſe, who are not in poſſeſſion of the criterion we here point out. As ſuch a caſe, then, is not preceded by predifpoſition, ſo peripneumony as well as every other ſthenic, every aſthenic, diſeaſe muſt, from the proofs of the univerſality of the fact, be allowed to be, it muſt be local. And here again we throw the gauntlet.

(E) Let it here be added, that the powers producing general diſeaſes, are thoſe that act upon the excitability, and are, thereby, quickly communicated over the whole ſyſtem; while thoſe, that act upon the ſolid texture of a part, ſo as to cut, prick, bruiſe, or contuſe it, &c. are the powers productive of local diſeaſe.

(F) The cauſe of the inflammation of the ſtomach has been mentioned. To concentrate it into a definition; it is a ſolution of the continuity of a ſolid part in the ſtomach, by mechanical or acrid means, followed by inflammation and pain, and, in conſequence of the great ſenſibility of the part, propogating ſymptoms of diſorder over all the ſyſtem. The cauſe of the general diſeaſes

here alluded to is an encreaſe of excitement, and the inflammation accompanying thoſe diſeaſes ariſe from that encreaſe.

(G) The cure of Gaſtritis, or the inflammation of the ſtomach, is to contrive means to keep the hurtful, and all rude matters, from coming into contact with the inflamed part, and leave that part to heal; taking care neither to encreaſe the local affection by too ſthenic a diet, nor to produce a tendency in the inflammation to run into gangrene, by the abuſe of evacuations and other debilitating powers; and if, than which nothing is more likely, the acuteneſs or continuance of pain ſhould at laſt bring on a ſtate of general debility, then to uſe the paliative means of preventing that bad conſequence. The cure of peripneumony is to weaken the ſyſtem, from the very commencement of the diſeaſe, by diminiſhing the energy of all the exciting powers; that of the abundance of the blood by bleeding, that of the over-proportion of the other fluids by purging, ſtarving, that ariſing from the ſtimulus of heat and other exceſſive ſtimuli by cold, &c.

CHAP. IX.

(A) The caſes of indirect deficiency or debility are comprehended betwixt 70 and 80. The direct are all the degrees below 40. Betwixt 40 and 55 conſiſts predispoſition to ſthenic; betwixt 40 and 25 the predispoſition to aſthenic diſeaſes.

(B) Diagnoſis is the doctrine of diſtinguiſhing diſeaſes from one another. It was naturally thought to be of the greateſt importance, when diſeaſes were ſuppoſed very numerous, and as different from each other as their names and the various appearances of their ſymptoms. That, however, has been found to be altogether a miſtake in this work, in which the endleſs variety of general diſeaſes is reduced to two forms, a ſthenic and an aſthenic one, without any other difference but what con-

ſiſts merely in degree. The huge volumes of diagnoſtics are then in this chapter ſuperceded; and much labour, not only irkſome to the artiſt, but worſe than uſeleſs, often pernicious to patients, is proved to be ſuperfluous.

CHAP. XI.

(A) Suppoſe the ſthenic diatheſis mounted up to 60 in the ſcale; to reduce it to 40 it is evident, that the 20 degrees of ſuperfluous excitement muſt be taken off, and therefore, that remedies operating with a ſtimulus, weak enough to produce that effect, muſt be employed: they are ſtill however, ſtimulant, and of conſequence, though they remove it, ſtill the ſame in kind, as the powers that produced the diatheſis; it having been proved, that they are not to be ſuppoſed ſedative, both for the reaſons already given, and for this additional one, that proof has not been yet brought of a ſingle ſedative in nature. As their ſtimulus, however, is leſs than that which is required to ſupport the ordinary ſtate of health, they are underſtood to be debilitating, and, therefore, proper remedies of ſthenic diatheſis.

(B) Suppoſe the aſthenic diatheſis to have ſunk down to 20; to raiſe it up to the ſtandard of health, it is plain, from all the propoſitions hitherto laid down, that the 20 degrees of deficient ſtimulus muſt be reſtored, and, therefore, that remedies operating with a degree of ſtimulus adequate to the production of that effect, muſt be uſed. All the difference betwixt this force of ſtimulus and that of the other, is only a difference of 40 degrees. As, therefore, the debilitating powers, though ſtimulant, employed in the firſt, removed the morbid ſuperfluity: ſo the ſtimulant powers uſed in this caſe, called ſtimulant by way of eminence, remove the morbid deficiency, and thereby, reſtore the degree of excitement, that conſtitutes the ſtandard of health.

(C) When the prevalence of debility, and that to ſuch a degree, as to deſtroy the connection that ſubſiſts be-

twixt the fibres of muſcles, and that function of the brain which we call will, takes place in parts of the ſyſtem, not only remote from the center of activity, but beyond the circulation, it muſt be of difficult cure; becauſe the moſt powerful means of effecting that operation, act moſt powerfully when taken internally, and much more feebly when applied to the ſkin.

(D) What is called dropſy conſiſts of a caſe which is a general diſeaſe, and a number of others, which are only ſymptoms of local internal diſeaſes, and to be treated in the laſt part of this work. Theſe ariſes from oſſifications in the large veſſels next the heart, from tumors, whether ſchirrous or ſteatomatous, impeding by their preſſure the return of the blood by the veins to the heart. It is the general caſe that is here alluded to, and the public may depend upon it, that it is to be cured, but not by evacuant means, and, on the contrary, by the high diffuſible ſtimuli, neceſſary to the cure of diſeaſes of high debility, ſuch as the extremity of typhus fever, and an expiring gout. All theſe are cured by high ſtimulants.

(E) After the diſcovery of the nature of the catarrh, the catarrhal ſymptoms in the meaſles came naturally to be enquired into. A full trial was given to the refrigerant debilitating plan, in the author's own family, as well as among ſeveral patients, and laſtly among near an hundred patients in England, treated by the father of one of the author's pupils; who all did well, while others, who were kept warm, according to a practice that Dr. Sydenham had left as he found it among his Alexipharmac cotemporaries, many died, and all had a bad recovery. The author's own ſon and name-ſon, a boy about ſix years of age, was ſtript half naked and allowed to go out and play as he pleaſed. The only check upon him was, his being allowed nothing but fluid vegetable matter, when he returned home with a keen appetite. This matter will be further explained, and in a more proper place, afterward. But, what has been ſaid, was an illuſtration of the hint in the text.

(F) This case of disease has been considered, as wholly and solely seated in the throat, and therefore conjoined with other diseases, where that local affection was understood to be the essential symptom, and a symptom that connected all the cases. But the other cases are sthenic or to be cured in the ordinary way of bleeding and evacuation; while such a practice is certain death in it, as being not only an asthenic case, that is a case of debility, but one of the highest; and instead of depending upon the affection of the throat, the affection of the throat depends on it. Give stimulants to the patients labouring under the inflammatory sore throat, and you kill them; bleed, purge, vomit, and starve, in the gangrenous case, and you ensure the same fate. Such, however, are the diseases, that systematics, nosologists, and other strangers in the city of nature, have from their ignorance of the place, in spite of their natural distance, brought all together. (See Dr. Cullen's General Morborum, all the three editions, genus VII.) As soon will Milton and Knightbridge meet; as soon will London place itself on the Cæton hill, and become an elevated suburb of Edinburgh.

(G) The discovery of the support of perspiration upon a principle which extends to all the phenomena of the subject, was reserved for this work. The heating remedies of the Alexipharmic physicians were intended to support the perspiration, and thereby, throw out a morbific matter: which was a very unlucky thought in the sthenic diseases, the principal of which were peripneumony, of which we have already so often spoken; phrenitis, in which the brain was supposed to be inflamed; and the small-pox and measles; because the nature of those diseases, and the tendency of all the powers producing them, was to check the perspiration, (see No. 61) from the excess of their stimulus; consequently, the addition of more stimuli, by way of cure, was to check it still more. But those diseases are only three out of the hundred of general diseases: whereas the

followers of a great man, who corrected that abuſe through a fiery perſecution, againſt himſelf, went all into a much worſe extreme. Their imitation of their maſter tranſported them into a rage to carry on the plan of promoting perſpiration, by the ſame means, through the remaining 97, of the hundred. And they ſucceeded with a vengeance. For, as it is the nature of thoſe diſeaſes to tranſmit too great a quantity of fluids through the perſpiratory pores, in conſequence of the debility which conſtitutes their cauſe; certainly the encreaſe of that debility, that is to ſay, the encreaſe of the cauſe, ſhould encreaſe the effect. Which it moſt certainly did, through all the ſyſtems that have appeared for more than a century paſt. This is intended only as a hint, to enable our intelligent readers to underſtand the fuller explanation of perſpiration, which will ſoon follow.

(H) The blood is made from the food, and elaborated by the powers of digeſtion; that is, the more nouriſhing food is taken in, and the more ſtrength there is in the ſyſtem to convert it into real blood, the more, and alſo better blood will be produced. The quantity of blood, ſo produced, may go to exceſs, as well as every other exciting power, the principle of which it is. But the queſtion is, when, in whom, and under what circumſtances, is an over-proportion of blood generated? Common ſenſe would ſay, not at the beginning or the end of life, when the degree of nutriment uſed is far from being ſo conſiderable, as at the middle and vigorous period of life. Again, which of the two ſexes are ſuppoſed moſt liable to generate this morbid redundancy of the vital fluid? A ſimple creature, aided by nothing but natural ſagacity, would be apt to ſay, the men; both becauſe they eat more, and, from the greater variety of the modes of promoting digeſtion to which they are addicted, digeſt better. How medical ſyſtematics would laugh at ſuch ſimplicity! How contrary that would ſeem to myſtery, their Lydian ſtone, under which they think all wiſdom ſo ſafely lodged, as to fear it would be dangerous to turn it up, and examine what was under it! What ſorts of habits are moſt lia-

ble to it? Not thoſe, who have the greateſt bulk of ſimple ſolids, whether they eat or not, much leſs thoſe, who are liable to bleeding diſcharges, who can neither eat nor digeſt; but all thoſe who eat and digeſt well.

(I) This indulgence is chiefly intended for thoſe, who have gone to ſome exceſs in the uſe of the ſtimulus of drink, and who ſtill, without it altogether, are not capable of taking enough of food and other durable ſtimuli for their ſupport. The aim, however, of all ſuch perſons (with the exception only of thoſe who are of an advanced age, or of thoſe whoſe debility threatens to run a certain courſe), ſhould be to lay aſide the daily uſe of drink altogether, and to indulge in occaſional approaches to exceſs as ſeldom as poſſible. Some perſons, even beyond the fiftieth year of their age, when they found they could eat and perform all their other functions with vigour, have had the reſolution to abſtain from all ſort of ſtrong drink, not only with impunity, but with a moſt wonderful improvement of their health and vigor. Another advantage, ariſing from this management, is, that whenever any diſeaſe, to which a perſon may be liable, (ſuch as the gout, various affections of debility, chiefly prevalent in the alimentary canal; in a word, the diſeaſes of either form of debility), either returns, or threatens to return; a return to the uſe of wine and other ſtrong drink will then become an excellent remedy, and even ſupercede the uſe of the high diffuſible ones. That practice would be attended with this further advantage, that, when the occaſion that called for it was over, and the diſeaſe prevented or removed, the perſon might again lay aſide the uſe of drink, with all the good conſequences he had formerly experienced from the practice; and thereby both prolong his life, improve his health, and enjoy the proper and vigorous uſe of all his functions.

(K) In many diſeaſes of debility ariſing from a former exceſs, the ſtimulant effects of which have paſſed away, the uſe of cold water, though in gratification of the patients craving, and of other thin potions, as well as of

vegetable aliment in a fluid form, and of evacuation of every kind is moſt hurtful.

(1) At 65 there are only 5 degrees of vigour left, which, either by a continuance of the ſame exceſſive ſtimuli that produced them, or, by the addition of a degree proportioned to that effect, would be worn out. Remove ſome of the ſtimulant powers, the exceſs of excitement will be diminiſhed, ſuppoſe to 60; remove more of the former, and the exceſs of the latter will be further diminiſhed, till the excitement is reduced to its natural healthy ſtandard of 40. The ſtate of excitement, then, within this range, that is, between 40 and 70, eſpecially in proportion to the approach of the exceſs to 70, is that, to which only directly debilitating powers ſhould be applied. In all caſes above 70 where the excitement is gone, and below 40 where it conſtantly decreaſes all the way, till it is loſt at 0, directly debilitating powers are pernicious. How bad then muſt the only practice be, that we find in books and lectures, a practice tranſmitted from the firſt accounts of our profeſſion, and which deals in the uſe of no other means but directly debilitating ones? Bad, indeed, muſt it be!

THE

SECOND PART.

CHAP. I

(A) Calefacients, or heating things, were one of the means that the Alexipharmic phyſicians employed to force perſpiration; but the principle is now laid down, that ſhows they produce the oppoſite effect. Hence the merit of Dr. Sydenham in recommending cold both in the ſmall-pox and in peripneumony, in which diſeaſe he took his patients out of bed, and placed them in an eaſy-chair. Happy had it been for the profeſſion, and happier for the ſick, had he extended his improvement to the meaſles and catarrh, and all the reſt of the few ſthenic diſeaſes, and ſtopt there; but by extending his antiphlogiſtic and refrigerant doctrine to the whole form of aſthenic diſeaſes, the harm and good he did were in the proportion of 97 of the former to three of the latter.

(B) The idea of certain powers of a tendency to corrupt our fluids, and of certain others to correct that effect, and take off the degeneracy, long prevailed in the minds of ſyſtematics, and is not among many of their followers yet laid aſide. Heat was one of the number; but that it acts ſo, is diſproved not only by the explanation here given, but by the certainty of the fact, that the ſame effect is produced by cold, as well as every other debilitating power.

(c) Famine, acids, and cold, have all the same effects upon the fluids that the putrefying substances were supposed to have; but surely acids produce no putrefactive process; neither can want act as positive matter; nor cold be supposed to produce any such effect. In a word, any corruption that is produced, arises only from the weakness of the heart and arteries, predominant in their extremities. They cease to act; the fluids within stagnate, and, under the heat of the body, degenerate. This is the true cause of the corruption. And the remedies are not correctors of the corrupted mass; but whatever invigorates the whole body, and consequently the heart and arteries. Nothing can be more absurd than to suppose that a glass or two of wine and water, a little bark, and so on, after being blended in the whole mass of fluids, should go to a portion of fluids in the extreme vessels, even without the circulation, and, by mixing with it, change its qualities.

(d) When the debility of the direct kind is very moderate, that is, the excitement has not sunk much below 40 in the scale, the short suspension of a few degrees more would not do much mischief. Suppose the excitement at 30 instead of 40, and a dip in cold water has brought it down to 25, the effect even of that, is not of a trifling nature; the debility, by this means, has passed the whole range of predisposition, and arrived at the degree where disease commences. It is true, the excitement will rise the moment the person is taken out of the bath; but still something is lost. The very accumulation implies a reduced disposition in it to be acted upon by stimuli. A person, who has abstained from any one stimulus for a given time, when it is again applied, will not bear near so much of it as he did formerly. If he abstains longer, he will bear still less, till, at last, he will be fit to bear none at all. If, on the other hand, the excitement should have fallen to 10, an addition of debilitating power would be attended with the utmost danger, not only of encreasing the disease, but of inducing death.

(E) From the higheſt to the loweſt, from that degree of it, which under the circumſtances here mentioned, produces a moderate catarrh, to that, where the modification of its action riſes to the degree of being adequate to the effect of producing a peripneumony.

(F) We are pretty certain of the exactneſs of that place in the ſcale which we have aſſigned to opium. Nor is our arrangement of the others uncountenanced by the ſame kind of criterion; but having not yet made all the trial neceſſary to eſtabliſh the propoſition, we defer any final deciſion of this point to an after opportunity.

(G) In the uſe of the diffuſible ſtimuli, great care ſhould be taken to apply them only to the caſes that require them; which are only the diſeaſes of the higheſt debility, or of which the intolerable pain, beſides tormenting the patient, threatens the worſt conſequences. All from the end of the 126. is an addition to the MS. this moſt valuable part of the exciting powers, whether conſidered as a part of diet, as the chief of them are among the Turks, or as uſed for the prevention of diſeaſes, to which there may be a ſtrong bias in the habit, or as remedies of theſe diſeaſes when they have come on, or as hurtful powers when improperly employed, having been left out in both the editions of the Latin work that have yet been preſented to the public.

(H) When I make a meal of animal food, much leſs bulk is requiſite to give the ſame nouriſhment, than when vegetable matter is the only one made uſe of. What makes the difference is, that there is ſomething in the animal matter which affords a nouriſhing ſtimulus independent of its bulk; and though the vegetable matter is not altogether devoid of that kind of ſtimulus, it, however poſſeſſes it in a much ſmaller degree. Both ſtimuli are neceſſary, but chiefly the direct, by which animal food chiefly acts; and therefore is the vegetable the worſt and weakeſt ſort of aliment, becauſe it chiefly acts by its bulk of matter. A ſmall portion of the indirect ſtimulus is neceſſary; hence the very general uſe of bread. But our whole vigour depends upon the direct.

(I) The nouriſhment of animal food needs only a little ſupport of tenſion from a moderate quantity of bread; but that vegetable food, even when ſupported by ſtrong condiments, in no quantity whatever, ever gives due ſupport, appears plainly from the inſtance brought in the text. Of the poor labouring people in Scotland, who chiefly live on vegetable matter, it would take three to go through the work that one Yorkſhire man, nouriſhed by bolting fat pork, can eaſily execute. And among the Gentoo ſervants, a dozen is not able to perform as much work as a ſingle Engliſh ſervant. A year's experience of vegetable food, and its pernicious conſequences (vide the Preface) has now put the queſtion, about the ſuppoſed ſalutary effects of low living, and the pretended virtue of a rigid obſervance of it, beyond all doubt, and brought irrefragable proof of its weakening effect.

(K) It will now appear how far an aſſertion of the oppoſers of this doctrine is juſt or calumnious: low living and ſtarving are condemned for the facts and reaſons aſſigned; but can it now be ſaid, that the doctrine is friendly to intemperance? On the contrary, it has reduced the fact to its proper ſtandard, reprobating the extremes, and eſtabliſhing the mean under which virtue takes her poſt. It is certainly as immoral, or irreligious, if you will, to hurt health, and haſten death by abſtinence, as by a luxurious exceſs. There is a gloomy luxury in ſuperſtition, a chearful one in ſenſuality; both bad.

(L) At leaſt it ſtands at the foot of the ſcale of directly debilitating powers, if they are to have the rank of ſtanding uppermoſt, as being moſt hurtful, and to be followed by the enumeration of the indirectly debilitating powers, as being next ſo, which by the way, is the rank that nature ſeems to point out for both.

(M) As there are caſes of indirect debility from an habitual abuſe of ſtrong drink, there are alſo others from a miſtaken or intemperate uſe of the diffuſible ſtimulus,

particularly opium. Both of them require nicety and skill in the management of them for their cure; for which consult Chap. XI. from par. 103. to 110. The management is out of our present question; but what affects that is, that, from this observation, we can clearly find, as it was to be expected from the analagous operation of the other exciting powers, that the diffusible stimuli, when their operation is carried to excess, will also produce an asthenic diathesis of the indirect kind.

(M) The blood, by its quantity, distends the muscular fibres of the vessels; that distention stimulates the excitability in the fibres, and produces excitement, commonly called their irritability; thus excited, the fibres contract; the contraction of each portion sends the wave onward to another portion: when the wave has passed any given portion of vessel, its fibres again relax, and make way for the next, which is pushed along in the same manner. In this way the circulation goes on in all cases while life remains; contraction and relaxation constantly alternate; the former propelling the wave, before the latter opens to receive the next. But the vessel may be in different states with respect to its power of either contracting or relaxing. When it is weak, which every part of the vascular system is, as often as all the rest of the system is weak, both the contraction and relaxation of each portion of vessel is imperfect. The contraction, from its smallness, and the relaxation, from its being more owing to the passive state of the simple, than the active state of the living fibres, leave betwixt them a large diameter upon the whole. But, in a vigorous, or sthenic, state of the whole system in general, and of that of the vessels in particular, the contractions are strong and forcible, and the relaxations active, and in consent with the contractions. Hence the diameter of each portion of vessel is diminished upon the whole; and while the quantity of the blood is at the same time encreased, the action and reaction are great; the blood distends with mechanical, the vessels resist with vital energy; the mutual effect of

both upon the excitability is considerable; all is activity, all is force, and these are in exact proportion to their cause over all the sthenic diathesis. This state of the vessel, in so far as it respects the muscular fibres, is its tone; in so far as it respects them as simple solids, its density. It is a sthenic state of the vessel, opposed to the asthenic first described, which is distinguished by the epithets of atony and laxity; which, however, opposed to tone and density, are only relative terms, employed for convenience, not absolute: like the term cold, used for diminishing heat, they only signify a diminution of tone and density.

(o) It is a curious fact, that, while the truth of this proposition is demonstrated, the plethora of the schools is only understood of a state of the vessels diametrically opposite to a just idea of plethora.

(p) Relief from bleeding and other evacuations is certainly a good argument for the cause of the disease being so far owing to an over-proportion of blood; and rest is as good for the proof of agitation of the vessels being concerned in the cause; besides, exercise is otherwise a noted cause of quickness of the pulse: and the hurtful powers and symptoms are equally decisive.

(q) Who ever heard of a flood of blood coming from the lungs in a peripneumony? Or, who has not heard of it in consumptive cases; which are the diseases depending upon the laxity of vessels of which we are speaking. What vigorous woman, sound in all her functions, as a woman, ever fell into perpetual floodings? What had been the state of these women before the disease? Did they eat and digest, so completely, as that there was any reason for supposing their vessels were filled with blood? No; long before the arrival of the disease their eating was puny, and considering the kind of matter they made use of, to wit, vegetable, it was not to be supposed more beneficial from its quality than its quantity. What was the idea to be gathered from their symptoms and particularly the pulse? The pulse had all the marks of an

asthenic one ; being weak, small, and quick, like that of a new-born infant. What was the state of their habit ? Was it vigorous and robust ? It was the reverse ; soft, delicate ; the habit lax ; a falling off in flesh, with weakness over the whole system, and total loss of appetite. What were the remedies employed to remove this supposed off-spring of plethora ? Bleedings, repeated without end ; other evacuations with the same freedom, and vegetable food in a fluid form, and a horizontal posture, with their head lower than their body and under extremities. Miserable are the resources of ignorance, and contemptible their execution ! Fill a rigid tube full of water, open at both ends, and the fluid, no doubt, will run out at the end which is most below an exact horizontal position. But that is not the case with the fluids in living vessels. The excitement, distinguishing them from all rigid inanimate tubes, counteracts, the effect of gravity, while its living state remains : In proportion to the degree of which, the sides of the vessel will embrace their column of fluids, and prevent the flowing out of the fluids, in proportion to the degree of excitement ; and before the gravity can act, the excitement must be extinguished, and the living system reduced to alumpish mass of dead matter. It is the latter, that enables them to produce that effect. And, therefore, bleeding discharges can never happen, either in health or sthenic diathesis, unless in that very high degree of it that approaches to indirect debility, and even then, only in the forced scanty manner described in the text ; whereas, after the establishment of indirect debility, or in the case of direct, the great discharges only can happen, and that without force, in great plenty, but still short of what would happen if no excitement restrained it.

(R) Systematics allow that there are many diseases, which are a reproach to their art, from their never yielding to their method of cure, but, on the contrary, becoming worse and worse in proportion to the time and pains taken about it. Of these approbria medecinæ (it would

be better, I believe, to call them opprobria medicorum) few are more so than the bleeding diseases; which seem uniformly to have proceeded from evil to worse under the evacuant debilitating plan; while it has now been found, that the high stimulant plan removes them with the greatest success.

(s) It has been said above, in chap. IV. that the excitability is one uniform undivided property over the whole living system; and that, wherever it is acted upon in any part of its seat, it is affected over all. This fact, which is strictly true and universal over every part of living matter in nature, with the utmost ease explains many things, that were confessedly inexplicable upon every other medical doctrine; and, among the rest, the several affections of the secretory system.

(t) Nothing is more effectual in hastening death than a love marriage betwixt an old man of worn out excitability, and a young beautiful virgin: I need not explain to any reader, on which side, that of the man or the wife, either the love or the danger lies.

(u) of the Torrid zone. I have been so often, and by persons of good enough sense to make just observations, informed of the necessity of purging off the redundency of that fluid, which not only fills the intestines, but diffuses itself over the whole alimentary canal; and, then, of following out the cure of the disease by the use of wine, spirits, and the diffusible stimuli, that I have, though at first with some reluctance, admitted the fact. The reason of the slowness of my assent to it was, that, upon every other occasion of any accumulation of matter in the first passages, even in the cholic itself, I had always found the practice of invigorating the peristaltic motion, by stimulants, sufficient to clear away all such extraneous matter; while vomiting and purging, by their relaxing effect upon the vessels, served to generate more, and encrease the cause of the disease, which is always debility. This I found not an exception to that general principle, but an instance of a sort of local dis-

caſe, from an over repletion of the exhalant mucous and biliary veſſels.

(x) Theſe are the exhalants that pour out the ſaline, watery part of the blood unchanged; the mucous glands that change, by their ſecretory operation, the fluid they receive from the blood; the pori biliarii that change the fluid that they receive from the extremeties of the veins of the gate, and of the hepatic artery, or artery of the liver; the little ducts which theſe form by the union of numbers into ſingle veſſels; the hepatic duct, or great biliary veſſel of the liver, which receives the bile from all the ducts; and, laſtly, the ductus communis choledochus, or the duct that may be denominated in Engliſh, the general receiver of all the bile, whether from the great duct of the liver, or that which ſends to the gall-bladder a part of the bile that returns in the ſame veſſel to the general receiver. Theſe, and beſides, them, the inhalants, or abſorbants as they are called, to wit, the ſmall veſſels that take up from the exhalants and other arterial terminations of veſſels, the fluid, called lymph, which is once more to be returned into the circulation; are the veſſels that ſuffer the concourſe of ſymptoms deſcribed in the text.

(y) How great the ſpace in the whole ſyſtem is, that theſe veſſels occupy, may be eaſily imagined, when it is conſidered, that every evanelcent artery, over the whole body, terminates in one or more of theſe colorleſs veſſels that have been deſcribed.

(z) None of the exciting powers have more influence upon our activity, than the two which are juſt going to be mentioned, the exerciſe of our intellectual function, and that of paſſion, or emotion. With reſpect to the former, Homer obſerves of the hero, whom he gives for a pattern of eloquence, that upon his firſt addreſs, that is, while he was under ſome agitation, and had not yet got into his train of thought, he was aukward in every motion, and in his whole attitude; he looked down to the ground, his hands hung ſtrait along his ſides as if powerleſs; his whole appearance was torpid. But when he

once entered upon his ſubject, his eyes were all fire, his limbs all motion, with force, grace, and energy. Upon commencing a lecture, the pupils have often obſerved the ſame torpor in the lecturer, and a ſimilar vivacity and life in a few minutes, when he had now got fairly into his ſubject: the report which a lecturer's daughter, upon looking through the hole of a door, while the lecture was going on, made to the family and ſome company then preſent, was, that her father looked, in his lecture, as if he would look through his hearers. A Mr. Donaldſon is one of the few great maſters, in the art of painting, who never fail, with a moſt exact likeneſs, to diſplay the whole influence of the mind upon the features. A miniature of me, done by him, as a preſent, is reckoned the greateſt maſterpiece in theſe reſpects, that ever came from the hands of a painter.

(2A) Nothing is more clearly diſagreeable than an obſcure light, as when one reads with a ſmall or unſnuffed candle. Hence the luxury of more candles than one, or of wax or ſpermaceti candles. This is often experienced at Ranelagh, and may be ſeen in children exquiſitely amuſed.

CHAP. II.

(A) IT muſt appear to the reader, to what ſimplicity the hitherto conjectural, incoherent, erroneous, myſterious, and enigmatical art of phyſic, is now reduced. It has been demonſtrated, that there are only two forms of diſeaſes, that the deviation from the ſtate of health, in which the morbid ſtate conſiſts, is not either repletion or inanition, or changes in the qualities of the fluids, whether of an acid or alkaline nature, or the introduction of foreign matters into the ſyſtem, or a change of figure of the extreme particles, or a diſproportion in the diſtribution of the blood, or an encreaſe or decreaſe of the power of the heart and veſſels as regulating the circulation, or a rational principle governing the actions of the body, or an alteration in the extreme par-

ticles as being of too large or too ſmall a ſize, or an alteration of the pores, as being too narrow or too capacious, or a conſtriction of the ſuperficial veſſels from cold, or a ſpaſm of them producing a reaction, as it is called, of the heart and interior veſſels, or any thing that any perſon has yet thought of, reſpecting the cauſe and nature of morbid ſtate. On the contrary, it has been proved that health and diſeaſe are the ſame ſtate depending upon the ſame cauſe, that is, excitement, varying only in degree; and that the powers producing both are the ſame, ſometimes acting with a proper degree of force, at other times either with too much or too little; that the whole and ſole province of a phyſician, is not to look for morbid ſtates and remedies which have no exiſtence, but to conſider the deviation of excitement from the healthy ſtandard, in order to remove it by the proper means. The reaſoning part of this doctrine, it is expected, the reader will find irreprehenſible and unanſwerable; and the practical part, from the aſtoniſhing cures that have upon innumerable occaſions been effected, will ever ſtand in ſupport of the truth and utility, as well as ſimplicity of the whole.

CHAP. III.

(A) During the prediſpoſition to peripneumony, as well as to every other diſeaſe, neither the ſymptoms of diſturbance, nor any other ſymptom at all appear. And in mild caſes, ſuch as catarrh, the ſymptoms of duſturbance occur not through the whole courſe of the diſeaſe: But, when a diſeaſe is, like the peripneumony or the gout, of a violent nature, then the ſyſtem is commonly diſturbed, and in a moſt conſpicuous degree. The affection of the lungs in the former, from the inflammation within, and of one of the feet, or ſome other part in the latter, from an external inflammation, give extreme diſturbance to the affected parts, while there is a diſeaſe of the ſame nature as the gout, that is

dyſpepſia, or indigeſtion, in which the inflammation never appears.

(B) The voluntary motions are thoſe that are performed under the influence of the will, ſuch as the motion of the limbs in walking, or in any ſort of exerciſe. The organs, by which they are moved, conſiſt of bundles of moving fibres called muſcles. The involuntary motions are thoſe of the interior parts of the ſyſtem, ſuch as thoſe of the heart and veſſels connected with it; the periſtaltic motion in the firſt paſſages, which are the paſſage to the ſtomach; the ſtomach itſelf, and the whole convolutions of the inteſtines; as alſo thoſe of the womb, of the bladder, of urine, and ſo forth. None of the latter are under the influence of the will.

CHAP. IV.

(A) The bronchia are the diviſions of the wind-pipe running through the ſubſtance of the lungs, and blended with the blood-veſſels. In the ſubſtance of the lungs, beſides theſe two ſets of veſſels, the air-veſſels and blood-veſſels, there are liſtewiſe exhalants, ſmall arteries, and mucous glands, coming off from the extremities of the red arteries. The wind-pipe is covered with the latter; and the great quantity of mucus thrown up from the lungs, often in perfect health, and in innumerable caſes, both of ſthenic and aſthenic general diſeaſes, ſufficiently proves the exiſtence of the ſource from which they flow.

(B) High-ſeaſoned animal food, wine, ſpiritous drink, cordials, and the whole train of high diffuſible ſtimuli, ſome of theſe, as meat and wine, have no effect upon the external ſurface, or any other part: others, as ſome of the condiments, ſuch as muſtard and ſtrong ſpirits, and above all, the diffuſible ſtimulants, as æther, camphor, and opium in a liquid form, do act upon the ſecond, and by their application to it, ſupport their own internal uſe. Thus, to prevent or remove the gout, anaſarca, ſprains, and ſo forth, the application of any of thoſe high diffuſible

remedies juſt now mentioned, will greatly contribute, along with their uſe as taken into the ſtomach, to ſupport the general operation. Theſe, and innumerable others, are ſo many facts that have been ſuggeſted by obſervations and trials made in the proſecution of this doctrine.

(c) Diſeaſes that are ſthenic, and accompanied with an inflammation of a part, as a portion of the lungs, the throat, ſome of the joints, and in which, as has been formerly ſaid, the inflammation is like any other ſymptom, an effect of the cauſe of the diſeaſe, not itſelf the cauſe.

(d) In the inflammatory ſore-throat, the inflammation affects the throat, which is alſo ſometimes the ſeat of an eryſipelatus inflammation. In erytipelas, ſometimes the face, ſometimes one of the legs, ſometimes the ear, ſometimes the temples are inflamed. I have frequently been affected with an eryſipelas, that begins with an acute inflammation and pain in one ear, which is thickened to four times its uſual dimenſion; from that it ſpreads over the whole hairy ſcalp, till it reaches the neighborhood of the ear on the oppoſite ſide, never, however, affecting that ear: this progreſs has been ſometimes from the right to the left, ſometimes from the latter to the former, in proportion as either had been more expoſed than the other to heat, or the alteration of heat with cold, or their ſucceſſion to each other. This diſeaſe is ſthenic, but in a mild degree, and to be removed by coolneſs, cold water, low vegetable fluid diet, and a ſlight purge. It was once greatly aggravated by wine, ſpirituous drink, and the high diffuſible ſtimuli. In rheumatiſm, the inflammation attacks a large joint, ſometimes ſhifting from one to another, ſometimes ſeveral at a time, and, in contradiſtinction to eryſipelatus, is deep ſeated, extending to the interior part of the true ſkin, which is the caſe with every ſuch inflammation, called therefore, phlegmonic; while its ſeat in eryſipelatus is betwixt the ſcarf-ſkin and outer part of the true ſkin upon the corpus mucoſum. To theſe phlegmaſiæ, accompanied with an

inflammation of a part, depending upon the general cauſe of the diſeaſe, and eſpecially upon the effect of temperature, may be added that which an inflammation in one of the ears accompanies, though this caſe is ſeldom admitted into the number of the phlegmaſiæ. It is, indeed, ſometimes local, ariſing from local injuries, but is as certainly at others, a general diſeaſe, and to all intents and purpoſes a phlegmaſia.

(E) Thoſe two diſeaſes, in young vigorous perſons, are very liable to be exceedingly troubleſome by the frequency of their occurrence. In the younger part of my life, the violence in degree, and frequency of recurrence, of the ſthenic inflammatory ſore throat, was very diſtreſſing, as the leaſt variation of the external temperature, ſuperadded to a full nouriſhing diet, not without the ſtimulus of a chearful glaſs, was ready to renew, not only the inflammation, but the whole phænomena of the diſeaſe. The ſame thing I have often obſerved in the frequent recurrence of rheumatiſm in perſons of the ſame age and habit, perhaps, with ſome difference of temperament. But it is to be obſerved, that in proportion to the advance of life, and diminution of vigour, both theſe diſeaſes become much leſs frequent, and much leſs violent. Nor is any thing more common than their giving way at this time to a very oppoſite diſeaſe, the gout, which depends upon a ſuperaddition of direct debility to the indirect, that laid the foundation of it. I am pretty certain my inflammatory ſore throat, or erysipelas, never happened ſpontaneouſly, nor without an addition of ſtimulant power, to thoſe that produce that diſeaſe, in conſequence of carrying to ſome exceſs the plan of cure ſuited to the removal or prevention of the gout.

(F) It ſhall by and by be ſhewed, that this ſort of inflammation is only a part of the general diatheſis, ſomewhat higher in degree than any other part, but far ſhort of the degree conſtituted by the whole general affection.

(G) See above, par. 50 and 51. Suppose the excitement in every part of the system to be 45 at some point in the period of the predisposition, and 54 in the part to be inflamed; after the coming on of the disease, the same proportion will hold: when the excitement has now mounted up to 60, the excitement of a part will be understood to have gone to 69; keeping up still the same proportion. But this 9 degrees of greater excitement in a part, comes far short of the sum total of excitement in all the parts affected with the general sthenic diathesis; that you may suppose 3000: and then the conclusion will be, that the general sthenic diathesis consists in a sum total of morbid affection, as 3000; while the inflammation of the part is only an affection of 3 degrees of excitement.

(H) Solution of continuity, in all its forms, whether as being the effect of puncturing, cutting, bruising, compression, erosion from acrid matter, or from heat, or cold, is always followed by an inflammation, which, when it goes on briskly, and needs to have its violence restrained, should be called as is expressed in the next paragraph.

(I) Phrenitis has been thought, and commonly even defined, an inflammation of the brain; an opinion that, however universal, seems to be liable to much doubt: nay there are many reasons for adopting an opposite one, as will appear from the reasoning in this paragraph of the text.

(K) It was long an opinion, that the inflammation in rheumatism might be transferred to an internal part, as the stomach; but that, also, is now laid aside, and all the cases where there could be the least appearance of any such transference, have been found to be cases of the gout, or some analagous disease of debility.

(L) The inflammation was supposed a chief and primary circumstance, and its cause and seat, the cause and seat of the whole disease: while the general sthenic diathesis, and all the symptoms depending on it, was suppos-

ed the offspring of the inflammation. But the truth is, in every reſpect, the reverſe of this account. The general ſthenic diatheſis is the effect of the general exciting hurtful powers. As the effect of theſe, in a leſſer degree, it exiſts during the prediſpoſition, and before the arrival of the diſeaſe; and, after the diſeaſe is come on, it ſubſiſts, as certainly as ſuch, for one, two, or three days, as afterwards, when the ſign of the inflammation, the pain, makes its appearance. It is only an increaſe of it, that induces the latter: and it is not to be cured by any contrivance of throwing any thing into the inflamed part, there being no ſuch thing to be found in nature, but by the ſeveral means of removing the common cauſe, that is, evacuant and other debilitating remedies. Thoſe, while, at the ſame time, they remove the other ſymptoms, by alſo removing the diſeaſe, prove that the common cauſe of the whole is the general diatheſis. The inflammation, therefore, like every other cauſe of the general diſorder, is a conſequence, inſtead of being a ſymptom.

(M) Such, however, and many other diſtinctions, equally falſe, frivolous, and miſleading in the practice, have been at all times univerſally received by ſyſtematic, and lately by noſological writers.

CHAP. V.

(A) Theſe ſymptoms have lately been conſtrued into ſo many marks amounting to a proof of the exiſtence of ſpaſm upon the extreme veſſels; but we ſhall, by and by, find a much better explanation of them.

CHAP. VI.

(A) This is a fact as new, and of as much importance as any in this whole work. Phyſicians, hitherto, had no diſtinct notion of a variety of inflammations; and had ſcarce any idea of any inflammation, but ſuch a one

as was to be treated with bleeding and evacuation; nay, often, when they had no reason to suspect inflammation at all, the mere circumstance of pain was, in their estimation of it, sufficient to warrant a profusion of bleeding without end. But, the truth is, that pain may not only arise from an inflammation, which they had no idea of, and which was to be cured by stimulants, but it arises from spasms, convulsions, and even from emptiness.

(B) These symptoms of want of appetite, loathing of food, thirst, sickness at stomach, vomiting, and acute pain of the stomach, as well as those that follow to the 195. and from that to the 198. form a chain of symptoms depending upon encreasing debility, which, instead of being different in kind, are all connected by an uniform operation of nature. And they furnish an instructive instance of the erroneous mode of judging of the nature of symptoms, and morbid affections, which has been so prevalent in all systems of physic, that we are yet acquainted with. However different in appearance, they are not only similar, but all unite in forming one and the same kind of disease, one and the same morbid affection; which is proved by their arising all from one and the same set of hurtful powers, to wit, debilitation; and by their being cured by one and the same set of remedies, to wit, stimulant. The former powers may vary in degree, but they are all debilitating; and the latter may also act with different degrees of force, but they are all stimulant. And the state of the system, from which the former constitute a deviation, as well as that to which the latter produce a return, is health, which is always the same.

(C). The fibres of the stomach are muscular, and partly longitudinal, partly oblique, or approaching to circular. When the food is taken in, the former are contracted and shortened, by which they raise the under part of the stomach, which is unfixt upwards. These gradually relax as the food, after its first digestion in this organ, and its conversion into a more fluid form, in the same gradual manner, passes out of the pylorus,

or under orifice of the ſtomach. This operation takes off the diſtending weight in the direction from above downward; and, as the food, in proportion to its converſion from a more ſolid to a more fluid form, is more and more collected into the under part of the cavity of the ſtomach, this gives a preſſure in the lateral way, and, therefore, throws the other fibres into contraction, by which the ſides of the ſtomach are ſqueezed together, and, thereby, perform the office of throwing out, by the pylorus, the remaining part of the alimentary matter. Beſides theſe ſucceſſive actions, the muſcular ſubſtance of the ſtomach is ſo conſtructed as to be provided with fibres, the motion of which, when the ſtomach is full, is upward and downward; when empty downward only. All theſe motions give the alimentary matter the mechanical agitation neceſſary to promote its mixture.

(D) The gaſtric fluid, poured into the cavity of the ſtomach, as well as the ſaliva that follows it from the palate, and the watery or other drink taken in by the mouth, contribute to change the food more and more into a fluid conſiſtence, which is a change only of its form; but, by certain means, a change alſo of its nature, called in chymiſtry proper mixture, takes place. This change is chiefly effected by the gaſtric fluid, to which perhaps, a certain relation that the other fluids bear to the alimentary matter in this living organ, contributes. Another means of promoting the ſolution that goes on in this proceſs is the heat of the ſtomach.

(E) The prevailing notion with reſpect to this kind of affection has been, and ſtill is, that its cauſe is the matter here ſpoken of, which is only an effect of the cauſe, and that its cure, when the affection is in the ſtomach, is vomiting to carry off the ſuppoſed cauſe. But its true cauſe is the laxity of the fibres, and their atony from the general debility, yielding to the diſtending force of the matter, and thereby loſing their tone and denſity

more and more; while vomiting therefore encreaſes, ſtimulating removes the diſeaſe.

(F) a way of reaſoning never made uſe of in medicine before, but which runs through, and influences moſt of the propoſitions in this work. It is further to be obſerved, that, upon no occaſion, can we ever arrive at an adequate knowledge of abſtract cauſes; that the eagerneſs of mankind to ruſh into wild and fanciful explanations of them, without any regard to real phænomena of nature, has been the cauſe of all the falſe phænomena that ever appeared in the world, and that the only ſure and faithful guide to the ſtudy of cauſes is a cautious and painful inveſtigation of the effects and phænomena of nature that proceed from them. See more upon this important ſubject, and indeed, a complete diſcuſſion of it, in my book, entitled, "Obſervations on the old ſyſtems of Phyſic."

(G) All this reaſoning with reſpect to ſpaſm and convulſion, ſhowing them to be the ſame, and only a part in the whole, a link in the chain of the other aſthenic affections, which have been mentioned, as well as the facts and arguments next to be brought, which will ſerve to prove all that follow to be alſo the ſame, is, of itſelf, of the higheſt importance to mankind. In a particular manner, the whole tribe of diſeaſes of the alimentary canal, and almoſt all thoſe of children, all, indeed, but the contagious eruptive ones, are both explained, and their principle of cure aſcertained, with geometrical exactneſs. Here, then, at once is a diſcovery, upon ſcientific principles, of the true nature, and certain cure, of more than one half of the diſeaſes of the human race; the method of cure ariſing from this doctrine having never failed in any of them, and never ſucceeded upon a contrary plan, the debilitating and evacuant, ſo univerſally recommended by the authority of the ſchools. The ſpaſms and convulſions of the external parts, unleſs when immoderate in degree, are equally

certainly removed by the new method. And even epilepsy and tetanus yield to it.

(H) When this asthenic thirst comes on, it is the highest luxury in nature to be allowed a free indulgence in the use of cold water, which is always hurtful in proportion to the degree of its coldness.

(I) A lady, after nursing her twelfth child for seven months, was found by her husband, a physician well acquainted with the new doctrine, very low spirited one evening. She was of a delicate, thin, exhausted habit, and had been subject often before, towards the end of her periods of nursing, to loss of appetite, cholic, dejection of spirit, and as often cured by removing the child from her breast, and putting her upon a rich stimulant regimen. Her friend and physician perceiving the cause of her dejection, ordered two of their daughters, who happened to be grown up, to sit up and rock the child in the cradle all night, and also watch their mother to administer to her the things he had ordered. They themselves went to bed. The reader should have been informed, that such was the lady's lowness of spirits, that tears bursted from her eyes upon hearing the sudden order for the weaning of the infant. He fell asleep; but in an hour's time was wakened by the noise of a most violent vomiting she had fallen into. She had a pain in her stomach at the same time, from her account of which the description above was taken. All this had been occasioned by her applying the child's mouth to her nipple.

(K) The cholera, or that disease, the urgent symptom of which is alternate vomiting and purging, the effect of which, while their cause is a general weakness over all, but prevalent in the first passages, is to encrease the weakness, from which they proceed, to such a degree, as to hurry on the patient's death, with every symptom of expiring debility, in the short space of sixteen hours. This happens in the warm countries, as the southern parts of Europe, and especially in the torrid zone, whether in Asia, Africa, or America.

(L) The cholic has been commonly treated by purging and bleeding, and low diet; but in no inſtance has that treatment of it been ſucceſsful. Opiates were particularly forbidden, upon the ſuppoſition of their conſtipating the belly; but the truth is, that the cholic, as well as diarrhœa (which has been ſuppoſed a diſeaſe of an oppoſite nature, from the ſeeming contrariety of looſeneſs of the belly, and coſtiveneſs to each other) are the ſame kind of affection, only differing in degree. And the cholic is to be removed by no other means than thoſe that remove the ſimple looſeneſs; that is, by durable and diffuſible ſtimulants.

(M) The iliac paſſion, which is that higher degree of cholic where vomiting comes on, and the periſtaltic motion is ſo inverted as to occaſion the rejection of ſtercoraceous matter by the mouth. Sometimes in the progreſs of the ſame diſeaſe, eſpecially when treated only by evacuation and bleeding, a portion of gut is inſinuated into the cavity of the next portion. This is called in the art, Volvulus, or Intus Suſceptio. The quick and effectual cure of cholic, before the ſymptoms of volvulus make their appearance, is a good proof that the latter is induced by the purgative medicines, employed to clear away the obſtructing cauſe, acting with ſuch relaxing effect, and urgent violence, as to turn back the inverted motion in one part, while it continues inverted in all the reſt, and particularly in the portion next to it. The ordinary evacuant plan, therefore, is a cauſe of the violence of the diſeaſe in all its ſtages; and laſtly, of the laſt, which becomes a local and immovable affection. Nothing could be more abſurd, than the reaſoning that has directed the practice of phyſicians. In which, beſides the general rules of bleeding to cure bleeding, vomiting to cure vomiting, and purging to cure purging; and beſides the contradiction of purging in cholic, which, by the laſt rule, only applies to diarrhœa; they have taken it into their head, that a good means of removing the obſtructing matter in cholic, was to throw in a large quantity of heavy ſubſtance, with

the intention of forcibly displacing it; reasoning in that way not so well as a soldier would do, in clearing away any foul matter from his firelock; for it should have been remembered, that whatever effect such substances, as quicksilver, might have by their weight in pushing downward any obstructing matter, they must operate with a contrary effect, as often as in the convoluted state of the intestinal canal, the course of any portion was upward. Neither did it ever strike them, upon any one occasion, what they should never have left out of view upon every occasion, that the idea of the action of dead matter upon dead matter, whether mechanical or chemical, that is, perceptibly or imperceptibly mechanical, is never to be transferred, in sound reasoning, to the mode of action of the same dead matter on living matter; the excitement in no case whatever admitting of any such analogy.

(N) These two diseases, according to a theory that has at all times prevailed in the schools, and has pervaded all medical systems, are supposed to originate from an obstruction in the mesentric glands, through which the chyle, or alimentary matter, after undergoing a double preparation, one in the stomach, and another in the first convolutions of the intestines, has to pass before it arrives at its common receptacle, the thoracic duct, in order to be thrown into the venous mass of blood; and to remove it, still upon the same idea, as if all the cavities of the animal economy, whether great or small, were to be cleansed like the soldier's firelock, no limits were set to the use of gentle aperients, and particularly the use of mineral waters. And they used gravely to tell us, that with the help of a course of time, suppose the arrival of the infant, or child, at the seventh year of his age, that would carry off the disease by its detergent operation, provided the obstruction were not so great as to induce death before the lapse of that period. That all this is silly theory, devoid of all foundation in truth, is proved by the completion of hundreds of cures in the shortest spaces of time, by means of durable stimuli, which act upon their delicate frames with

ſuch efficacy as to ſupercede, unleſs in the moſt violent caſes, all uſe of diffuſible. This remark applies likewiſe to worms, for the cure of which no bounds were ſet to the uſe of purgatives, upon the idea of clearing away the ſtuff in which this vermin neſtled; a practice not ſo judicious as that of ſome fooliſh boys, who place their ſucceſs in bird-catching, upon the chance of bringing down the neſts from the top of high trees, by throwing ſticks and ſtones at them; while other boys, both more ſenſible and alert, climb up, and ſeize every one of them. The cauſe of worms is the ſame as that of all the other diſeaſes we have ſpoken of, differing in nothing but in what they all differ from each other, mere degree. Debility over all, but prevalent in the alimentary canal, occaſions a weakneſs both in all the other functions, and particularly in that of the periſtaltic motion. This ſtate implies a ſimilar weakneſs in the veſſels that pour their fluids into that cavity; their weakneſs implies an enlargement of their diameters, and that enlargement, an encreaſe of the quantity of fluids thrown in, without any encreaſed impulſe behind. Hence ariſes a colluvies of matter, which the encreaſed periſtaltic motion is not able to throw off. The colluvies is encreaſed by the uſe of vegetable matter and fruit taken into the ſtomach, and depoſiting their feculent parts on the inteſtines. The indication of cure, is not to encreaſe either the general, or particular part of the cauſe, by purging, and the uſe of other debilitating powers, but to ſtrengthen the whole living ſyſtem; and eſpecially the inteſtinal canal, by the whole round of ſtimulant remedies, diffuſible or durable. To this treatment the tabes and atrophia will yield in a few days, or even hours; the worms in as many weeks. And they are all increaſed by the common plan of cure, as univerſal experience has proved to a demonſtration.

(o) Endleſs have been the bleedings and other evacuations employed to remove thoſe painful affections, and as diſmal has been the effect of that method of cure. The univerſal rule, ſuggeſted by the principles, and confirmed

by the practice of this new doctrine, is to invigorate the whole system, and apply any diffusible stimulus, particularly laudanum, to the pained parts. By that practice I know not one cure, of some hundreds, that either I or my pupils have performed, that has failed. The gout will sometimes make its attack in this way. But whatever be the particular force of disease, with which they may seem to have any connection, the only diagnosis, here necessary is to be sure that the true peripneumony is not the morbid state. When that is out of the question and whether the painful complaint be denominated bastard peripneumony or not, the only indication of cure is what has been just now mentioned. A young lady with whom I am nearly and tenderly connected, has been often affected with an acute pain in her right side, mostly fixed and solitary sometimes accompanied with a certain numbness and senselessness in her extremeties, commonly with loss of appetite, and some degree of head-ache. The effectual method of cure is to apply rags dipped in laudanum, volatile alkali, or æther, and renew them as often as they become dry, and to support her internally with durable and diffusible stimuli, proportioned in kind and quantity to the exigence of the case. This method of cure of a morbid affection, that upon the contrary debilitating evacuant plan would be readily and quickly converted into an incurable asthenic disease, has always proved infallible in removing the attacks, which never after return but when she has enfeebled herself by keeping the house too much, and neglecting air, exercise, and the use of the other diffusible stimuli. Friction used over all the affected parts, is also found useful in supporting the stimulant operation of all the other remedies. There is in the fens of Lincoln, where an eminent physician, and follower of this doctrine, practises, a disease called a bastard peripneumony; in which, though it had always baffled all the efforts of the common evacuant practice, he never lost a patient by exercising the contrary one.

(P) This I have often experienced in the case of the gout. Before dinner, when my stomach was empty, I have limped in going abroad to dine. But after having made that meal heartily, and taken a glass or two of wine, have returned with a perfect firm step, and free from all feeling of pain and uneasiness.

(Q) The true reason for all this, and innumerable errors in the practice, is that the leaders in the profession never understood any diathesis but a sthenic one, or any indication of cure but an asthenic, to which they gave the name of an antiphlogistic, as they did that of phlogistic to the diathesis. By his reformation of the erroneous plan of cure, that his cotemporaries, the Alexipharmacs, had introduced in the small-pox, and the few other sthenic diseases that ever occur in all the rest of the general diseases, Dr. Sydenham's authority confirmed the error. He left also the measles as he had found that disease, and all other general diseases, which are much more in frequency than 97 out of the 100, or 97 to 3 of the sthenic. Great men had need to be cautious, as the least inadvertency in them, not to say essential mistakes, never fails to lead their followers, who are commonly servile imitators, and implicit believers, into capital error. If ever they attempt any thing of themselves, it is commonly to raise a crazy superstructure upon a false foundation, it is commonly to refine upon error ad infinitum.

(R) Till this doctrine appeared, it was impossible to erase from the minds of physicians an impression that had been deeply made there, that, nothing but the only inflamation, that they were acquainted with, could be the cause of such pain and torture, as is described in the text. I have more than once experienced the whole concourse, here mentioned, and have always found them to yield to the most stimulant method of cure, that I could contrive. I once labored under this modification of asthenic disease for no less than ten days, and was always able to overcome it in two hours, and procure an interval of complete ease and relief for the rest of the day. The

remedies employed were the whole round of diffuſible ſtimuli, as opiates in all their forms, camphor, muſk, volatile alkali, and æther, &c. By theſe the functions for the time were completely reſtored. But their ſtimulant effect was no ſooner perfectly gone off, that is, after the interpoſition of a long ſleep, through the night, than the ſymptoms returned with a violence little ſhort of what it had been the day before. This was proof poſitive, that their nature was aſthenic, or conſiſting in debility, ſince they yielded to ſtimulant remedies; and that the debility was exquiſitely great, ſince it required ſo high a degree of ſtimulant operation to remove it. While that is the undoubted fact, there is a nicety with reſpect to proportion, to be attended to in this caſe. It is a rule, that the degree of curative means, whether in the cure of ſthenic or aſthenic diſeaſes, ſhould be accommodated to the degree of the diſeaſed ſtate, or degree of the cauſe. If too little of the curative means is employed, a proportional part of the diſeaſe will remain: if too much, the diſeaſe will be more than removed, that is, another ſtate which may be morbid in another extreme, may take place. Too much was once employed in this affection, and the effect was, that the diſeaſe was not eradicated till the tenth day of its courſe from the beginning.

(s) The rule here is, if indirect debility be the cauſe to begin with a high degree of ſtimulant cure, and gradually reduce it to the ordinary degree that is ſufficient for the healthy ſtate. And the caution is to be ſure of this gradual reduction, otherwiſe the indirect debility will be liable to return the moment the effect of the ſtimuli is gone off. By an attention of this kind, a diſeaſe depending upon indirect debility may be cured in the ſixth part of the time, that would be taken up by the cure, when the remedies are every day carried beyond the due bound. For example, if the indirect debility be in the table the effect of an application of 71 degrees of exciting power inſtead of 40, that is to ſay, the excitement is worn down to 9 inſtead of being up at 40;

it is evident, that an application of 71 degrees by way of remedies, will leave the diſeaſe where it was. Suppoſe only 65 degrees of ſtimulant power adminiſtered; the excitement will fall to 66, and the waſted excitability riſe to 15. Next day let only a degree of exciting power as 60 be applied; then the degree of excitement will be that number, and that of excitability 20. Five degrees of exciting power ſtill-leſs will reduce the morbid excitement to 55, and raiſe the excitability to 25. And ſo on may the matter go, till the excitability is raiſed to 40, and the excitement reduced to the ſame number. But, if the reduction be much leſs by the day, the cure will be proportionally ſlower. Nay ſuch an error may be committed as to encreaſe the diſeaſe inſtead of reducing it, which will happen, as often as a degree of ſtimulant power is applied, which is more than equivalent to that which produced the diſeaſe. All this attention and caution is neceſſary in the cure of aſthenic diſeaſes of indirect debility; while that of thoſe of direct debility is eaſy and ſimple, to wit, to give the ſtimulants in ſmall proportion, and often repeated, till the diſeaſe is removed, unleſs, which may happen, you can gueſs the proportion, which may ſuffice to remove the diſeaſe at once, or, at leaſt, twice.

(τ) A young lady afflicted with theſe ſymptoms, was, in the courſe of a month bleeded thirty times, always with a temporary relief, but with a return of the diſeaſe more violent than ever. She was then put upon a ſtimulant plan, and in leſs than a month reſtored to her perfect health. That was among the moſt early cures taken from this doctrine.

(υ) No diſeaſes are more oppoſite to each other, than high ſthenic diſeaſes, ſuch as the common inflammatory fever, or peripneumony, and proper fevers; the former, in the table, ſtanding at the head of the ſcale of encreaſed excitement, and the latter at the bottom of the ſcale of diminiſhed excitement. And the ſame method for the cure of both has been purſued, to wit, the evacuant, de-

bilitating. If, in peripneumony, large quantities of blood were taken at a time, the difference has been made up in the cure of fevers, by repeating it the oftener; while all the other evacuations were carried on with the same profusion in both. When they talked of the respective causes of those diseases, phlogistic diathesis was the word for the high sthenic diseases, and irritation for the high asthenic. But these were words only, while in fact the method of treatment of both was the same, at least in kind, and scarcely different in degree. To whatever part of any system of physic we turn our attention, we constantly see one mode of practice runing thro' the whole, and that too, notwithstanding the supposed great number of diseases, very limited. It turns all upon bleeding, other evacuations, starving, and some other trifling directions, under the title of regimen. It was all antiphlogistic, to use their own language; and whatever other language they held, the nature of the disease, if we are to judge from their treatment, was phlogistic.

(x) The confluent small-pox, as depending upon a very high degree of debility, is ranked among the high fevers in the after part of this work, because the scale is not regulated by the appellations given by physicians, or by any of their erroneous distinctions, but by strict regard to the degree of excitement. And for the same reason is the violent cholera marked nearly in the same place; because the debility, taking place in it, is nearly equal in degree to the most sinking febrile debility; in a word, because the same degree of debilitating power produces, and the same degree of stimulant operation removes, the diseases so assorted.

(y) See above, par. 168. and compare it with this. The meaning in both is, that, as certain parts of the system have more excitability than others (51) so those parts which in the diseased state are more affected than any other, that is, are either more excited, as in sthenic inflammation, or less, as in asthenic, than any other, keep up the same proportion of disparity before the arrival of

the diſeaſe, before the appearance of any of the ſymptoms, and while, as yet, nothing but mere prediſpoſition has taken place. The truth of this propoſition is eſtabliſhed by that of another ſo comprehenſive as to extend to the whole ſubject of life; which is, that over the whole living creation, throughout the univerſe, health, prediſpoſition to diſeaſe, and diſeaſe itſelf, are the ſame ſtate, only differing in degree, (vid. par. 23 and 65.) Health, therefore, is alſo comprehended under this ſame propoſition.

(z) A local inflammation is that which is produced by a wounding inſtrument, when a perſon, previous to ſuch an accident, is in health, and continues to be ſo after the accident. Or it may ſtill be local, though a perſon is in bad health when it happens, but ſo however, as that the general ſtate of the health is underſtood to have no concern in it. A wound in a very tender part may induce diſorder over the general ſyſtem; but ſtill all the ſymptoms can be traced to the wound, and not to the ordinary cauſe of general diſeaſe.

(2A) A typhus, or low-nervous fever, is a diſeaſe of the higheſt debility, next to the plague, and often not inferior to that diſeaſe in malignity, and, therefore, to be arranged in the ſcale next to that diſeaſe, which ſtands at the bottom of diminiſhed excitement. Phyſicians have conſtantly confounded the different degrees of this diſeaſe with ſthenic ones, affecting the pulſe. But they are diametrically oppoſite, as ſhall be pointed out when we come to the proper place for ſuch diſtinctions.

(2B) A profeſſor, in his lectures, gives a caſe of a typhus fever, where, upon account of delirium, and ſome other ſymptoms, thought to announce an inflammation in or near the brain, the patient was ſo freely bleeded, that the ſtate of the pulſe (which is ſaid to have been, in his words, "a pulſus vacivus, if ever there was ſuch a pulſe,") forbid any further bleeding. The patient was given up, and the extraordinary phyſicians withdrew, leaving the ordinary one of the family, only, about him,

This gentleman, from ſome impreſſion on his mind, began to think that another bleeding might be tried with advantage. He bleeded him, and the patient recovered. This is an account of a caſe that I pretend not to underſtand, and I believe it will be no leſs puzzling to my readers, and the more puzzling, the more ſenſe they have. It is, however, bro't as an example, that in a ſeeming expiring debility, the higheſt degree of aſthenic diatheſis, there may be an univerſal ſthenic debility, that requires bleeding. I have mentioned it, not for the ſake of information, but of caution, to the reader. Any perſon may ſee the frivolity and lightneſs of the theories of our profeſſion, but it requires knowlege and diſcernment to guard againſt the ſeduction of facts.

(2 c) Theſe definitions apply to all the four inflammations (par. 205.) with reſpect to the ſtate of the inflamed veſſels; their differences only depending upon the general ſtate of all the reſt of the veſſels, which in the local, may be quite the healthy ſtate of theſe, while, in ſthenic general inflammation, it is the ſthenic, and in this, the aſthenic, diatheſis, that are conjoined with the inflammatory ſtate. Further, as their cauſe is influenced by theſe general circumſtances, ſo alſo is their cure; the ſthenic and aſthenic general inflammations requiring the remedies of the diatheſis to which they reſpectively belong; and the local, only the remedies ſuited to heal up the part.

(2 d) The diſeaſe here mentioned, is neither deſcribed, nor ſeemingly underſtood, in medical books and lectures. In this work it is taken, as every thing elſe is, from nature, at the bed-ſide of the ſick, and deſerves ſo much the more attention, that, though it is a diſeaſe of the utmoſt malignity, it ſeems to have been altogether overlooked. Its appearances are mild at firſt, but, without both ſkill and attention, will end fatally.

(2 z) All this refers to a lady in Scotland, of ſingular worth and amiability, who died, but not in conſequence of the plan of cure, which this doctrine enjoins, having been followed, eſpecially at the period of the diſeaſe when it was moſt wanted.

(2F) Treated in the way here and formerly (vid. pref.) mentioned, the moſt violent degree of the diſeaſe always gave way in a few days, and milder caſes in as many hours. I never found a ſingle caſe baffle me but one, where the patient, who, with his valet, had quacked himſelf into the gout, as well as other complaints, and particularly an habitual coſtiveneſs, by forcing every paſſage by the belly, for the ſpace of ſeventeen years. I was diſmiſſed, without having my directions complied with; and without being allowed to accommodate the remedies to his practice of purging and throwing up injections, ſo as to endeavor, at leaſt, to prevent or mitigate their hurtful effect. For it muſt be obſerved here, that, as every directly debilitating power is an exciting hurtful means of bringing on any aſthenic diſeaſe, ſo the effect of every evacuation, and particularly that by the belly, is well known to be a certain means of bringing on a fit of the gout. Among many other means of inducing that diſeaſe, a ſingle doſe of Glauber's ſalt, though that be but a mild cathartic, will bring a fit of the gout on me at any time.

(2G) Yet in their ſyſtems of noſology, which are labored volumes of diſtinctions without differences, begun, within this half century, to be ſuperadded to the former modes of ſyſtematizing, which, without this new one, had ſufficiently diſgraced the art, and needed no more than the moſt abſurd of the whole, or that the miſled fancy of men could invent, to complete, in all its copartments, the vaſt fabric of error, and particularly in the laſt of theſe, that publiſhed in Edinburgh, the putrid ſore throat, as deſcribed (above 211) was left out, and the gangrenous, which is that juſt now alluded to in the text, conjoined with the common ſthenic ſore throat, though diametrically in its nature oppoſite to it.

(2H) There cannot be a more exquiſite ſtimulus in living nature, than that univerſal cake of inflamed puſtles, which covers the whole ſurface in a crowded ſmall-pox. It is no wonder then, that, when it is ſuperadded to the ordinary ſtimulant hurtful powers, to

which this diſeaſe firſt owes it violence, and afterwards, that very eruption, the united effect of both ſhould ſoon paſs the whole range of exceſſive ſtimulus, and quickly run into the ſtate of indirect debility (ſee par. 199). Such is the nature and progreſs of the ſmall-pox, in paſſing from the ſthenic into the aſthenic ſtate, that is, from one diſeaſe into another of a moſt oppoſite nature.

(21) The cure of the diſtinct ſmall-pox is the debilitating; that of the confluent, the ſtimulant plan. The cauſe of the former is ſthenic diatheſis, that of the latter the aſthenic, occaſioned by indirect debility; which is a diſtinction unattended to in general, and with very bad effect upon the practice. For, when the confluent ſmall-pox is eſtabliſhed, the puſtles flat, and ſigns of mortification coming on, the covering the patient with a ſingle ſheet is as common as in the diſtinct ſmall-pox.

(2K) A young child of mine, who had been long weakly, and often, in conſequence of that, ſnatched from the jaws of death by being properly ſupported, according to the principles of the new doctrine, had been prepared to receive the ſmall-pox, and inoculated. After the eruption was completed, and it was now certain it would be exceedingly moderate, one morning he was brought before me, covered over with the appearance of the eruption deſcribed in the text.

(2L) It is certain, that the ſafe conduct of the ſmall-pox depends upon debilitating the habit which is to receive the infection; and it is as little doubtful that we may carry that operation a great way, by lowering the diet, purging the belly, and applying intenſe cold to the ſurface, and, by all means, guarding againſt all alternation with heat. By this means the phlogiſtic diatheſis, chiefly ariſing from the ordinary powers, and in part, as it would ſeem, from the contagious matter, is prevented or removed; the great flow of the fluids to the ſurface checked; and the diameters of the perſpiratory, as well as of all the other veſſels, kept open and patulous. But it had been long a queſtion with me, whether this

debilitating operation might not be carried too far. If it be certain, as it is, that extreme debility ſuppreſſes perſpiration, ſurely the proceſs puſhed near to that degree muſt endanger that event. This phænomenon happening to my child, ſolved the doubt that I had not yet decided, and it ſeemed to be in perfect conformity to the principles of this doctrine, to underſtand, that, as this child had been formerly weak, and perhaps ſtill retained ſome degree of that ſtate, the further weakening him by the preparatory management, for the better regulating this diſeaſe, had been carried too far. A ſurgeon happened to be by when the child was under examination; I aſked him if he had ever ſeen ſuch a caſe, for I had neither ſeen, nor heard, nor read, any thing like it. His anſwer was, that he had ſeen three, and all of them fatal. I knew how that would happen, that is, that they would continue the debilitating practice they had been following. On the contrary, I ordered the child ſpirit and water, and a little of an opiate, then reſtored the meals that had been taken from him, and brought him about to his perfect health (for the ſmall-pox gave no trouble) in twelve or ſixteen hours.

(2 M) Pyrexia is the word for ſthenic diſeaſes affecting the pulſe, called febrile, or fevers, very improperly, while the term fever is reſerved for the high aſthenic diſeaſes that have been confounded with the pyrexiæ.

(2 N) That heat takes place in prediſpoſition, is a matter of daily obſervation. Thus, when a perſon has no other ſymptom of diſeaſe, it is often remarked, ſometimes by himſelf, ſometimes by another, who may have happened to feel his hands, that he is certainly not quite well as his hands are hot. When this heat happens, either in the hands or feet, without any cauſe to account for it conſiſtently with health, it is a ſure prelude of diſeaſe, that is, a ſure mark of conſiderable prediſpoſition to diſeaſe; and the kind of diſeaſe, of which it is the harbinger, is oftener aſthenic than ſthenic.

(2 O) When the excitement is at 40, all the functions are performed in the beſt and completeſt manner. Above

that there is more force through all the ſteps of prediſpoſition, but with leſs durability and ſteadineſs; which is exemplified by the compariſon of hard laborers, who at the ſame time are well ſupported, and gentlemen, who live well, without uſing a proportionable degree of labour or exerciſe to prevent a luxuriant ſtate of vigour. When two ſuch perſons are ſubjected to a comparative trial of their vigour in any exertion, the former will be found to go through the exertion with more ſteadineſs, and to hold out longer and better than the other; even though his firſt efforts may have been inferior in force to thoſe of his antagoniſt. And the reaſon is evident; a moderate and proper degree of vigour, will bear an addition of ſtimulant operation longer than a higher degree of it approaching to morbid ſtate; becauſe the diſtance of the excitement from indirect debility, which puts an end to excitement, is greater in the former than in the latter caſe. The difference in the well-ſupported labourer is 30 before he can reach an increaſe that leads up to 70: whereas that of the gentleman is perhaps not more than 20. The exertion in the ſtruggle adds ſtimulus; which will be better borne by him who has leaſt and yet enough, than by him who has more, but of a ſuperfluous degree, and more liable to run into the extreme of a ceſſation of excitement. The effect of the exertion in the labourer will be to carry him ſoon up, by its ſtimulant operation, to the degree of excitement where the gentleman began, ſuppoſe that to be 50, and perhaps by and by to 60. But the ſame ſtimulus of exertion in the gentleman will have the effect of firſt mounting up to 60, and by and by to 70, where the excitement begins to ceaſe.

(2 P) Who would adminiſter wine, opium, and the other high ſtimuli, whether durable or diffuſible, to cure the inability to perform motion in either peripneumony or that rheumatiſm which is highly ſthenic? Or rather who would think of any other means of removing that ſymptom, than the debiliating powers, ſo effectual in removing all the reſt, and not leſs ſo in removing it?

(20) Tetanus is a violent ſpaſmodic motion of the muſcles of the head, neck, and upper part of the thorax, whereby the head is kept immoveable in the ſame poſition, in which it had been found upon the coming on of the ſpaſm. The teeth alſo, from the affection occupying the muſcles of the under jaw, are kept immoveably locked, and hence the name of lock-jaw. Beſides the affection of the muſcles, that has been mentioned, there is ſcarce one muſcle in the whole body, free from one degree or other of the affection. Further, there is a moſt painful feeling over all, but eſpecially in the parts moſt affected. This diſeaſe ſometimes happens in cold countries, ſuch as this, in conſequence of a wound in any ſenſible part, or when ſmall bones, as the oſſa ſpangioſa, are bruiſed crashed and daſhed into the ſofter parts. The part of it called lock jaw, is frequently a ſymptom in fevers. But the diſeaſe is more frequent in warmer countries than this, as in the ſouth of Europe, where the exceſs of heat is liable to run into indirect debility. It is moſt frequent of all in the Torrid Zone, where indirect debility is the moſt conſtant attendant on heat. As a violent and permanent contraction of the muſcles was the moſt ſtriking ſymptom of it, and ſyſtematic phyſicians ſuppoſed every ſuch contraction the effect of an encreaſe of excitement, or to uſe their own words, an encreaſed influx of the nervous fluid or nervous power into the parts affected; conſequently their indication of cure was to relax the rigid contracted parts. Hence no bounds were ſet to their emolient relaxing meaſures. Such were bleeding, other evacuations, and warm bathing. But experience ſoon taught, that all theſe encreaſed inſtead of removing the diſeaſe. Of late opium, becauſe it was thought a ſedative, was tried. The trial ſucceeded. But immenſe quantities of that medicine were found neceſſary to effect the complete cure. Laudanum uſed to be thrown in without meaſure, or any other rule, but to give it on till the diſeaſe ceaſed.

(2 R) A certain gentleman in his desk, speaking of the method of curing epilepsy or the falling sickness, and recommending, among other evacuant and otherwise debilitating means, small but frequently repeated bleedings, unguardedly contradicts himself in his very next sentence. "However," says he, "we regular practition-"ers are liable to be too cautious and even timid some-"times. For I have known a bold practitioner in the "country, who cured an epilepsy by very profuse bleed-"ing. In a few months after the patient died of an uni-"versal dropsy, but the epilepsy never returned." I would ask this gentleman, what sort of a cure that was, that converted a disease, which may come and go for many years, nay even for a long life time, into one that, in a very short time, proved fatal? What reason would a podagric have to thank any one who should convert the gout in him upon any violent attack, into a fatal dropsy. That sort of treatment is not curing a disease but encreasing it, and even that to death. The convulsive symptoms of an asthenic may pass away; but the asthenic remains. You may cease to call it epilepsy; but dropsy still shows that the cause of the disease remains, nay is prodigiously encreased. This fatal mistake of an encrease of the disease upon the whole, for the cure of an inferior degree of it, proceeds from an improper use of directly debilitating powers in place of the proper stimulant ones. But there are cases, where the last, by being carried too far, produce the same fatal mistake. Thus in peripneumony, to get rid of the hard pulse, and the acute pungent pain (see above, 173. and the notes), the bleedings are carried so far as to produce a fatal hydrothorax or dropsy of the chest.

(2 S) This is perhaps the first philosophical performance in which care has been taken to keep clear of abstract causes. The prosecution of them has contaminated almost every department of knowledge that had been treated scientifically. See the introduction to my observations on the several erroneous systems of physic, &c. where it

will appear, that even the great Sir Isaac Newton did not altogether avoid this error, especially in the questions he put, however modestly, with respect to an all-pervading æther, the wanton and aerial theoretical fabrics that have been raised upon which, have, in spite of Lord Bacons's better directions, disgraced the philosophy of the middle of the eighteenth century. Compare what you will find in that book with the III. Chap. paragraph 18. in this.

(2 T) I know not what the abstract state of muscular fibres is, either when they contract and relax with rapid, violent, and morbid force, or when they remain immoveably fixed in one forcible permanent contraction: But I know, that nothing but debilitating powers produce them, and nothing but invigorating ones remove them, which is enough for me, who mean to prove myself a sure and cautious observer of the phænomenon of nature; and in my practice as a physician, to avoid, after the example of many others, groping in the dark, under the guidance of abstract reasoning, but to view every subject of observation, by nature's clearest light.

(2 U) In the spasmodic and convulsive state of the function of motion, when compared with the vigor of the same function in its healthy state, who would say that the former is greater than the latter? The healthy and vigorous state of motion consists not in the degree of contraction, but, with a certain degree of that, in the well proportioned alternation between contraction and relaxation; of which we have proof indisputable in this mode of motion being best performed in that middle state of vigor, that intervenes betwixt the extreme of the healthy, or moderately encreased vigor, and the other extreme of direct and indirect debility. The encrease of vigor and excitement keep pace to a certain extent, even through some degrees of morbid excess of the latter: but a period, and that short of indirect debility, arrives, as in peripneumony, where the excitement is encreased beyond the healthy state, and must be re-

duced in order to reſtore the due healthy vigor. There are other caſes, as that of mania, of ſthenic inſanity, where the conjoined encreaſe of vigor and excitement will ſtill go further. But in every caſe, the encreaſe of vigor, ſtill judging of it from its effects in the healthy ſtate, ceaſes before that of excitement; and, perhaps, we may make a ſtep towards finding the boundary, by obſerving, that the greater the ſum total of exceſs of exciting power is, the ſooner does the point arrive, beyond which the vigor does not proceed. In peripneumony it ceaſes at a certain period of the diſeaſe, where the ſalutary effect of bleeding and other debilitating means ſhows that the encreaſe of excitement is ſtill going on. But here the ſum total of excitement, conſidering the ſtate of all the other functions, is greater than in mania, where the function chiefly encreaſed in vigor, is only that of voluntary motion, while all the functions of involuntary motion are very little affected. From this inveſtigation we can clearly diſcern, that every encreaſe of excitement leads to a morbid encreaſe of vigor, and that there is, ſomewhere or other, a point in the ſcale of encreaſing excitement, and below the point of indirect debility, here the vigor is no further encreaſed; and this inference ariſes with reſpect to the practice, that we ſhould be very obſervant of both facts, as pointing out a very material diſtinction in the indications of cure; that in indirect debility being to ſtimulate, while that at the ceſſation of vigor is to continue to debilitate, till the ſum total of exceſſive vigor be reduced to the proper and healthy. The inability to the performance of motion in peripneumony, is an inſtance of the latter; that of the converſion of the ſame diſeaſe from exceſs of debilitating cure, is an inſtance of the former.

(x) Indeed they have talked ſo confidently of it, that they may more juſtly be arraigned of going upon a petitio principii, or that error in logic, where a point, chiefly required to be proved, is taken for granted, and made a ground work of other reaſoning.

(2 y) From a microscopical observation of Leuenhoek, where he once thought he saw a hollow cavity in the nerves (but could never see it again, nor any body after him, though that instrument has been infinitely improved since this time) the celebrated Dr. Boerhaave took his noted intertexture of vessels, making the whole mass of living bodies consist of such. The functions were, at that time, supposed to depend upon an inelastic fluid secreted in the brain, and distributed in the cavities of the nerves, to every part of the system. Much reasoning has been employed in refutation of that beautiful, though fanciful system. But the only reason that should have been employed against it, was to deny the truth of the hypothesis upon which it was built; and that negative argument might have been supported by this positive one, that it is now known, that the nerves are solid substances, and not hollow tubes. The next theory that was taken up, was, that though the nerves were solid substances, yet they were porous, and, therefore fitted to receive into their pores an elastic fluid, like the electrical, the magnetical, and, like, or rather a modification of, the supposed æther of Newton; that this inelastic fluid also floated upon the surface of the nerves, and formed an atmosphere around them, and by it all the functions of living systems, even those of the most perfect, the human, were explained. For a full account of it, see the Preface to the Observations on the Principles of the old Systems of Physic, from page 19 to page 58. Among other applications of the æther, under the denomination now of nervous power, one was to make its influx into the muscular fibres affected with spasm, or convulsion, the cause of these morbid motions; as its influx, as an inelastic fluid, into the hollow cavities of the nerves, had been before supposed to afford the same explanation.

(2 z) That was their word, after an ingenious philosopher in Edinburgh, whose dissertation upon this subject is given at full length in the place of the Observation referred to, had ridiculed them out of their æther,

(3 A) It is here to be obſerved, that the change of the theory here has led into a vagueneſs of terms. It might have been proper, that the notion of either an inelaſtic, or elaſtic, fluid been retained, to have called the ſuppoſed cauſe of the function a fluid, and to have talked of its influx as ſuch; but now that we know nothing about it, or whether it has any exiſtence at all, to call it a power, and yet to talk of its influx or efflux, its flowing in or out, is ſurely vague and incoherent.

(3 B) In one fit of the gout, when its paroxyſms were allowed to return, in conſequence of a diſreliſh that I had taken for a certain ſtimulus of the drink kind, and, therefore, all at once abſtaining from ſtimulus, I fell into a ſtate of perfect inaction, and, though without feeling of pain or uneaſineſs, ſo devoid of muſcular force, or capability of producing any motion or exertion, that even the ſlight degree of muſcular contraction neceſſary to ſupport my poſture in bed failed. In that ſtate, when my eyes were glazed, the whole dangerous paroxyſm was removed by changing my drink into a more agreeable one; any ſtrong drink would have anſwered, and opium beſt of all.

(3 C) Theſe are the ſeveral hemorrhages of ſyſtematic and noſological authors. They have hitherto been ſuppoſed to depend upon ſthenic, what they call phlogiſtic diatheſis, and the particular diſcharge to be ſupported by an activity, an effort, what they call a molimen hæmorrhagicum, in the veſſels pouring out the blood and the parts of the veſſels immediately behind. Their continuance was accounted for upon the ſuppoſition of there being an over-proportion of blood in the ſyſtem, or what is commonly called a plethora; but they are all aſthenic diſeaſes, depending upon relaxation and atony both of all the reſt of the vaſcular ſyſtem, and particularly of the bleeding veſſels. (See above, 134. z) and, inſtead of a plethora, there is a penury of blood, all which is proved by the phenomena during the prediſpoſition, when little food is taken in, and leſs, upon ac-

count of the weakneſs of the digeſtive organs, is digeſted; theſe circumſtances are encreaſed after the arrival of the diſeaſe. The pulſe withal is weak, ſmall, and frequent; and the patient puny and emaciated. The diſeaſe is encreaſed by bleeding and other evacuations, and both relieved and removed by wine, ſpirits, and diffuſible ſtimuli; a method of cure which, till within theſe fifteen years, would have ſtartled all the phyſicians upon earth.

(3 D) No idea in medical writings ſeems ever to have been formed of the body as a whole. On the contrary, nothing has been more common, than to talk of the functions as operating in a great meaſure, each from a cauſe exiſting within itſelf, or but ſlightly and arbitrarily connected with ſome other. This falſe notion was carried to its moſt ridiculous pitch in the doctrine of ſympathy, and not rendered much more decent, after the word conſent of parts came to be ſubſtituted in its place. Thus, the common expreſſions were the ſympathy or conſent of the ſtomach with the head, of the ſtomach with the face, of the ſtomach with the external ſurface, of the latter with the internal, and particularly with the inteſtines, of the excretions with each other, of the feet with the kidneys, and ſo forth. It was never dreamed, that there was one over-ruling principle throughout, upon which all the functions depended. The ſtomach, for inſtance, cannot be ſtrong while the perſpiratory organs are weak, and therefore take in and digeſt too much while they cannot throw out their fluid.

(3 E) It has been proved in the IVth chapter, Part I. that the excitability is one uniform, undivided property over all, and that, in whatever part of its ſeat it is acted upon, that action extends inſtantaneouſly over all; that though ſome parts, differently upon different occaſions, may be more acted upon than any other, equal in ſize and nervous importance, that that is only in ſo inſignificant a proportion as to have no effect in conſtituting an inequality of action in the ſyſtem. Again the force of

the powers that act is a given force, being either weak, in due proportion, or excessive, or weak again from ultimate excess. Their effect then upon the system, which receives their action in every degree in which it is communicated, and that with the utmost exactness, must always be the same, that is, either direct debility, health, sthenic diathesis, or indirect debility. To apply this to the present case, the stomach cannot be healthy, or under a predisposition to sthenic state, and thereby take in and digest, with the help of the other digestive organs, too much of the matter, from which blood is made; while the perspiratory vessels are too weak to perform their function of throwing off their excrementitious matter. On the contrary, the state of the stomach must run through the whole living system. If it can perform its functions properly, or in whatever degree it performs it, all the other organs of digestion, the upper part of the intestines, biliary vessels, the lacteals, the veins betwixt their common trunk and the heart, the heart through all its cavities, the whole arterial system, and the colourless terminations of that system, whether exhalent or glandular, and the excretory orifices of these, the inhalants, and all the venous blood returned by the arteries; lastly, all the excretories upon the external and internal surface, all these will perform their functions in the same degree as the stomach, whether properly or imperfectly. To promote the most perfect health all the exciting powers must be applied, each in its due proportion. And the want of any one or more, may make some odds, which is insignificant to this point. If a person has not had his usual exercise, a cheerful glass will prepare him for sleep. For want of the same exercise the appetite will be impaired, but so is the function of perspiration. Too much exercise under heat will impair the appetite, but it also impairs the perspiration after a person gets into a state of rest. In short, any slight inequality from want of any one or more stimuli can be made up by others. See above, par. 41.

(3 F) Opium, though much used in the cure of certain symptoms of diseases, was never understood by those physicians, who, in books and lectures assumed to themselves the province of directing the profession of physic. Every property they assigned to it was the reverse of the truth. Instead of allowing it to be the strongest stimulant in nature, they made it a sedative; and, though they found great difficulty in finding a single sedative more, to help to make out their catalogue of a class of such bodies in nature, they were confident that it was one (see above, 229. and the notes.) Another property they ascribed to it was that of bringing on sleep; whereas, it is the most powerful body of all others in producing and keeping up the watching state (see above 30. 31.) They also assigned it the virtue of allaying pain, but there is a kind of pain, that it encreases, and besides that, aggravates every other symptom of the disease. They never could deny, that opium was exceeding improper in inflammatory diseases, that is, the several sthenic diseases with affection of a part, whether inflammatory or catarrhal. And wherever they found it of service in pain, they might have perceived, that such pain was different from what they called inflammatory, or our general sthenic pain. The truth is; it is not a paliater of pain, but a remover of its cause, as often as that depends upon debility, while it as certainly aggravates every other. The pains, that opium is calculated to remove, are all those, that depend upon general asthenic affection, as those of the gout, of chronic rheumatism, that of the gangrenous, as well as the putrid sore throat, all spasmodic and convulsive pains, all pains from pure debility, as in the legs, ankles, and soles, or in any part of the skin, nineteen head-aches out of twenty, which are in that proportion asthenic; the pain of any deep-seated sore or gun-shot wound, after every degree of sthenic diathesis is removed from the habit. It is an equal remedy against the asthenic inflammation, whether local or general, as preventing their tendency to mortification and sphacelus. Nay,

when these latter states have come on, it is a most powerful means of removing them, and of correcting the degeneracy; for the affecting of which the bark had so often failed. All this is the discovery of the author of the Elementa, though the credit of the last and smallest part of it, from their ignorance of the high merit of the whole, they have shewn a disposition to give another, a gentleman and eminent author in London. But a treatise on the gout, with a full account of all the virtues of opium, will soon be presented to the public, in which all this will be cleared up. Blessed as opium in all these cases is, it is equally bad in all sthenic ones.

(3 G) See paragraphs 117. 128. 134. and all the debilitating powers throughout the whole chapter; while all the stimulant ones in it will be found to be such as contribute according to their degree of stimulus towards the production of the morbid effect, which makes our present subject.

(3 H) Whenever his cough is cured he should stop; as the carrying the stimulus too far will endanger the return of the cough from a very opposite cause. The cough at first, suppose, to be from an excitement as 26; its cure to be brought about by an excitement at or above 40; the return to an excitement at or above 60, will bring on a sthenic cough.

(3 I) This mistake of symptoms, in consequence of judging of their interior nature, from the similarity or dissimilarity of their appearance, is the false idea, upon which the whole fabric of a department, lately introduced into the art of medicine, has been reared. It is to be observed, that symptoms the most similar to each other in their appearance, are, in reality, the most different; and those that have the least resemblance in their appearance, have the nearest affinity in their interior nature, and indeed are one and the same, with no other difference, but a difference of degree, and even that often very slight, sometimes next to none at all. The great variety of symptoms that distinguish the whole form of a sthenic dif-

eaſes, affords as many proofs of the truth of this propoſition, as the inſtances of diſſimilarity or difference in opinion are numerous. What is ſeemingly more oppoſite than diarrhœa and cholic, and typhomania and coma, than epilepſy and general dropſy, than the cold and hot fit of aguest, than ſpaſmodic and convulſive affections, compared with thoſe in which there is no fault in the motions either as to exceſs or regularity, than the ſeveral degrees of morbid diminution of menſtruation down to the actual ſuppreſſion, and the ſeveral degrees of the morbid encreaſe of that natural diſcharge, till their flow, at laſt, attains its ultimate exceſs, both in degree and duration? And, with reſpect to febrile and non-febrile diſeaſes, what is more ſimilar than a ſlight ſynocha, or inflammatory fever, and a typhus in the ſame degree, which, yet, are diametrically oppoſite, both in their cauſe and cure? What is more diſſimilar than the various phœnomena of fevers of the intermittent kind, through all their degrees of intermitting and remitting, and thoſe of the more continued kind? And yet they all ariſe from cauſes highly debilitating, and are effectually removed by remedies equal in their degree of ſtimulus. In one word, to ſhow the inſignificancy of the diſtinction of diſeaſes into febrile and non-febrile, and, when the degree of debility conſtituting the cauſe in both, is conſidered and compared; is there any reaſon for ſeparating the high dropſy, the high dyſentery, and ſinking cholera, from their place betwixt intermittent and remittent fevers and the moſt continued kind? Laſtly what two things can be liker one another, than a crowded, diſtinct, and confluent ſmall-pox, or than the common inflammatory ſore throat, and that which was lately deſcribed (ſee above, par. 211). Such have been the ideas that have guided the directors of the art of medicine in their inquiries into the natures, cauſes, and cures of diſeaſes. If botaniſts and natural hiſtorians, by all their artificial methods of arrangement, have made little progreſs in exploring the true nature of their ſubject, and on the contrary, with

ſcarce a ſingle exception, have confounded it; if it was ridiculous to unite into one genus a man, a monkey, and a bat, how much more abſurd was the attempt to arrange the mere qualities of matter in the ſame way. Yet upon this hopeful employment has John Bull expended vaſt ſums of money, while he left the moſt ſolid and important departments of ſcience neglected, and covered by the dirt among his feet. We have too little uſeful ſcience yet, it is time to improve our ſcanty ſtore (ſee the Introduction to Obſervations, &c.)

(3 K) I have experienced ſuch a caſe more than once, and have ſeen and treated it in great numbers. It is ſometimes a part of the concourſe of ſymptoms that form that aſthenic caſe of diſeaſe, which is commonly called fever. A gentleman, under or about the thirtieth year of his age, had been ten days in a typhus fever, occaſioned by extreme cold, ſucceeding to the debilitating effects left upon his habit by too great moderation in his diet, and, certainly, not a good choice of the different articles of it. To aid the debilitating effects ariſing from theſe, he had experienced all the extremes of heat and fatigue that fall to a ſoldier's lot, in very warm countries. He was, over and above, of a ſmall ſize, ſlender and emaciated. He had alſo, from his infancy, been affected with a ſhort cough, ſometimes dry, and ſometimes with a little expectoration. During the courſe of his cure, he had been more than once bleeded, though his diſeaſe had uſhered itſelf in by a great profuſion of bleeding which ſuddenly took him as he was on a journey, in a cold day, of about 44 miles, in a carriage. He was vomited, purged, bliſtered prodigiouſly, and cliſtered. The whole force of the old plan of cure was exhauſted upon him, and he ſo exhauſted by it, as to be given up for an incurable of two diſeaſes, a bad fever, and rotten lungs. His face was hippocratic, he had the dead rattle, and his cough and expectoration were aſſiduous. By the ſtimulant new plan of cure, he was put out of danger in ten days, and ſet upon his feet in as many more.

(3 L) A deſcription of this diſeaſe, in which the lungs are ſuppoſed to be affected with ulcers or tubercles, has been given in the note under 3 K. But as the ſubject is both as new and intereſting as any in this work, it may be proper to give a further illuſtration of it by the expoſition of another ſet of facts. Both in perſons liable to the gout, and other aſthenic diſeaſes, ſometimes of direct, and at other times of indirect debility, and eſpecially in thoſe who have been much expoſed to cold, without the debilitating effect of the cold, being overcome (vide par. 121) by an alternation with, or ſucceſſion of, heat, and in very many old people, eſpecially among the poorer ſort, who have been, and naturally are, much expoſed to various debilitating powers, there is often, eſpecially in winter, a very great cough and expectoration. This ſometimes goes to ſuch a height as to give ſuſpicion of the affection of the lungs juſt now ſpoken of. But the completeneſs of its cure, which when it ariſes from indirect debility, is effected by the uſe of animal food, avoiding vegetable, and fiſh, and by good wine, and diluted ſpirits, in moderate proportion at a time, but frequently repeated, avoiding claret and other French wines, and all beer-drink, unleſs perhaps a little warm porter in cold weather, and a very moderate uſe of diffuſible ſtimuli, keeping the feet and the body in general moderately warm; ſhows ſufficiently, that there had been no local affection in the lungs. When the debility of the diſeaſe is of the indirect kind, in which the cure is more difficult, there is, ſtill, as little reaſon to be apprehenſive of the pulmonary or any other local affection. For the cure of it alſo proves the contrary. In it, the means of cure are to change the forms of ſtimulus, and to proceed from the uſe of the ſtronger to that of the weaker, till at length the patient can do without much of the very ſtrong ones. (See above, par. 99, and thoſe that follow.) When the diſeaſe cannot be overcome in that way, the excitability muſt be underſtood to be worn out, and life come to its end; but ſtill, from general debility, not local diſeaſe.

For, if ever any local affection does appear, it is always the laſt effect, not the primary cauſe. In this way I loſt two gentlemen, after having been able to ſupport them for many weeks, when the prognoſis upon the common practice did not allow them as many hours. The cauſe of their indirect debility had been hard drinking. But even in thoſe, who die of a confirmed conſumption, there is not often reaſon for the ſuſpicion of tubercles in the lungs. Their bodies have been opened after death, and the lungs found quite ſound. And in the diſſections, where the tubercles have been found, ſtill they were only an effect.

CHAP. VII.

(A) This is completely illuſtrated through the whole firſt chapter of the ſecond part, from par. 111, to par. 166, inclusive. Nay, the propoſition is conſtantly alluded to through the whole that has yet been ſaid, and will be in what remains to be ſaid.

(B) To illuſtrate this, let us take the exciting powers one by one, and begin with wine. When a perſon is inſufficiently excited with reſpect to that ſtimulus, and riſes not, ſuppoſe, above 30 in his excitement, a glaſs carries him up 2, another 2 more, and ſo forth, till after five glaſſes, and their effect in carrying him up to 40, he finds himſelf well and vigorous in his functions. But, ſtill, we are not ſo flimſily made, as not to bear a little of what is either too much or too little. Suppoſe him then to take five glaſſes more, and conſequently, to be raiſed to 50, or 10 above the ſtandard. As his ſpirits, his intellectual, and all his other functions, were low, while his excitement remained below 40, ſo they are all proportionably exalted by the time that his excitement is elevated to 50. Let him ſtill go on, and his intellectual function will riſe ſtill higher; he will now diſplay the full extent of his genius; his paſſions and emotions, of whatever kind, will riſe in the ſame pro-

portion; he will, in one word, be an example of the effects of Alexander's feast. Suppose, to bring him to all this he has swallowed, besides those he had before, other five glasses. Let him go on, till he has taken five glasses more, and we shall see the effect: In the course of time, employed in taking these, he gradually falls off in his spirits, in his intellectual and in his corporeal functions; his tongue, his feet, his eyes, his memory, his judgment, all, fail him; he, at last, becomes drowsy, and then falls asleep. The same is the progress of excitement as it rises from labour or exercise through the day, whether of mind or body. The same is the effect of the stimulus of eating, especially nourishing stimulant things, and in great plenty. Before dinner, the occupations of the former part of the day, are not yet sufficient to prepare one for sleep; which, however, after a heavy dinner, will, unless the interference of some other stimulus prevent it, very readily happen to most people, especially to those, whose frailty, from age or any other cause, renders them more liable to be fatigued by the past operations of the day than others. The younger and more vigorous will be able to hold out to the end of the day; when they too after having undergone the degree of stimulus necessary to give that waste of excitability that disposes to sleep, will be overcome by it. The very flow of the blood in the vessels, and the exercise of the involuntary motions, that keep it up, tend at last to the same effect. The same thing applies to the motion constantly going on in the stomach and intestines, as well as the motions that occur in all the secretory and excretory small vessels. Light, stimulating the eyes, and sound, the ears, and the several substances that act upon the organs of the other three senses, all tend, by wasting the excitability, to wear down the excitement to that point in the scale where sleep commences. And the process, in every case, is, first a low, then a higher and higher, then the highest, vigour of all the functions; which, again, gradually falls till its termination is sleep. We have, therefore, after

viewing their effects singly, to suppose them, in one degree or in another, united, and sleep the finishing effect of their united operation.

(c) Coma, or an insuperable disposition to sleep, is most commonly owing to the want of most of the stimuli mentioned in the text, as that of food, of wine, at least in the ordinary practice of cure, of good animal spirits, of the power of thinking in a pleasant exciting train, of a due quantity of blood in the vessels, of pure open air, of corporeal exercise, and of the absence of certain stimuli, that otherwise irritate in the weakened state and produce watchfulness.

(d) Too much, or too long continued, sleep is hurtful, because it implies a suspension of that excitement to which proper health and due vigor is owing, it is, consequently, a state of direct debility. Too little sleep, or of too short duration, is of equal detriment, as implying a degree of excitability, not sufficiently accumulated to receive a sufficient impression from a renewal of the exciting powers. From the former arise most of the complaints of the rich and indolent; from the latter, many of the diseases of the poor and laborious. As the action of the exciting powers should be adapted to the strength, a little indulgence in sleep is the safest extreme to the weak, as in the case of children, and persons laboring under debility.

(e) When a boy, I valued myself much for enduring the fatigue of walking: About the fifteenth year of my age I walked, in a summer day, from Berwick on Tweed to Morpeth, which, with two miles wandering out of the high road, I found to be a journey of fifty miles. But I got not a wink of sleep the whole night, from the excess of the exertion; and the next day, so pained and enfeebled were all my joints, that it was with the utmost difficulty I made out the single stage from Morpeth to Newcastle, which was only a walk of fourteen miles. Some years after that, when I was now arrived at my full strength, and my joints perfectly knit, I walked and wandered in all sorts of ground, in roads, and out of

them, over smooth and plain, and heathy and mountainous tracts, from four o'clock P. M. to two o'clock, P. M. next day, with only an hour's rest, and one hearty meal at betwixt ten and eleven o'clock in the forenoon, when I was now within six miles of my destination. The hills over which I wandered in the course of the night are those called Lammer-muir, situated betwixt East Lothian, and the Mers: the places I travelled between in this rout, was Edinburgh and Duns, the place of the nativity of the celebrated schoolman and metaphysician, John Duns Scotus, and that of my grammar education. In this great exertion I was sustained by a great stimulus, high animal spirits, and love. At the end of my journey, and finding myself among my friends, and the object of my affection, I had vigour enough to dance with the latter. This time I slept well, and was perfectly recruited next day.

(F) Volumes have been filled with the doctrine of irritation as a cause of morbid state, and the indications of cure, and remedies to remove it, have been equally tedious and labored. In sthenic diseases, phlogistic diathesis, instead of plethora and vigor (for the belief in which two last there might have been some foundation in that form of diseases, see above from 131 to 134) has been the universal pathology; and bleeding, other evacuations, and cold, the universal idea, or, as it is called, indication of cure; and while they thought of no other method or means of cure for the asthenic form of diseases, the pathology, applied to them, was plethora with vigor, or with mobility in other cases, and, in the febrile irritation. By irritation they explained the startings of the tendons, the restlessness, the frequency of the pulse, the typhomania, or constant working, of so frequent occurrence, and so noted a symptom in those diseases. But as we have proved, that the reverse of plethora and vigor is the true state of the system in every disease of debility; so we assert with the same solidity of argument, and the same weight of proof, that irritation, as being considered, ei-

ther as the cauſe of morbid watchfulneſs, or of any other ſymptom, is nothing that requires either evacuant, or any other debilitating remedies, to remove it. It is merely a weakened ſtate of the ſyſtem, thrown into flutterings from the ſlighteſt exertion of the ordinary functions, as when a perſon falls into tremors from noiſe, or into a ſweat from walking a ſtep or two.

(G) A heavy dinner, exceſſive fatigue from either corporeal or mental labor, a high fit of paſſion, and heat, are each of them noted for giving a diſpoſition to ſleep; which is an effect ariſing from their high degree of ſtimulus, hurrying the excitement to that degree of waſte in which the ſleep-inviting point conſiſts; and it will the more readily take place, that no exciting power, by ſtill finding excitability to act upon, continues, therefore, to act, and prevent the ſleep.

(H) That happens in the phlegmaſia, where the effect, not only of the inflammatory pain, but of the whole diatheſis and of every other ſymptom, as well as that of pain, is to run up into indirect debility. The laſt part of debility, that uſhers in a fit of the gout, is commonly of the direct kind; but the effect of the continuance of the pain is often ſleep, the origin of which is indirect debility, its conſequence an encreaſe of the diſeaſe, and its remedy an interruption of the morbid ſleep for the purpoſe of adminiſtering ſuch diffuſible, and other ſtimuli, as have the effect of removing the debility which occaſions both the ſleep, and other ſymptoms of the diſeaſe.

(I) Let the point of indirect debility, in which ſleep conſiſts, be as 15 degrees in a particular ſcale, and the greater debility than that which either conſtitutes morbid ſleep or morbid watching, by 20 degrees or upwards in the caſe of its being indirect, or 10 or downward in the caſe of its being direct debility. It is evident, that, to bring on ſalutary watching on the one hand, or ſalutary ſleep on the other, or to convert both into ſalutary ſleep, if that be required by the circumſtances, the deficient degree of ſtimulus muſt be adminiſtered, that is 5 degrees

to bring up the excitement from 10 to 15 degrees, and as many for the purpose of renewing the worn-out excitement by means of a new exciting power which may still find a portion of excitability to act upon, or to remove certain stimuli, which, however slight and mild, are fatiguing and disturbing to the system in its weakened state. Accordingly in fever, when the patient, amidst every sort of directly debilitating powers, had, besides, wanted sleep for ten days, a small portion of an opiate given him every quarter of an hour, in 3 hours time laid him asleep, which, in spite of an urgent cough and profuse expectoration, lasted for 16 hours, and was followed by the most surprising relief. The continuance of this practice, with only an increase of the doses in proportion as the abundant excitability was gradually worn off, and alternating them with wine and beef soup, in ten days removed all danger. A child of three months had had no sound sleep for ten days, but cried night and day, from a complaint in his belly, which the ordinary practitioners would have called an obstruction in the mesenteric glands. A large dose of the tinctura thebaica, for the patient's age, was administered, which laid him in a profound sleep, that continued near 36 hours, and at once removed the disease. Numberless are the cases of a kind similar to this, where the morbid watchfulness was partly from direct, partly from indirect debility, that have been constantly removed by the same practice. A child of 7 years of age, in a fever of great direct debility, in consequence of a most rapid growth happening during the disease, which was not completely removed till near the end of seven weeks, after having been under the disease near a fortnight, was affected with the most constant disposition to sleep, so sound that no noise or shaking of his body could awaken him. The administration of the opiate repeated in small doses till the effect took place, kept him awake. Some time after, in the course of the same lingering disease, when he had not yet acquired any permanent strength, but was only better supported by the diffusible and other

ſtimuli, than he had been till I was called in, his predominant ſymptom came to be great watchfulneſs, which was partly the effect of a certain, though not a great degree of excitement that the tincture, and other cordial powers had given him. It, however, induced too great a degree of indirectly debilitating exertion for his ſtill very weak ſtate, and it therefore became neceſſary to give him an addition of excitement to bring him to the ſtate of ſalutary and recruiting ſleep, and thereby to ſuſpend the action of a number of exciting powers, however ſlight their operation was, which were too much for the enfeebled ſtate of his ſyſtem. In the caſes of children whoſe diſeaſes are almoſt all aſthenic, and in other diſeaſes of high debility, inſtances of ſuch effects of the diffuſible ſtimuli, (for more than one was employed upon this, as well as many other occaſions) are equally numerous and ſurprizing. In a very large practice I am ſure I never, in the very worſt caſes, loſt three patients.

(K) The notion of ſome powerful remedies, as opium, mercury, the Jeſuits' bark, &c. acting by an operation peculiar to each, and different from every other power in nature, was long prevalent in the ſchools of medicine. Thoſe they called *ſpecifics*; an idea, which, like many other of their vague conceptions, was altogether contrary to ſound philoſophy; ſince the more careful our enquiries into nature's operations are, the more and more reaſon have we to be convinced, that ſimplicity and uniformity pervade the whole phenomena of the univerſe. Accordingly, in the exciting powers that act upon the excitability of our bodies, we find only one action, that of ſtimulating, varying only in its degree to, take place in all animal as well as vegetable bodies, nay, in every thing that we know to poſſeſs life in the univerſe. We alſo find, to the ſame extent, only one property in living ſyſtems upon which it acts, that is, the excitability; and one effect produced by the mutual relation betwixt them in that reſpect, to wit, the excitement. Inſtead of the diſtracted notion of vortices, or atmoſpheres in rapid

motion, governing the motion of the planets, Sir Isaac Newton found the whole planetary systems of the universe governed in their motions by one single principle.

Instead of the infinite difference of habits and temperaments, I have found every individual precisely the same as every other. Whatever produces the gout in one, will produce it in another, prepared to receive its influence. And whatever cures it in any one, cures it also in every other; and so forth, with respect to every other disease. The deeper we explore the works of nature, the more will we be convinced of this wonderful simplicity, so that to a philosopher, all nature would appear the effect of one single instrument in the hand of the all-wise, all-powerful Creator.

(L) Physicians have had a more favourable idea of coma, or the sleeping state in fevers, than is merited. Instead of deserving to be looked upon as a positively good sign, ensuring a safe return of the disease, as they did; it was at best but a negative mark, implying that the slight stimuli acting upon the system in a state of high debility, and, therefore, by their operation, slight as it was, encreasing the direct debility, by the addition of the indirect to it, were kept off and hindered from producing that hurtful effect. Their authority in giving that judgment of it is overthrown by their extreme ignorance of its nature.

CHAP. VIII.

(A). The same order is followed here, that has all along been observed, to wit, that of the enumeration of the powers in par. 11. and 13. and that of the explanation of them, when viewed as the hurtful powers producing either diathesis in chap. I. part II. and it will be kept to throughout the whole work. Nothing can be more simple and natural, and better suit the simplicity of the subject, while nothing is more artificial and arbitrary than the arrangements either of system-

atics or nofologiſts. Juſt order could never be expected from an erroneous and confuſed view of the ſubject to be treated of; while a clear conception of the ſubject as a whole, infallibly leads to a diſtinct diſtribution of the ſeveral parts that compoſe it; ſo that what Horace ſays of language, equally applies to order, and the ſame thing applies here as to his *Verba & lucidus ordo, Rite paratam rem verbo haud invita ſequentur.*

(B) See above par. 115. Though very intenſe heat relaxes the ſimple and induces atony on the living ſolids, who in a peripneumony, would think of uſing it with that view? That diſeaſe from its own violence, often mounts up ſo high in the ſcale of encreaſed ſtimulus, as nearly to approach the point of indirect debility, and it ſometimes actually gains that point. The addition, therefore, of more ſtimulus from the application of heat, would enſure that effect, and thereby occaſion the converſion of the diſeaſe into a much worſe one, ſuch as hydrothorax, or the dropſy of the breaſt.

(C) It is called the common inflammatory fever, very improperly, as being no fever, but a general pyrexia, or affection of the whole ſyſtem, without inflammation or local affection, and producing heat over all, and tumultuous effect upon the pulſe. Its proper generic name is Pyrexia. See above, par 68. where that appellation is aſſigned to it; an appellation to avoid miſtaking its nature, that ſhould be accurately attended to. Great miſchief has been occaſioned by this vague term. Thus, when a perſon is ſaid to be affected with a diſeaſe; when it is aſked what diſeaſe it is, and the anſwer given, that it is a fever, immediately bleeding is thought of, though that, and every evacuation, is as hurtful in proper fever, as it may be ſerviceable in the pyrexia. To give an example of this pyrexia, the particular appellation for which is ſynocha, or ſthenic pyrexial diſeaſe; many years ago, a perſon in the old town of Edinburgh, laboring under it, eſcaped the vigilance of his nurſe, flew naked out of the houſe, in a very keen froſt, with ſnow upon

the ground, acrofs the ſtreets, paſſed over into the new town, and from that to the fields beyond it. He ſoon became ſenſible of his ſtate, ſtole into a houſe next to him, got ſome clothes thrown about him, and was carried home in a chair, perfectly cured of his diſeaſe. From which, and a prodigious number of facts to the ſame purpoſe, all concuring in the proof of the debilitating operation of cold, there can hardly ariſe a doubt in the mind, that in a certain high degree, if it could be conveniently uſed, or if there were occaſion to have recourſe to it, for want of efficacious remedies, it would at once remove the higheſt degree of ſthenic ſtate that ever occurs in diſeaſe, and reduce the excitement from the neareſt approach to 70, down to 40. Nay, it might run into the oppoſite extreme, and go all the way to death. But we ſhall, by and by, have occaſion to obſerve, that we are ſo well provided with effectual remedies, as not to be under any temptation of ſtraining this to its height. And we ſhall alſo find, that a number of remedies, in a moderate degree, are preferable to any one, or to a ſmaller number in a higher degree. The diſcovery of the principle upon which the cure of ſthenic diſeaſes turns, has enabled us to render the cure both more complete and exact, than it could have been without principle.

(D) I remember, when I was a young ſtudent, of hearing the old phyſicians in Edinburgh very gravely forbid a draught of cold water in an inflammatory pyrexia, and even in a common catarrh, for fear it ſhould produce an inflammation in the ſtomach.

(E) The fibres being relaxed, deſcribe a greater cavity, and hence the check given to the perſpiration by the contrary effect of the ſthenic diatheſis, in encreaſing their denſity, and diminiſhing their diameters, is taken off.

(F) No gouty perſon can bear the operation of much cold, and every one can endure more heat than moſt other perſons. And the reaſon is evident: So debilitating a power muſt, in proportion to its degree, be peculiarly hurtful in all diſeaſes, in which the debility conſtituting

their cauſe, runs high, as it naturally does in the gout, where it is encreaſed by the advance of age, and other cauſes, and much more ſo in fevers.

(G) The chyle is the alimentary matter that has undergone a preparation in the ſtomach, and an after one in the upper part of the inteſtinal canal, and which, ſo prepared, or in part digeſted, is taken up by the mouths of a number of ſmall veſſels that open into the inteſtines; theſe carry it to a great trunk, in which all theſe veſſels, called lacteal, unite, and through that trunk, to be afterwards mixed, firſt with the venous, and then with all the other blood in ſucceſſion. Such is the nouriſhing matter of animals.

(H) In par. 136, you will find, that the ſecreted fluids here alluded to, are the milk, the ſemen, and the perſpirable fluid. As the diſtention occaſioned by the over-abundance produces the morbid ſtimulus, ſo the ſubduction of the fluids muſt, of courſe, take it off, and give the deſired relief.

(I) How great the ſpace or extent of the ſyſtem is, that, in the ſthenic diatheſis, receives the ſtimulus of an over-abundance of blood; and, in the aſthenic diatheſis is ſubject to the debilitating power of an under-proportion of the ſame fluid, may eaſily be conceived from the well known fact, that there is not a ſoft part in the whole ſyſtem, into which the inſertion of the point of the fineſt needle will not draw blood; conſequently, the ſtimulus ariſing from an over-abundance of blood, as well as the debility ariſing from too ſmall a quantity, muſt be the moſt conſiderable of all others. Every circumſtance here concurs to render the one the greateſt ſthenic, and the other an equal aſthenic, hurtful power. If the force of every ſtimulus, of every exciting power, be in proportion, firſt, to the degree of it applied; ſecondly, to the ſenſibility of the part on which it acts; and, thirdly, to the extent of that part, it will be no wonder, that theſe two powers ſhould prove the moſt formidable of all others. Hence it is, that, in the cu-

rative part, bleeding is the moſt powerful remedy of ſthenic, and filling the veſſels an equal one, of aſthenic diatheſis.

(K) which act by giving vigour to the whole ſyſtem, and more eſpecially to the ſtomach, with which they come into actual contact. Hence digeſtion, and the converſion of the matter taken in into good chyle, and blood; and hence, at laſt, the fulneſs of the veſſels firſt indicated. The proceſs of emptying the veſſels in the cure of ſthenic diatheſis has the advantage of being the firſt in order; and hence it is that the cure of ſthenic diſeaſe is more quickly effected than that of the aſthenic; it being, over all nature, much more eaſy to take away than replace. See and compare par. 126. and 130. and ſubjoined notes, and a little above, par. 265.

(L) The ſole uſe, and a great one, of the diffuſible ſtimuli is, in great weakneſs, where they are only required, to ſupport the ſyſtem, while it cannot be ſupported by the ordinary durable ſtimuli; and, after the excitement is ſo far reſtored, that the ordinary ſupports *are* now ſufficient, to lay aſide the extraordinary; the continuance of which would now be hurtful, and to manage the convaleſcent, and reſtored ſtate of health, by the powers employed in health. When the diffuſible are continued longer, they are equally hurtful, and a cauſe of diſeaſe, as they are ſerviceable when diſeaſe requires their ſupport; analogous to wine, they bring about the ſyſtem in a weakened ſtate, to be ſuſtained by its natural and ordinary ſupports; but, analogous to it in another reſpect, when the ſtrength of the ſyſtem requires not their additional ſtimulus, they carry it up into indirect debility, and prove the cauſe of diſeaſes and death. In one word, whatever has been ſaid againſt the propriety of the uſe of exceſſive, and ultimately exceſſive ſtimulant powers, the former producing ſthenic diatheſis, and the latter indirect debility, all that applies, with propriety, for the diſcontinuance of the uſe of diffuſible ſtimuli, when the durable are now ſufficient for the pur-

poſes of the ſyſtem. And another argument that ſtill remains againſt the ſuperfluous uſe of both the diffuſibles and ſtrong drink, when debility requires not their uſe; is, that, independent of death, or even diſeaſes, being their immediate conſequence, predilpoſition to diſeaſes muſt; conſequently, as the ſyſtem muſt at laſt be worn by ſtimuli, all the unneceſſary, that is, all that do not contribute to that middle vigour, in which ſound health conſiſts ſhould be avoided.

(M) The ſtate of the intellectual function has a great influence upon that of excitement; and, often, when all other ſtimuli have been applied in due proportion, the deficiency of that ſingle ſtimulus will point out a want in the proper meaſure of excitement. There is not a finer ſtimulus than the pleaſurable feeling ariſing from a happy train or flow of thinking; hence the high delight, that ariſes from a flight of wit, or from a pleaſant vein of humour; hence all the fine feelings of the belles letters; hence, in youth, the ardent keenneſs to be acquainted with the learning, wiſdom, and elegant productions of the antients, as well as of thoſe, who have made a diſtinguiſhed figure in later times; hence the enthuſiaſm, ſo natural to the human feelings, to out-ſtrip others in every mental excellency; The arts, the ſciences, every department of human knowledge, are all the effects of that intellectual propenſity. How happy would it be for mankind, were this noble ſtimulus duly cheriſhed! What benefits, which ſociety is deprived of, would not accrue from a proper cultivation of it! How fine was that feeling in Julius Cæſar Scaliger, when he declared that he would rather be the author of Horace's few ſtanzas of Lydia and Telephus, than accept of the crown of Arragon! See Obſervations on the principles of the old Syſtems of Phyſic, from page ix. to xv. of the Introduction.

(N) See above, par. 43. and 141. Recollect the method preſcribed in the 43. paragraph of this work for preventing the fatal cataſtrophe of the Roman woman,

when her ſon, whom ſhe had counted upon, for certain, in the number of the dead, was, contrary to every expectation, preſented to her in perfect health. The danger and fatality of her ſtate was, that her excitability was too accumulated, with reſpect to the ſtimulus of exciting paſſion, to bear ſuch a ſtrong impreſſion as that which the preſence of her ſon, in life and health, had made. She was in the ſtate of a famiſhed perſon, whoſe accumulated excitability is overpowered by a ſingle morſel of food, or of a perſon, who had been long affected with thirſt, where the ſmalleſt indulgence in drink may prove fatal; or of a perſon, near ſtarved to death by cold, in whom a raſh approach to heat, might induce the ſame fatal effect; all which are preciſely upon the ſame footing, and equal inſtances of an excitability too accumulated to bear any degree of ſtimulus!

CHAP. IX.

(A) See above, par. 268. With the exception of peripneumony, phrenitis, and violent and miſmanaged caſes of the ſmall-pox, and meaſles, and rheumatiſm; in the laſt in their mild ſtate, as well as the other ſthenic caſes, the lancet ſhould never be unſheathed. That is to ſay, in ſeven caſes out of ten, even of the ſthenic diſeaſes, which are the only ones that either require or bear any degree of it, the practice muſt be laid aſide, and never thought of in any aſthenic affections whatever. Conſequently, the caſes, where it is in any degree allowable, are exceedingly few.

(B). So conſiderable a ſtimulus is exerciſe, that, if in ſuch a degree of ſthenic diatheſis, as that, which forms only prediſpoſition to the diſeaſes depending on it, exerciſe may of itſelf be ſufficient to effect the converſion of the prediſpoſition into the actual diſeaſed ſtate. Often has the higheſt of theſe diſeaſes, and even peripneumony itſelf, been brought on by violent exertion in exerciſe.

CHAP. X.

(A) How widely different is that maxim from any that have hitherto ever been received in the profeſſion of phyſic; in which flying to the uſe of the lancet, was the firſt thought that aroſe in the mind, with reſpect to the idea of cure of every diſeaſe; and bleeding and evacuations, through the courſe of each diſeaſe, the only remedies.

(B) It is plain, that though all the other powers ſhould be in full action upon our bodies, and that with the effect of keeping up in them a due degree of excitement over all; yet plunging any perſon naked into a denſe medium, ſuppoſe that of water, in a degree of cold at or under the freezing point, will moſt certainly, in an inſtant, put an end to life.

(C) The operation of cold has been ſo widely miſtaken by all phyſicians, that it comes to be of the greateſt conſequence to underſtand the ſeveral propoſitions ſtated in this work with regard to it. For that purpoſe conſult par. 37. and the note upon it marked *b*. as well as par. 259. and all that has been ſaid upon the ſubjects of either heat or cold in chap. 1. of the ſecond part, from 112. to 123. as alſo par. 120.

CHAP. XI.

(A) The action of every exciting power, whether ſalutary or hurtful, or curative, always extends over the whole body, the whole ſeat of excitability, but ſtill with the inequality mentioned in the fourth chapter of part I. This is the baſis of the diſtinction with reſpect to the preſent ſubject: which is, that, as every power acts moſt effectually on the part where its action is immediately exerted, it is better to truſt to a number, every one of which poſſeſſes that advantage, than rely on any one,

however powerful otherwiſe ; as by that means, whatever be the indication, whether it be to encreaſe or diminiſh excitement, the effect will be more equally produced over all in conſequence of there being a number of parts that have had a ſtrong action exerted upon them.

(B) As the moſt healthy ſtate of man is occaſioned not by the operation of any one, or of a few exciting powers, but by the united operation of them all ; ſo neither is its re-eſtabliſhment to be effected, but by the ſame united operation of all the remedies, the laſt of which come to be the means of the ſupport of the healthy ſtate.

(C) The convaleſcent ſtate from either of the two general forms of diſeaſes, or from local ones, the effect of which had drawn the whole ſyſtem into conſent, is much the ſame ; being a ſtate of ſome remaining debility in all ; in the ſthenic from the excitement either going too low, by the remedies being puſhed to ſome exceſs, or not equally diffuſed over all the parts in conſequence of the natural ſupports only beginning to be brought fully into play ; in the aſthenic from the perfect point of health being not quite gained, either from the ſtimulant remedies not having been carried exactly up to 40, or from ſome of them having been carried further than the waſted excitability could receive them with invigorating effect, and thereby an inequality left upon the whole. The convaleſcence, from the general effects upon the conſtitution ſometimes ariſing from local diſeaſes, is to be explained upon the principles laid down, with reſpect to the two other caſes of convaleſcence.

(D) Celſus ſays, ars noſtra conjecturalis eſt. And every man of ſenſe, whether of the profeſſion, or out of it, has held the ſame ſentiments of it. Nothing is more glaring than the contractions in medical writings and reaſoning of every kind, nothing ever could be more incoherent. If a piece of knowledge, that ſets out with a fixed principle, which applies to all the parts of the detail, while they reflect on it, both illuſtration and confirmation, be entitled to be conſidered as a ſcience, the reader

is desired to consider, how far that criterion will apply to this doctrine. The pedantry of mathematicians has contributed as much to bring their science into disgrace, as any other circumstance, particularly in allowing no sort of probation, but that which is made out by lines and diagrams; while, except the elements of that science, every application of that department of knowledge has led to as many false conclusions as any other. If they will not allow the proof, that arises from our feelings, compared with those of all men, whose organs of sense are not deranged, what will they make of their own axioms? They must admit of other probation; while human reason holds its reign, truth and falsehood will be discriminated, without regard to such empty and useless prepossessions.

CHAP. XIII.

(A) Hence it would appear, that it should be a general rule in ploughing and harrowing to adapt the depth, where the seed is to be laid, to the state of the surrounding temperature. It would seem, when other circumstances are equal, that the seeds of plants may more safely lye superficially in warm than in cold countries. The same fact seems to be favoured by the difference of perfection that planted and natural woods attain in cold countries; the former, the seeds of which are lodged in a certain depth, turning to better account than the latter, which rise from seeds that have randomly been scattered upon the surface. Might not the hills in the west of Scotland, upon some such principle, be made useful oak forests?

(B) While the northern winds, that is, the wind due north, and all the intermediate ones in every point of the compass from due east to due west, are cold and dry, and commonly of a tendency to bring snow; the southern, or the winds that blow from any point of the compass towards the south, from the same points of due east

to due weſt, are as commonly warm and moiſt, and often productive of mild fertilizing rains.

(c) No diſcovery, of any importance or extent over nature, has yet been made, that does not warrant, as far as the ſmallneſs of the number of ſuch diſcoveries go, the truth of this aſſertion. See the introduction to my Obſervations.

THE THIRD PART

CHAP. I.

(A) THE phlegmaſiæ are ſthenic diſeaſes, accompanied with inflammation in an external part, as has been ſaid ſomewhere before, according to the definition of noſologiſts. But, as there is no difference betwixt them and ſynocha or the catarrh, which latter are unaccompanied with inflammation, we therefore pay no regard to the diſtinction; and ſhall regard nothing either in theſe or any other diſeaſes, but what is conſtituted by a real difference of excitement. It is the excitement by which we are to be guided through our whole diſtribution of diſeaſes.

(B) Long before any part of this doctrine was diſcovered, when I was in ſearch of certain facts reſpecting peripneumony and pleuritis, I diſcovered one which I was not looking for, of more importance than all the reſt put together. It had been aſſerted, by moſt ſyſtematics and all the noſologiſts, that the primary ſymptom in the phlegmaſiæ was the inflammation of a part. I ſaw this was not true with reſpect to rheumatiſm, in which the general affection or pyrexia often rages one, two, or three days before the ſign of inflammation, pain, is perceived in any of the joints. I could alſo diſcern, that from the moment the pain and inflammation appeared in eryſipelas, or the roſe, there was alſo the general affection equally conſpicuous. In ſhort, in no one of that ſet of

diſeaſes, did the fact appear that the inflammation was primary, and the pyrexia, or affection of the whole ſyſtem dependent upon it. But as peripneumony was ſaid in Edinburgh to be an exception, the detection I made, equally diſproved that. In all the works of Morgagni, where peripneumony and eryſipelas are treated, and in all thoſe of Trillerus, a profeſſed writer on that ſubject, and in a theſis in Sandiforth's Theſaurus, taken from no leſs than 400 caſes of that diſeaſe (for they are now by others, as well as me, conſidered as one), I found that in ſomewhat more than one-half of the given number, which was very reſpectable, the general affection appeared from one to three days before the pain came on and in all the reſt of the caſes, though for any thing theſe authors ſaid to the contrary, they might ſometimes have come on together, yet, that there was not one, in which it could be fairly alledged, that the pain was the firſt and primary appearance. Hence I found, that all the theories raiſed upon that hypotheſis of courſe fell to the ground. Indeed the fact is quite conſiſtent with every one here.

(c) In fevers and other aſthenic diſeaſes of great debility, from the weakneſs of the ſtomach and other digeſtive organs, and the ſmall quantity of nutriment matter taken in, the quantity of blood which is diminiſhed in every one of thoſe diſeaſes, cannot be more than one-third leſs than that which ever fills the veſſels in ſthenic diſeaſes. Conſequently, by a given power, it may be propelled in the ſame proportion, that is, one third faſter than in the ſthenic diſeaſes, which alſo appears in fact; for while 100 beats in a minute is a frequent pulſe in ſthenic diſeaſes, till their approach or actual converſion to indirect debility, the common frequency in fevers and the other high aſthenic diſeaſes, is 150 beats in the ſame time.

(d) See par. 154. If it ſhould be alledged, that, though in fevers and the other caſes mentioned juſt now in the note (*), the deficient quantity of blood to be

put in motion will account for the greater celerity of motion, than in the diſeaſes which make the preſent ſubject; kill the great weakneſs of the heart, for want of the ſtimulus of a due quantity of blood, as well as of many others, ſhould overbalance the effect ariſing from the ſmall quantity to be moved. But the anſwer to that objection is eaſy. It ariſes from the explanation of the ſtrength and hardneſs of the pulſe juſt now mentioned in the text. The febrile pulſe is indeed one-third quicker than the ſthenic pyrexial, but it is weak, and ſmall, and ſoft, while the other is ſtrong, and full, and hard. An equal force then of the heart to that in the ſthenic caſe is not required to account for the difference of the effect. A third leſs of blood, with an equal force behind, will be driven not only one-third faſter, but with ſtrength and hardneſs. The want of theſe two laſt then is to be ſet to the account of the heart's greater weakneſs. Though the blood then be driven one-third quicker, yet the impulſe communicated upon the whole is one-third leſs, as the characteriſtics of both kinds of pulſe readily explain to us.

(E) Which authors and too many practitioners have univerſally done in jumbling proper fevers with the preſent diſeaſes, under the vague and falſe denominations of febrile or feveriſh diſeaſes. In noſology the ſynochus is conjoined with typhus, the gangrenous ſore-throat, which is a typhus fever, with the common ſthenic inflammatory pyrexia.

(F) This propoſition does not go ſo far as to aſſert, that there may not be a ſthenic diſeaſe, without any actual inflammation, but with an affection of a part nearly allied to it, which depends upon an equally high diatheſis, as either peripneumony or rheumatiſm, and even higher than the latter. Such we find, as I have formerly ſaid (156. and 157.) in phrenitis. But the meaning is, that the inflammation, when it does happen, is always in proportion to the degree of diatheſis.

(G) This has been more than once hinted at, and once a little above. The nosologists have excluded synocha from their order of phlegmasiæ, because, forsooth, though it was in every other respect the same, it wanted the inflammation of a part, and they united it with proper fevers, though in the powers producing it, in its proper cause, and in the remedies that remove it, it was in every respect diametrically opposite to those diseases. But their rule of judging was different from ours.

(H) It is with much regret, that I should have had occasion to observe the bad, and too often fatal consequence of treating such local affections, without discrimination of the habit with which they may coincide. The disease is treated by evacuation and starving, even in habits the most weakened, and drink is withheld from persons even the most accustomed to it. The disease encreases, and as if that were for want of more such treatment, the same treatment is persevered in till death closes the scene.

(I) See par. 81. The nosologists, under the genus of phlegmone, which in one of them is divided into two species, proper phlegmone, and erythma, have raked together a number of local, and most of them insignificant affections, which they have considered as laying the foundation of their phlegmasiæ, or general sthenic diseases with an inflammation in a part. But will any man in his senses see any connection betwixt chilblanes, which is one of them, or anthrax, which is a local symptom of the plague, of the slight inflammation upon the eye, called a stie, or the inflammation in the groins of children, from their being scalded by their urine, or the bites of insects, the effects of which are confined to the bit part; will he see any connection betwixt these and a peripneumony; which arises from hurtful powers affecting the whole system, and no part in particular; and is cured by remedies that affect the whole system; and the inflamed part not more, nor even so much as

many others? All these, however, have been made the prototypes of inflammation, by which they meant their phlegmasiæ; as if there were nothing to be regarded in them but the inflammation, which, in fact, is their most insignificant part, bearing no higher proportion tothe sum of morbid state over the system, than that of 6 to 3000, or even less. See above part I. chap. IV, and particularly par. 50.

(K) See above par. 81. Take for an example gastritis, which the nosoligists have made one of their phlegmasiæ, and put upon the same footing with the peripneumony and the other diseases that may be admitted as phlegmasiæ. That affection is an inflammation in a portion of the stomach, in consequence of a solution of continuity from the previous swallowing of ground glass, small fish bones, a quantity of Cayenne pepper; or symptomatic of a schirrous obstruction and tumor. These, not the ordinary hurtful ones that operate upon the whole system, as in the true phlegmasiæ, are the powers that induce that affection. It has no connection with the excitement, the affection of which is only an effect of the locally stimulating power, and of the sensibility of the stomach; its true cause being the solution of continuity or obstruction, keeping up the inflammation; and its remedies such, as are adapted to the removal of that local state. It may happen to a sound habit, where there is no diathesis in any degree; in which case it is purely local; or it may accidentally coincide with either diathesis; in which case it is a combination. When the combination is with sthenic diathesis, debilitating evacuant remedies can only palliate, but they bring life into danger when the asthenic diathesis is present, which is 17 times out of 20 for the other.

(L) The general affection arising in the system from the effect of a thorn pushed under the nail (see par. 344. and note,) and that occurring in the gastritis, mentioned in the last paragraph of the text (see the note on that paragraph) are good examples of cases, to which the term symptomatic pyrexia should be applied.

(M) The ſymptoms in common to it and the other diſeaſes of the ſame form, enumerated in the laſt paragraph, have been deſcribed in par. 331. Theſe peculiarly diſtinguiſhing the phlegmaſiæ and exanthemata, that is the diſeaſes either accompanied with inflammation, or an approach to it, are deſcribed in par. 332.

(N) Yet one noſologiſt, upon that very ſuppoſition, makes two orders of phlegmaſiæ, one ſeated on the membrane, the other in the interior ſurface of each viſcus. Into this error, he had been led, by obſerving, that, after death, the interior ſubſtance of the liver exhibited ſigns of previous inflammation. And, as other diſſections ſhowed the membrane upon other occaſions to have been in a ſtate of inflammation, he thence drew his raſh concluſion. But it is to be obſerved, that the firſt mentioned ſtate of the liver was not a phlegmaſiæ at all, as it had not during life exhibited any of the ſymptoms of that diſeaſe, or even given any ſign of the preſence of inflammation. It is a caſe, then, we have nothing to do with upon this ſubject, even ſo far as it applies to the liver. But the extending the application to all the viſcera, which he was pleaſed to make the ſeats of ſome phlegmaſiæ or other, was looſeneſs of reaſoning, and careleſſneſs of matter of fact, in extreme. A gentleman, whoſe works have lately been buried, without any ſtruggle or ſigns of life, but that of a feeble unintelligible ſound from within the tomb, which no living reaſon could make any ſenſe of in their life time, took it into his head to maintain (for the ſake of ſeeming to differ with men of name and reputation, his higheſt ambition,) that the inflammation in the phlegmaſiæ was always ſeated in the membrane: The anſwer to which is given in the text.

(O) So far is it from being true, that this ſort of inflammation can be confined to a few points of the affected veſſels (ſee the note here at (N). that in fact we find it, though not ſo often as has been ſuppoſed, ſometimes in the mediaſtinum, ſometimes in the external

membrane of the pericardium, sometimes in the superior membrane of the diaphragm. Boerhaave's notion of the translation of inflammation from one viscus to another, was an error in the opposite extreme.

(P) Stitches, as they are called, frequently happen from slight accidents, and may appear before the arrival of rheumatism, but they should be distinguished from the pains that arise from the diathesis, constituting that disease; a distinction, that has seldom been attended to, for want of a right principle to lead to such attention.

(Q) It is a universal effect of sthenic diathesis to render the pulse hard in one degree or another. And peripneumony is not an exception from that fact. But the distinction arose from the mistake of inflammation being the all, instead of an unimportant part of the disease.

(R) The direct debility may be owing to the proper cure, which is directly debilitating, having been carried too far, or to the indirect debility arising in the course of the disease, seldom now to alexipharmac treatment. See above par. 47. and the subjoined notes.

(S) There is commonly in the organ where any nicety of sense is to be exercised, an extraordinary apparatus of blood vessels. Blood flowing into these, encreases, by its heat and the stimulus of its motion, the sense to which it is subservient.

(T) The nosologists have separated the exanthematic deseases real or imaginary, into a class or order by themselves, which they have filled up with diseases, of which there is not two, but the small-pox and measles, that have any other connection, than their mere eruptive appearance, while they are separated from others, with which, in every respect, they have the most essential connection. Thus the small-pox and measles are taken from the natural place to which they are here restored. And it is unaccountable, that we should have it to say, that even erysipelas, which has surely no right even to the slim distinction of eruptive, has also been placed among them. Again, the plague, which is to all intents

and purpoſes a typhus fever, its eruptive part not always diſjoining it from that, is ſeparated from it, though it is ſo nearly the ſame, ſcarcely excepting degree, and conjoined with ſthenic diſeaſes of a diametrically oppoſite nature. And the gangrenous ſore-throat, which is alſo a typhus, has neither been placed among fevers, in its proper place, nor among the exanthemata; to which the efflorescence, that it produces on the external ſurface, according to their own rules of arrangement, ſeemed better to entitle it than ſome others, eſpecially the eryſipelas. And it again (for there is no end of the confuſion of this pretended order of ſome phyſicians,) is conjoined not only as a genus with ſthenic diſeaſes, but even as a ſpecies of one of thoſe genera. The truth is, that ſyſtematics, who were otherwiſe no noſologiſts, have made too much work about eruptive and contagious diſeaſes, and have never dived into the interior nature either of them or almoſt of any other. They have all followed each other from their firſt leader, and never once deigned to turn a glance of their eye upon the phœnomena of nature as they aroſe before them. Hippocrates miſled his followers, they miſled theirs from age to age, and they all miſled the poor noſologiſts; who have laid on the capſtone of the abſurdity of the art, and having finiſhed the fabric of folly, left mankind, if they are not pleaſed with it, to look out at their leiſure for a better and more ſolid.

(u) That the lungs ſhould be inflamed in a violent ſtate of the diatheſis in the meaſles is not to be wondered at; as the common catarrh, when its diatheſis runs high, is liable to produce the ſame effect. (See par. 343. towards the end.) But, conſidering how many facts in medical writings I have found falſe, the effect of that on my mind, is to render the weight of teſtimony in favour of the various internal viſcera being ſo liable to be inflamed, from this ſuppoſed ſtriking in of the meaſly eruption, very light, and to diſpoſe me to doubt of the fact altogether; which I am the more inclined to do, from the analogy of a broad fact in direct contradiction

to it: which is, that the inflammation, depending upon the general diathesis in sthenic diseases, never, as I have yet found, affects an interior part. (See par. 113. 167.) Neither is inflammation, from any other source, near so frequent in internal parts as vulgar opinion has taught us. Dissection has shown inflammation in the intestinal canal in dysentery, or what is called in English the bloody flux. But that only happened under the evacuant, debilitating, vegetable, plan of cure: and, even in that case, seems to have been an ultimate, not an early, effect, much less a cause. And it has been shown, that what has been considered as a burning inflammation in the first passages, is not an inflammation at all. (See above par. 197.) Nay even when inflammation does happen internally, it is never of the sthenic, but always of the general, or local asthenic kind, and when quickly cured, cannot be inflammation. If there be any truth in the frequency of inflammation towards the end of the measles, it must be of the asthenic kind: which is the more likely from its late appearance, and from a circumstance that though no where taken notice of, has great weight with me; which is, that as the distinct small pox passes into the confluent, peripneumony into dropsy of the chest, and any sthenic disease with its diathesis, into any asthenic disease, and the diathesis on which it depends; there is nothing in the nature of the animal œconomy, and of the powers acting on it, to prevent the same conversion of sthenic into asthenic state in the measles. And if, which is most probable from the alexipharmac practice, that was then used in this disease, indirect debility can induce such a change, no disease has a fuller chance for it than the measles. But I am sure, were the debilitating plan used from the beginning, no such consequence would happen.

(x) To make this subject simple to any apprehension. A person has been exposed to intense cold a whole day. He comes home at night, is set by a warm fire, receives hot meat, and warm cordial drink. He is next covered

up in his bed with an addition of clothes, receives more warm ſtrong drink. He falls aſleep, and next morning feels a pain in ſome part or other of his upper extremities, nigh, or between the great joints; and previous to that, a high ſtate of heat and bouncing pulſe, with a certain feeling of uneaſineſs in different parts of his trunk. The pains encreaſe in the bed next night in proportion to the encreaſe of the general affection; and cold, evacuation, and abſtinence from food, from alternation of temperature cure him.

(Y) I have often experienced them all, ſometimes ſingly, ſometimes all three, in the courſe of the ſame diſeaſe, oftener a combination of inflammatory ſore-throat, and the mild eryſipelas, and, as far as I could obſerve, could diſcern that the degree of phlogiſtic ſtate that produced them, and of remedies that removed them, were both gentle, the former as ſtimulants, and the latter as debilitating powers; and both ſo nearly of the ſame degree, that, in arranging them, I was at a loſs which to place over the other in the ſcale.

(Z) This is ſo liable to happen, when any perſon has once experienced this diſeaſe, that the encreaſed motion of the blood in walking in a warm day, and then ſitting down in a cool place, has ſometimes produced ophthalmia, ſometimes this ſore-throat.

(2A) This might happen to a perſon under an aſthenic diatheſis, which would be encreaſed by the debilitating plan of cure, and would be uſeleſs in the abſence of diatheſis.

(2B) I never ſaw this diſeaſe, but when I was ſo young a ſtudent, that any obſervations I could make, can be of no uſe to me now. There have been many battles of words about, whether it be inflammatory or ſpaſmodic, without any adequate meaning of the differences betwixt theſe two words, at leaſt ſo far as to influence the practice; which remained much the ſame betwixt the parties, and probably the right one miſſed by both.

(2 C) A child of mine was given over for death by his nurſe: His mother gave him ſome of the diffuſible ſtimulus. He ſlept two hours, and when he waked, made ſigns, for he could not yet ſpeak, to have a little pie, moſt of which he ate.

(2 D) The improvement that Dr. Sydenham made was good for the length it went, which was, to uſe cool and gentle evacuants for the cure of the ſmall-pox, peripneumony, and one or two more of the ſthenic diſeaſes. The bias, in favor of the elexipharmac practice, for the cure of catarrh and meaſles, he never got over. His theories were vague, but with reſpect to the practice in the diſeaſes among which his reformation lay, they were innocent. He attained not any idea of the nature of diſeaſes depending on debility: And his practiſe was hurtful in them. He fell a victim to his gout, which could not have happened, had he been acquainted with but one diſeaſe of the debility. His practice, even when right, was deſtitute of principle: He had no ſort of comprehenſion of the doctrine of life as a whole, and as a department of knowledge diſtinct from all others. It would have been lucky, however, for poſterity, had his ſucceſſors done as much in aſthenic, as he did in ſthenic diſeaſes. From that beginning, the ingenuity of ſome at laſt under a right direction, might have brought out more information, and, by gradual and ſure ſteps, at laſt attained a comprehenſion of their whole ſubject. But profeſſors of univerſities ruin every thing: For while they find out nothing themſelves, they throw into falſe lights the uſeful hints of others. This was the effect firſt of the Boerhaavian, then of the Hoffmanian, and Stahlian doctrines. See our Obſervations, Outlines, p. 84, to 159.

(2 E) This, indeed, is a clear proof, that the matter contributes ſomething, and that there may be a degree of diatheſis, compatible with health, unleſs when it is encreaſed, and the perſpiration diminiſhed, by ſuch contagious matter.

(2 F) Compare this with par. 49, 50, 51, 52, 53, and indeed with that whole chapter, as the fevereſt trial of the truth of it; nothing being more natural than the ſuppoſition that a mad man is only affected in his head, but we ſhall find that not true.

(2 G) This muſt be taken with more than grains of allowance; ſince ſuch is the effect of the different motives to human action, received from example and education, that the paſſions themſelves are drawn into a ſubſerviency to every perſon's predominant purſuit. I have known a perſon in Edinburgh get credit for his integrity, though that was not extraordinary, from roughneſs of manners, and an affectation of paſſionateneſs, while the diſſimulation of that real diſpoſition is the more general engine among men, of promoting their intereſt. At any rate, ſo much more than mere appearance of temper, which may be ſo much over-ruled, is neceſſary to the eſtabliſhment of maxims; that I ſhould think my life or property upon an inſecure footing, if it depended on the good nature of a perſon, for which the only ſecurity was his fatneſs.

(2 H) The ſimple ſynocha is ſo ſimilar to a gentle typhus, that it requires great judgment to diſtinguiſh them at firſt. The ſafeſt way, when the doubt cannot be determined, is to keep the patient in a moderate temperature, and in a ſtate of reſt; as any debilitating power, in caſe the diſeaſe ſhould turn out a typhus, would be dangerous; and, though it ſhould afterwards manifeſt itſelf a ſynocha, ſtill its mildneſs renders the omiſſion of any thing that might have been done, innocent; and it is always eaſy to take down ſthenic diatheſis.

(2 I) The moſt early among the Alexipharmac practitioners, after once making his eſcape from peripneumony without bleeding, fell a victim to the folly of his theory in the next attack. The Alexipharmacs in general, were too moderate in their bleedings in the true, tho' few ſthenic diſeaſes that require it, and all in the wrong, in their uſe of heating ſtimulant preſcriptions in them.

(2 K) The blood is ready to break out again after the tying up; and if, as ſome adviſe, the arterial twig ſhould be cut through, it diminiſhes the number of the few acceſſes to this mode of bleeding; neither does there ſeem to be any uſe in deſtroying ſuch veſſels, eſpecially as no good purpoſe can be ſhown for doing ſo.

(2 L) The principle, at leaſt with reſpect to purging, was, that it diminiſhed perſpiration, and, therefore, was underſtood not to act as an antiſpaſmodic. A balance betwixt the excretion by the belly, and that on the ſurface was talked of, and they were held for oppoſite operations. In ſuch theoretical nonſenſe they deſerted their only good leader, at leaſt in thoſe diſeaſes, who alternated his bleedings and purgings, and as I have found upon the beſt foundation.

(2 M) It is laughable to hear ſuch perſons talk of their practice, from which they never can receive information; it being not the effect of any thing they know themſelves, but what they have been told by others. In that way, without any exerciſe of judgment, without a ſingle obſervation, that they can call their own in the courſe of a long life, do they jog on, like the blind beggar led by his more faithful dog, or, like children in the play of blind Harry, groping about with their eyes tied up, through the whole courſe of a practice boaſted of, God knows, by nobody who knows it but themſelves.

(2 N) If the diatheſis ſhould riſe within two or three degrees of indirect debility, in that caſe the heat of the firſt part of a ſweat, by exhauſting the little excitement that remains, may have a moſt hurtful effect. But if the diatheſis be any where below that high point, the addition of ſtimulus can be borne for the ſhort time of its continuance; and be afterwards much more than compenſated by the large and continued flow over all.

(2 O) In an excitement of ſixty-ſeven, within three degrees of indirect debility, the heat in the firſt part of the ſweat, by adding theſe, might kill the patient, if you will, without leaving any chance of relief from its

evacuant effect. But, if the excitement be no higher than 60, the addition of the three degrees will keep greatly within the point of indirect debility, and, therefore, be safe; while the succeeding evacuation may reduce the excitement perhaps 10, and bring it within the range of predisposition; and a new course, or a little prolongation of this, carry it down to the point of health, and finish the cure.

(2 P) Suppose the diathesis be two degrees above the highest of the points of predisposition, at 57; and bleeding to the degree of producing 35 of debilitating influence be employed; it is evident, the excitement will go down not only the 17 necessary to bring it to the point of health, but sink to 22, that is, 3 below the range of predisposition to asthenic disease, and therefore compleat the conversion of the sthenic into an asthenic disease.

(2 Q) The small-pox is, in one word, to be treated as any sthenic disease, according to its degree of morbid state, and the eruption is only to be regarded during the period of its existence, either with respect to the exception of sweating then, or of any thing else.

(2 R) As asthenic diseases to sthenic ones are in the proportion of ninety-seven to three of the hundred; such also must be the frequency of predisposition to them: The inference from which is, that as we are seldom in the most perfect state of health, and consequently, for the most part, under some degree of predisposition, all the chances are greatly in favour of that predisposition being the asthenic one. Hence, the impropriety of treating all local diseases in the same way, and as if they were general sthenic ones. Death has been too often the consequence of that practice, when the local fault, for which it was intended, was no more, perhaps, than a thorn pushed under a nail, a cut, or contusion of a finger. In such circumstances, however fully the person may have lived, wine is withheld, fluid vegetable matter prescribed, and the routine of every species of evacu-

ation gone through. Dismal are the consequences of gun-shot wounds on this plan of cure. Turn back to the paragraphs 80. and 81. and the notes subjoined to them.

(2 s) Because no effect can arise without a cause, the exciting powers, therefore, must here have operated with more force, than in the other case; and if it should be objected, that the circumstances in both cases were equal, the difference then must be set to the account of the greater vigour of the excitability in the case of obesity.

THE

FOURTH PART.

CHAP. I.

(A) WOMEN menſtruate more than other females, becauſe they are ſubjected to a higher degree of the ſtimulus, which is its cauſe; and ſuch women as are expoſed to more of the ſame ſtimulus than others, will alſo experience more of the effect, preciſely upon that ſame principle.

(B) When the thirſt was but juſt coming on, and not yet eſtabliſhed, I have found a hearty breakfaſt carry it off. But when it is come to a head, the mixture of ſtomach ſickneſs, that now begins to take place with it, renders eating impracticable.

(C) I cannot help repeating again, becauſe the importance of the ſubject calls upon me to do ſo; that the practice of the new plan of cure, in all the diſeaſes of children, as well as in the others lately ſpoken of, has ever ſucceeded in my hands, as well as in thoſe of my pupils, to a miracle. I cannot ſay that I ever met with an inſtance where it could be ſaid to have failed. Let then who will compare that account with the known mortality that is every day the reſult of any other practice yet thought of in the profeſſion.

(D) If they ſhould pretend to ſay that their bleeding and other evacuations were more moderate than in rheumatiſm; the anſwer is, that they were not ſo profuſe at any given time: But, conſidering the length of time, that rheumatalgy draws out into, the frequent, and almoſt conſtant evacuations, conjoined with every ſpecies of inanition made the debilitating practice upon the whole far exceed that uſed in the ſthenic caſe. No wonder, then, that much miſchief was done.

(E) So great is nature's tendency to that particular encreaſe of exertion, which forms the matter of expectoration in this diſeaſe, that every caſe of death from diſeaſe is an inſtance of it. Hence the dead rattle in the throat is univerſally the expiring ſymptom. See 72 and 326.

(F) There are ſeveral caſes upon record, of the lungs after death from a confirmed conſumption, having been found perfectly ſound. A moſt reſpectable pupil of mine went to Liſbon with a young gentleman of conſiderable rank in Scotland, under a confirmed conſumption, whom he brought back perfectly freed from his diſeaſe, He alſo ſaved either two or three ladies, I am not juſt now ſure which; equally given up upon the common practice. He happened to aſſert before the phyſician of the factory, that a perſon juſt dead of the ſame diſeaſe had no local affection in the lungs, and upon diſſection it was found to be as he had ſaid. I have reſtored many phthiſipneumoniacs, but am obliged to own, that I have loſt three, to whom I was called too late. Their loſs, however mortified me, becauſe there were many reaſons for my ſetting my heart upon their cure. I alſo loſt in Edinburgh the moſt amiable young man of that kingdom, after curing a prodigious hemorrhagy from his lungs. This was he whom my pupil two years before brought home ſafe from Liſbon. But I was permaturely diſmiſſed in this, and counteracted, in the other caſes.

(G) Still to the old tune "cantilenam eandem canunt." They confeſſed they knew nothing about this diſeaſe, yet they preſcribe change of air and place: If they knew nothing about the diſeaſe, how could they know what would be of ſervice?—Others told them ſo. But why do they preſcribe vomiting?—They heard that from their maſter's deſk at ſchool, and found, that the ſame authority, was the reaſon of others for doing the ſame thing. Why vomiting? For the ſame reaſon, and becauſe a relique of the doctrine of morbific matter has run through all their ſyſtems. Hence in bleeding diſeaſes, the univerſal rule has been to bleed; in vomiting to give emetics, in diarr-

hæa to give cathartics, in imitation, forſooth of nature. The ſymptoms of diſeaſe have been miſtaken for efforts of the conſtitution to remove the diſeaſe. It is now, however, proved that there are no ſuch efforts. Every ſymptom, and particularly every morbid evacuation, is to be ſtopt. The contrary practice is as good ſenſe, as it would be to propoſe bringing on a dead rattle to cure the morbid one.

(H) There are very few perſons, who, at one time or another in their life, have not experienced painful twitches in ſome part or other in one of their feet, eſpecially when they happened to be in a ſtate more languid and ſluggiſh than ordinary. Every which caſe may be conſidered as a gout in miniature. But when the whole phenomena, except the inflammation, happen to any perſon, call it dyſpepſia, or what you will; it is to all intents and purpoſes a gout. Indeed, from all that has been ſaid through this work, general morbid ſtate appears to be a very ſimple affair, being nothing but an encreaſe or diminution of the cauſe of the functions or powers of life, without any other difference, but that of the mere appearance of the ſymptoms to our ſenſes; an appearance, by which, when we look no further for information, we are alſo conſtantly deceived.

(I) If I have kept off my gout for ſeven years paſt, after having been ſubjected to the moſt ſevere rage of the diſeaſe, might not I much more eaſily have prevented it before? But, it may be ſaid, perhaps, that excruciating pain makes a great difference in the ſcale of compariſon of any two diſeaſes: The anſwer to that is, that ſince the pain is as eaſily removed as the other ſymptoms, the difference is removed, and the weights in the ſcale equalized.

(K) My gout came on at the thirty-ſixth year of my age, after five or ſix months low living: it returned not again till betwixt five or ſix years after, becauſe all the intermediate time I had been well ſupported: And this ſecond fit was uſhered in with low living, immediately

previous to it, for near the same length of time as before the coming on of the first fit. Nay, no gout ever came on, but in consequence of direct debility; the indirect has not so quick an effect in that respect; at the same time it has a tendency to be hurtful, and therefore should be avoided.

(L) The juice of turnips, of cabbage, and even peas-pudding and peas-soup, which are commonly reckoned substantial dishes, have the same effect: When those substances, after being boiled, are used with a good solid meal of meat, I have always found them innocent. Green peas, ate with lamb or fowl, are both harmless and grateful.

(M) At any advanced period of age, in persons who had been vigorous, an unnatural power of execution some times, even in actual morbid state, will take place, so as that the person will be able to outdo all his former doings in that way. But it is a false power, it is a symptom of disease: It is like unnatural appetite for food, amidst a weakness of the powers of digestion.

(N) I know well when I may take cold drink, and use some vegitable matter; it is when, for some time past, I have been well supported, and feel strong and vigorous. I also know, if I have, either in food or drink, taken any thing improper in kind, how to correct it; which is, by having recourse to a proper stimulus. By eating an exotic fruit, which had a mixture of the qualities of the water-melon, the orange, and lime; in a quarter of an hour I had an attack in my stomach, in the middle of my lecture last summer, at the Devil tavern. By some of the diffusible stimulas I repelled it, and went well on with my lecture. At other times I have prevented such an effect, by anticipating the remedy. This doctrine puts much more in our power: But we should not, therefore, play tricks with it. On the contrary, we have great reason to be thankful for the command it gives us over our health, and that also, by the use of means not inelegant, nauseous, and clumsy, but quite the contrary.

The old motto of Aſcleiades, *Toto, celeriter, et jucunde*, is verified and improved by the important addition of *ſalubriter*.

(o) Such is the effect of the powers operating upon us, that a certain degree of that operation produces an effect that would not ariſe under another. If the accuſtomary operation has been moderate, habit will render the excitement ariſing from it, in ſome meaſure ſufficient for the demands of the ſyſtem: Hence day-labourers are ſupported upon leſs ſtimulus than gentlemen. Again, which is a circumſtance liable to happen to the latter, if the accuſtomary operation has been exceſſive, there will be a neceſſity for a continuation of ſome degree of the exceſs. A podagric may be ſtronger than a laborer, and yet fall into the gout. For, though compared with the other perſon, he is ſtrong; compared with himſelf at another time, he is weak: And the reaſon is, that though he is ſtill better ſupported than the laborer, he is worſe ſupported than the uſual ſtate of his ſyſtem requires. Further, the laborer, though he falls not into the gout, may, by carrying his moderation too far, fall into indigeſtion, or ſome other diſeaſe, in every eſſential reſpect the ſame as the gout. A double inference ariſes here, which is, that, though both exceſs and deficiency can be borne to a certain degree, ſo as to require a continuance of them, or a gradual correction; yet they ſhould both be avoided, as entailing that ſort of neceſſity for their continuance, while their effect makes no ſort of compenſation, being, at beſt, not the beſt ſtate, that of perfect health, but a ſtate of predispoſition to diſeaſe; the one to ſthenic, and at laſt indirect debility; the other to aſthenic, all depending on direct debility. The perfect rule for ſecuring the healthy ſtate, is to keep within the extremes of exceſs and defect, and thereby produce the due degree of excitement; and to apply all the exciting powers equally, each in its due proportion. The due degree may be ſecured by one or a few, but the equality of power over the ſyſtem, can only be ſecured by their equal a

lication. This propoſition goes to the bottom of two xtenſive doctrines, that of life, and that of morals; the aſt of which has as yet not attained to any thing like a undamental principle. I intend to proſecute the idea pon ſome future occaſion. I know a book filled with aluable ethic facts, but have not yet had time to conſider whether they all point to a general one, in which they all gree, and which reflects proof and confirmation upon hem; without which it would fall ſhort of ſcientific exactneſs.

(P) This has been proved, both upon other occaſions, nd particularly in the caſe of a young gentleman, who ived with me during my firſt management of my gout. ee Preface to the Elements.

(Q) I have heard of an hypochondriac ſo provoked at is phyſicians, who maintained that nothing ailed him, hat he, on the contrary, to carry his opinion of his iſeaſe to the utmoſt, at laſt took it into his head, that it ad attained its utmoſt height, by depriving him of his ife. He continued obſtinately in the notion of his being ead, till a more ſenſible practitioner was called in to ee him. This gentleman agreed that he was dead, but s he could not diſcern the particular cauſe of his death, e therefore, propoſed to open the body: In ſetting bout which, he made ſuch a claſhing with a great appaatus of inſtruments provided for the purpoſe he intended, hat the patient was rouſed from his obſtinate ſullenneſs, nd allowed, that this gentleman had come nearer to his aſe than any of the reſt; but acknowledged that he now ound he had ſome remains of life.

(R) This paragraph is the anſwer to the queſtion propoſed in that which ſtands in the Elementa, anſwering to he ſame number. That paragraph therefore is eraſed, nd this put in its place. I had heard from ſome of my upils, that they had been able, by their diffuſible ſtimuli, o remove epileptic fits. But in caſe of any miſtake, I would not venture to mark the fact for certain, which I have now done, from my own perfect conviction. A

young man, lately married, had the moſt alarming fit of epelepſy that ever was: His caſe was thought beyond remedy; as an extreme one, however, he got from ſome perſon the full of a tea-cup of tinctura Thebaica, up to a blue ring a little below the brim. He got out of his fit ſomehow or other; but was perfectly ſtupid and ſenſeleſs for a fortnight. Upon his falling into another, I was ſent for, and brought him about in twenty minutes, as I am told, (for I did not wait) ſo completely, that he got out of bed, and ate a hearty meal of beef ſteaks. Many weeks after, by miſmanaging himſelf, and neglecting directions given him, he fell into a ſlighter one, and was cured in the ſame way.

(s) In the Mers, or county of Berwick, in Scotland, where I labored three months under a tertian, that is, from the beginning of March to the beginning of June; and in the Carſe of Gowrie, and ſome other places in that country, nothing is more common than the tertian ague happening at the time at which I was affected; and nothing is more certain, than that the cold and moiſture are the chief powers inducing it. It is ſomewhat ſtrange, that a man born in that country, if he would patch up a ſyſtem of fevers, ſhould have overlooked a form of them, that occured to his eye-ſight every day, and borrowed his hypothetical courſe from a marſh miaſma, ſuppoſed to be the produce of great heat and moiſture, though he had only heard or read of the intermittents of warm countries.

(t) In the warm countries, agues often occur, when it is eaſy to diſcern heat to be an hurtful power; but when moiſture is much leſs prevalent, for that very reaſon that the heat is prevalent, than at other ſeaſons when the diſeaſe does not occur.

(u) I remember yet, that it was the higheſt luxury for me, when the cold fit came on, to be put in bed, and covered under ſuch a load of blankets (for the cold of ſheets was intolerable) as would, at any other time, have oppreſſed me. I was then about eleven years of age.

(x) In Holland, the Dutch ſtudents, who live not near ſo well as the Engliſh, are very liable to the diſeaſe, while the jolly-living Engliſh, who do not like the weak rheniſh wines, and the weak, ill-managed vin de Bourdeaux, which is a cheap, dirty claret, almoſt never fall into the diſeaſe at Leyden, while the Dutch are perpetual victims to it, as often as it is epidemic.

(y) They have talked of taking a little blood in the ſpring intermitents, but that was a theory of Dr. Sydenham's, who divided the diſeaſes of the whole year, into inflammatory and putrid; and I do not find, that that idea has ever been followed in practice. For though they follow him moſt ſervilely in moſt reſpects, eſpecially where he is wrong, their vanity, that they may now and then ſeem to ſtrike out ſomething from themſelves, diſpoſes them to differ from him in others, eſpecially where he is right, as in the rejection of purging in ſome ſthenic diſeaſes (137.)

(z) Riverius followed the plan of adminiſtering ſtrong drinks, ſuch as ale, wort, wine, ſpirits, and ſtrong punch; and I remember it was a cuſtom among the common people to cure themſelves by getting tipſy. But I was allowed neither the one method of cure, nor the other. The authority of Dr. Sthaal and Boerhaave, had thrown the bark into diſrepute in Britain: And my mother, "who truſted in God, and not in phyſicians," left me to the courſe of deſires and averſions, which were chiefly to avoid cold, and anxiouſly ſeek for heat. She kept me upon a vegetable diet in the intermiſſions, which I even then did not much like. It was the kindly warmth of ſummer, which then ſet in early, that had the chief effect in gradually finiſhing that cure.

(2 a) When the gout in the old way, is left to patience and flannel, and low diet, and watery drink, it ſhews both remiſſions and conſiderable intermiſſions. I have been often mortified, at finding, in conſequence of walking a little too freely, when I thought the fit was gone, a more violent return than the firſt part had been; when

I had not yet attained to the full knowledge of the nature and management of that diſeaſe: Which is a circumſtance that every podagric, who is ſtill treated in the old way, can bear witneſs to. Dr. Sydenham fell a victim to his ignorance of its nature.

(2 B) A gentleman in Scotland, came to dine with his brother, who lived with me and my family, in a houſe in the neighborhood of Edinburgh. He ate and drank ſo ſparingly, that I predicted, from a knowledge I had of his manner of living, which was an exceſs of temperance and abſtemiouſneſs to a faulty degree, that if he did not indulge a little more in theſe reſpects, he would ſoon fall into a diſeaſe of debility. The prediction was verified in a few days; when his brother having occaſion to go to town, found him, in the intervals of a violent vomiting, making his teſtament. By a good doſe of the diffuſible ſtimulus, he removed the whole diſeaſe at once, and enabled him, with the additional help of ſome ſound Port, and genuine Madeira, in a few minutes to eat heartily of beef ſteaks. Before his brother's arrival, he had been treated in the uſual evacuant, and, as they call it, antiphlogiſtic way. Upon the return of his medical friends, a clyſter was preſcribed, which threw him back into his diſeaſe, from which, with the ſame eaſe, and in the ſame ſhort ſpace of time, he was extricated, upon his brother's return to his poſt. This young gentleman, from that beginning, like many other of my pupils, is now a moſt reſpectable man in his profeſſion. Some time after that, he performed the greateſt cure that ever happened ſince the firſt annals of medicine. In a very dirty ſhip, the Dutton, which was going to the Eaſt Indies, he ſtemmed, in the latitude of Rio Janeiro, a fever that was carrying off numbers every day, loſing not one, as can be atteſted by the ſhip's books, for no leſs than five weeks—his name is D. Campbell.

(2 C) All this confirms, not only the point at preſent meant to be ſettled, which is, that the diſtinctions that phyſicians have made about the differences of fevers, are without foundation, and that they are all the ſame, with

no other difference, but in degree; and that, unleſs in that reſpect, they do not differ from other diſeaſes of the ſame form; but it likewiſe adds additional weight to our fundamental propoſition, that we are nothing in ourſelves, but according to the powers acting on us. Many circumſtances in the courſe of diſeaſes, that eſcape the obſervation both of patients and phyſicians, are of hourly and momentary occurrence, and ſufficient, when their importance is weighed according to the principles of this doctrine, to account for the variations in the progreſs of diſeaſes. We ſhall, bye and bye, ſee that the circumſtances of heat, from the gratification of indulging in which the patient is not to be turned aſide by any advice, is, with its conſequences upon the whole ſyſtem, ſufficient to account for the gradual converſion of the cold into the hot, and the hot, into the ſweating ſtages.

(2 D) The ancients ſuppoſed, that every type aroſe from a matter ſuited to produce it. Now, ſuppoſe a quotidian type to depend upon any given matter, and a tertian upon any other, different from that; when either type is changed into the other, are we to ſuppoſe that the matter is alſo changed, and ſo forth of the reſt?

(2 E) Dr. Wainman, as it was ſaid before, found that to be the caſe in the fens of Lincolnſhire. From which we may learn how little dependence is to be had on the facts in medicine, as they are delivered from deſks or in books; from both which we have always been taught to believe, that the Peruvian bark was a catholicon in intermitent fevers. But if it fails in the cure of the mild ſtate of that diſeaſe in this country, what muſt we think of its efficacy in the malignant intermitents and remittents of the warm countries? And if that medicine, with its univerſal high character, ſhall turn out next to an impoſition, what are we to think of teſtimonies in favor of any thing? One of the ways of adminiſtering the bark is in ſtrong wine or ſpirits, and it can hardly be doubted, but in that compound form it may have been of ſervice. But where ſhall we find a panegyriſt on the bark, who will make any allowance for the powerful medicine con-

joined with it? They talk of it as a vehicle, without allowing it any other credit. In the same manner, at all times, have many powers of great operation been overlooked in the accounts given us of remedies, and the merit of the cure imputed to the most inert. I have most generally found an analogy betwixt the remedies that are in reality powerful, and our ordinary supports of health. The wines and strong drinks are certainly a part of diet with most people, and so is opium among the Turks. But what analogy can be found betwixt the same ordinary supports of life, the same durable and natural stimuli, and the bark of a tree, whether brought from South-America, or growing among ourselves? I will not pretend to say, that the bark is devoid of all virtue; but I must have greater proofs of its power over disease than I have yet met with, before I can retract much of what I have said.

(2 F) There are three states or qualities produced in fluids by as many different fermentations, the saccharine, acid, or putrefactive. To one or other of those we are apt to refer every state of corruption in our fluids; but they are liable to degeneracies, which do not exactly correspond to any of those: And, as we are not yet acquainted with any of those deviations from the natural state, it is safer to use the general term corruption. Even the word *acrimony* is too general, as we can by no means pretend to say, that perfect blandness is the natural and healthy state of our fluids: Nay, the different uses and subserviency to the functions seem to require a considerable deviation from blandness; the urine, the perspirable fluid, the bile, and others, being intended, by a certain poignancy, to answer certain purposes. These, compared to certain blander fluids, may be said to be acrid; while compared with their state in morbid degeneracy, they may be called bland, and the latter acrid.

(2 G) Fevers will require many more visits from the physician, than are commonly either bestowed or required, and often a good deal of watching. While this is more generally the case in fevers, at least in the high

degree in which these fevers exist, at the same time they are not the only ones that require such strict attention; as every disease, when it has attained to the same degree of debility, endangering life, will claim the same circumspection and vigilance from the judicious and conscientious physician.

(2 H) Suppose any direct debility has occasioned a disease, when that is established, the excitability is so morbidly accumulated, that the slightest exertion of any exciting power, becomes too much for it; which immediately constitutes an admixture of indirect debility. The stimulus of corporeal motion, which is a great and rough indirectly debilitating power, is often too long continued, after a typhus fever has begun its insidious attack upon the habit; and hence the after part of the disease becomes more severe and dangerous. It is also to the same cause that we owe the propriety of excluding light and sound, when they prove causes of irritation, their stimulus, though slight, being too strong for their accumulated excitability. The guarding against gusts of passion and emotion, as well as mental exertion, is all upon the same principle. When a person falls into a fever, from excessive labor and low diet at the same time, that is an instance of a mixture of debility from the beginning. Again, when any disease, chiefly of indirect debility, is treated by bleeding, other evacuations, and starving, that is an instance of a superinducement of direct upon indirect debility. A judicious practitioner, and who prescribes according to the rules that arise from a near acquaintance with the operations of the inanimate part of matter upon living systems, will find plenty of scope for the exercise of his judgment in these and many other niceties: And he will find, that the Brunonian doctrine, as it is now nick-named by those who know it not, is not a doctrine to be practised without knowledge, without judgement, and without sense; but that it requires every part of knowledge requisite to throw light upon so extensive a subject, as that of the science of life over all nature; and

all the judgement and good ſenſe of the ſoundeſt underſtandingt o carry it into application upon many occaſions of nicety and difficulty. The traſh that has hitherto too often paſſed for knowledge, is to be acknowledged not only uſeleſs, but hurtful. But the true knowledge of nature muſt be always elegant, always ſatisfactory, always uſeful. It is to be hoped the day is not far diſtant, when this doctrine will change its preſent appellation, into that of the doctrine of Nature, over the living part of her productions; comprehending not only the morbid but healthy phœnomena, and the diſtinctions between the living and the dead ſtate.

(21) This may be exemplified by the treatment of a perſon the next and ſecond day after he has been hurt by drinking. His excitability has been worn out by an unuſually ſtrong ſtimulus, the effect of the firſt night's ſleep is to allow it to accumulate again: In this ſtate much exerciſe fatigues, for want of excitement to enable it to be borne: Fluid nouriſhment is commonly uſed, but it is not ſtrong enough to waſte the redundance of excitability, and bring the patient back to his healthy excitement. The dram-drinkers know the remedy, but they know not its bounds. They have recourſe to a glaſs of ſtrong ſpirit, and they would be right if they ſtopt at one, two, or a very few, according to the quantity, that their former habit may render neceſſary, and take no more than what gave them an appetite for ſolid nouriſhing animal food; which, whatever the quantity that is required to produce it be, is the beſt general rule: But they go on, and every day till that of their death, which ſoon arrives, renew the diſeaſe. The rule is to take a little of what proved hurtful, till a return of appetite comes on: After eating a little, a walk or a ride will add more ſtimulus: The air, in which the exerciſe or geſtation is performed, will furniſh another. In that way, more ſtrength will be acquired in proportion as a greater number of ſtimuli have waſted more excitability, and with more equality. A ſecond day's management by applying the ſtimuli in a ſtill leſſer degree, will

commonly remove all the complaints. When an habit of hard drinking has brought on, as it always will ſooner or later, a very bad and confirmed diſeaſe; if the excitability is nearly worn out, and what remains is very unequal, as having been produced chiefly by an alternation betwixt one ſtimulus acting with partial exceſs and ſleep, either imperfectly removing the exceſs, or by its length ſuperadding direct to the indirect debility, which the drink occaſions; the patient ſhould have ſomewhat a leſſer quantity, than that which at any time hurts him; then the next day ſtill leſs; and ſo on, till very little will ſerve him, and he ſhould add all the other ſtimuli in proportion as he diminiſhes the morbid one.

(2 K) The abundant excitability of an infant cannot be reduced at once to that waſted degree, in which the ſtrength of an adult conſiſts; it muſt be by the gradual application, of what it can bear always for the preſent time that that can be brought about; and, therefore, not ſooner than a ſpace of time equal to half the individual's given period of exiſtence. In a ſimilar manner an excitability that has been accumulated from deficiency of ſtimuli for a number of weeks or months, will require a ſpace of time, ſomewhat proportioned to that, to wear it out in the manner moſt ſuitable, to reſtore the loſt vigour. Some health will be ſooner brought about, but the effectuating of perfect health muſt be a work of time. Again, the direct debility of a few days will be eaſily removed in a few days. In fevers, and every caſe of high debility, the accumulation of excitability for want of ſtimulant power to produce excitement, muſt be eſtimated by the number of ſtimuli that have been withheld, as well as the degree of force of each of them. In a fever, then, the ſtimulus of exerciſe, of the open air, of converſation, of diverſion of every kind, of an agreeable flow of ſpirits, of a pleaſant train of thinking, of light and ſound in a great meaſure, as well as of the exerciſe of all the other ſenſes, and particularly the ſtimulus of a due quantity of blood, and other fluids, and moſt eſpecially that of nouriſhing food, and, at leaſt

upon the common plan of practice, that of wine and exhilarating drink, all these, are withheld, and, therefore, for want of them, the diminution of excitement must both be great and unequal. What then is required as to the idea of the cure? Since most of those, which are the ordinary stimuli, by which the ordinary health is supported, cannot be applied; the proper idea is to look out for a power in nature, that can, as nearly as possible, supply, both the degree and equality of stimulant operation that is wanted. Such a power we find in the few diffusible stimuli, and particularly in opium (See par. 130.) Any of those act powerfully on the stomach and diffuse proportional excitement over the system; So soon and effectually do they pervade it, and act with the most powerful effect upon the surface, that it is often an object of attention in the practice to think of means to prevent it from going too far. By the blessed use of those remedies, the excitement of the stomach is restored, so that with a return of appetite, food can be taken in, and digested, in so far as the powers of that organ go; which are confined chiefly to the first part of digestion, or what is called the first concoction. Next the excitement is restored in the other digestive organs, in the duodenum, in the biliary vessels, the pancreatic duct, in the lacteal vessels, through their whole course from the intestines to their common receptacle, as all the vessels that return lymph from every part of the body, in the veins betwixt the thoracic duct and the heart, in all the cavities of the latter, in all the red arteries, in the colourless terminations of all these, whether exhalant or glandular, and whether only simple separating, or also changing, the property of the fluid they secrete, in all the internal cavities of the body, in the commencing extremeties of the absorbent vessels, and in their progress through their lymphatic trunks to the receptacle in common to them with the lacteals, which are a part of their number, in the thoracic duct again; as also from that to the heart, and from the heart to the extremeties of the arteries: Lastly, the influence of excitement is extend-

ed to these terminations of the arterial system, whether exhalant or glandular, which perform the several functions of excrementitious secretion and excretion, by which every portion of fluids, now become useless, or, if they were retained, hurtful to the system, are thrown out by their several emunctories. When, by the use of the diffusible stimuli, the stomach, and all the organs can perform their respective functions, the natural stimuli begin to be restored; the stomach, the intestines, the lacteals and blood vessels, and all the other vessels, are gradually filled with their respective fluids; the muscles on the surface, and the muscular fibres recover their tone and density; the brain recovers its vigour; heat and air can be now restored to the surface; exercise can now add its useful stimulus; and all the functions return to their usual capability of being acted upon by the usual and ordinary exciting powers.

(2 L) Want of sleep is an indirectly debilitating power; and, in this weakened state of the system, in this redundancy of excitability, where every exciting power is liable to be too much for the excitability, the want of sleep, by not allowing this partial waste of excitability to be repaired, is the occasion of so much more indirect debility being added to the direct and hence the sum total of debility is encreased. The effect of sleep in removing this partial indirect debility becomes so far an invigorating power.

(2 M) When the habit is delicate, the patients way of life moderate as to the use of the stimuli, the place cold, or both cold and moist, and the patient easily affected with stimuli of all kinds; in all these cases the rule, which common sense prescribes, is to diminish the dose of the diffusible. A lady in Edinburgh, who had borne and nursed many children, had lived exceedingly moderately, had been and still was, very assiduous in the management of her family affairs, and usually stimulated with little air out of her own house, fell into a cholic, and, by the evacuant and starving plan, had been kept in it for a full month, till the urgent symptom of vomiting

required further assistance: When I came, I first retarded the vomiting by a glass of whiskey: And, by two more, with no other help but that of a mixture containing 30 drops of the Thebaic tincture, which the surgeon had been administering in miserable small portions, in three hour removed the whole disease. As I have said somewhere before, the disease, from the neglect in fulfilling directions, had very nigh returned next day; but another glass repelled it.

FIFTH PART.

(A) THE excitability is here not talked of in its comparative states of abundance or deficiency, but in the degree in which any part possesses it in preference to others. It is used in the sense of the greater or lesser vitality of parts: Accordingly we can say, that some parts possess an exquisite sensibility, as the stomach, the brain, and intestines, and, I believe, most of the interior, soft, fleshy parts, and the shut cavities; and externally, the parts immediately under the nails; that others possess less, as the bones, ligaments, and cartilages; and externally, the cuticle, or scarf-skin. It is, with respect to the difference of sensibility, or excitability, or capability to be acted upon by exciting powers, that we use the expression of more or less excitability. See above, par. 49, and the addition, and 53, and addition.

(B) So hurtful is the air and temperature to all parts below the cuticle, that nothing is a more certain cause of gangrene than their exposure, even for a very short space of time; Nor is there any other way of accounting for the fatal effects of slight, superficial, but extensive burning. Death has been the consequence of a burn, that extended no farther than the fore part of the thorax, or the breast, and was not of longer continuance, than the time taken to tear off the burning clothes that occasioned it.

(c) See the seventh Genus in Genera Morborum Cullenі, where you will find Linnæus's prototype of inflammation, that is, of inflammatory diseases, or what is in this work called phlegmasiæ, or sthenic diseases with inflammation, or an approach to it, also adopted by this author. It is nothing else but a collection of local affections, or, in a few cases, symptoms of disease, and that they almost all come under this head of local diseases, and every one of them under one of these heads.

(d) Of this we are presented with examples in every day's experience; where we find the slightest sores, from the neglect of the simple rule of cure laid down here, degenerate into very troublesome affections.

(e) See above, par. 10 to 14. If I cure a peripneumony by bleeding, other evacuations, and other debilitating powers, that are not evacuant, it is by diminishing the force of exciting power; if I cure a fever by opiates and other stimulant powers, whether stimulating by filling the vessels, or without that, it is by encreasing the same force; and if I cure a sore on the surface, by the method just now mentioned, I thereby prevent the force of exciting power from rising too high, from an excess of stimuli, or from running either into direct or indirect debility, from too little stimulus, or an ultimate excess. If either these general or local cures are neglected, or mismanaged, the cure will not be supplied by any effort of the system; and if the cure is made out by regulating the excitement, such effort is superfluous. The vis medicatrix then is as little real in local as general diseases. See above, par. 62, and the addition.

(f) 113 and 166. The stomach is sometimes inflamed from a schirrous tumor, occupying the pylorus; and that case also is taken in by the systematic and nosological writers, as belonging to their gastritis: But the consideration of it does not belong to this head of local diseases, but to the third division of them. At the same time, both it, and the present case, are local diseases; and not phlegmasiæ, differing from the phlegmasiæ so fully treat-

ed of in the third part of this work. It, as well as enterites, of which we are next to ſpeak, have every mark of difference from the general diſeaſe mentioned in the 6th paragraph. See alſo Chap I. of the Fifth Part.

(G) The inflammation is frequently not in the womb, but in a neighboring portion of the inteſtines, or meſocolon, or in the peritoneum itſelf, as diſſection has frequently ſhown. This is a diſeaſe, than which none has been more enquired into, and none yet leſs underſtood.

(H) When the body is debilitated, the ordinary ſtimuli, that in its healthy ſtate invigorate it, and even a much leſs degree of ſtimulus, will produce the irregular motions, which are ſuppoſed owing to irritation; not that any thing irritating is applied, but that the exceſſive abundance, or defect of excitability, admits not, without ſuch effects, the degree of ſtimulus, which, applied to it in its healthy, half-waſted ſtate, would produce healthy, vigorous motion, (ſee 25 and 27.) The tremors that are occaſioned by the turning of a door upon its hinge, the ſweat occaſioned by ſlight exertions in walking, are ſo many inſtances of that, and the irregularities of the pulſe are owing to the ſame cauſe. As the weakneſs upon which fevers depend encreaſes, ſo alſo do the ſuppoſed ſymptoms of irritation, ſuch as colliquative ſweats, colliquative diarrhœa, ſubſultus tendinum, &c. But they are all the effect of the general weakened ſtate, being fluttered by every ſlight ſtimuli. At other times irritating powers, in the ſame weakened ſtate, do occur; ſuch as thoſe mentioned in the text.

(I) But even in that caſe, the real ſtate is debility, and the indication of cure is to remove it, as well as the irritating powers: Which, while they encreaſe it, are at the ſame time its offſpring, and require ſtimulants to enable the ſyſtem to reſiſt its effect. (693.)

(K) The inflammation, out of which gangrene ariſes, is always unſupported, and the gangrene always a ſtate of either direct or indirect debility; the high excitement in the phlegmaſiæ, and the low in fevers, cauſing that

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