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AN

ESSAY

ON THE

DISORDERS OF OLD AGE,

AND ON

THE MEANS FOR PROLONGING

HUMAN LIFE.

BY ANTHONY CARLISLE, F.R.S. F.S.A. F.L.S.

SURGEON EXTRAORDINARY TO HIS ROYAL HIGHNESS THE PRINCE REGENT,
AND TO HIS ROYAL HIGHNESS THE DUKE OF GLOUCESTER;
PROFESSOR OF ANATOMY TO THE ROYAL ACADEMY;
PROFESSOR OF SURGERY AND ANATOMY TO THE ROYAL COLLEGE OF
SURGEONS OF LONDON;
AND SURGEON TO THE WESTMINSTER HOSPITAL.

“Every stage of human life except the last, is marked out by certain defined limits; Old Age alone has no precise and determinate boundary.”

CICERO on Old Age.

PHILADELPHIA:

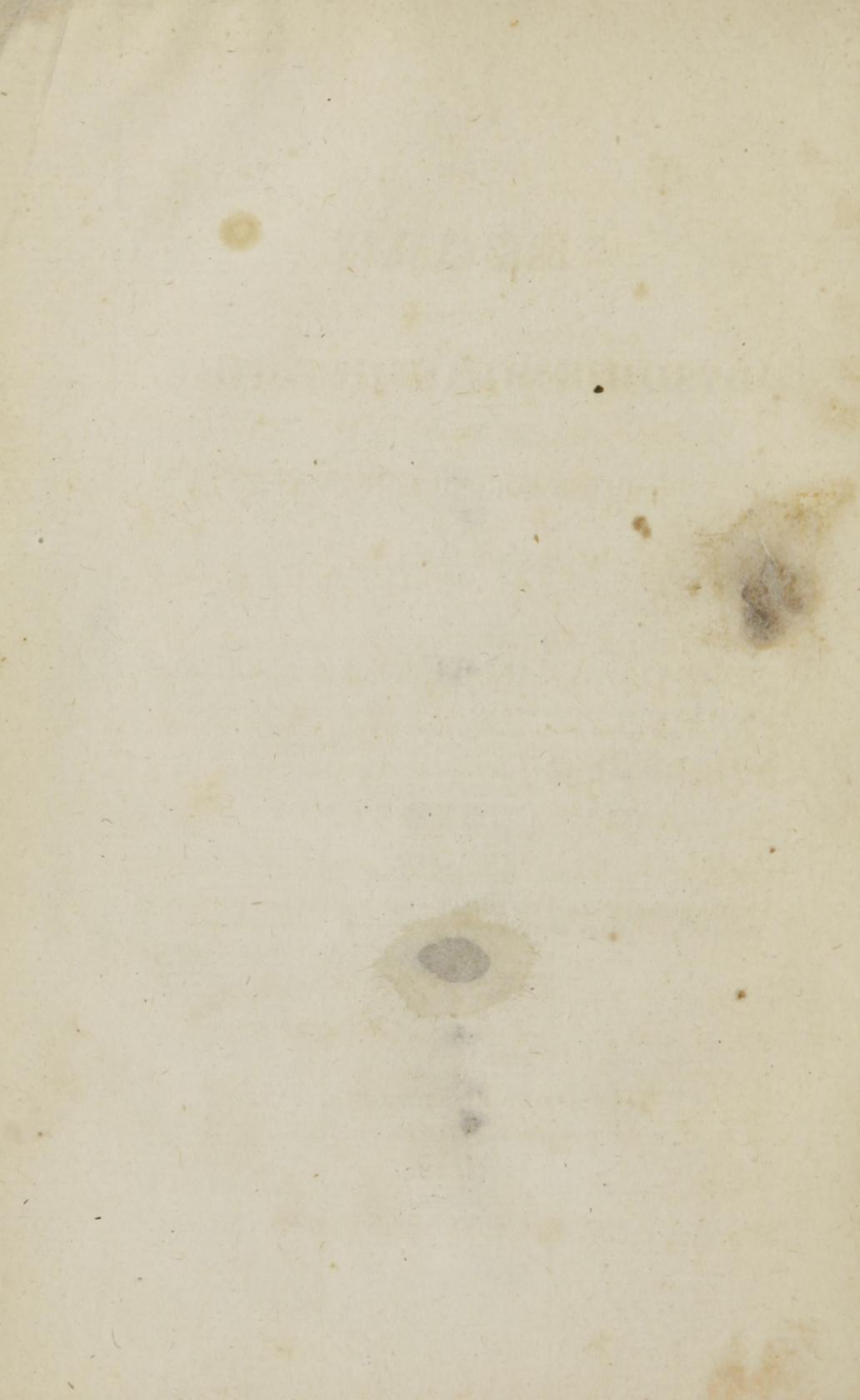
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TO
THE MASTER, GOVERNORS AND MEMBERS
OF
THE COURT OF ASSISTANTS
IN THE
ROYAL COLLEGE OF SURGEONS,
LONDON.

RESPECTED COLLEAGUES,

I SUBMIT this short exposition of a part of my professional sentiments to your competent and equitable judgment.

My deliberate thoughts are here purposely laid open to all men of education, from a hope, that such proceeding will tend most effectually to promote the Healing Art.

Surgery must appear more respectable when it is known to be established upon rational and scientific

foundations, and that its rules are deducted from the unvarying laws of Nature, and constantly subject to the corrections of progressive Experience and accumulating Observation.

Gentlemen,

Your much obliged,

And faithful Servant,

ANTHONY CARLISLE.

Soho Square, 29th Nov. 1817.

ON THE

DISORDERS OF OLD AGE.

NUMEROUS medical tracts have been written upon Longevity, and on the Maladies of advanced Age ; and it might therefore be unnecessary to trouble the public with any further additions, were it not apparent, that many of those books are too voluminous for common readers, and others rendered objectionable by their technical perplexities.

The present Essay is addressed principally to persons already advanced in years, and does not embrace the course of regimen which from an early period is best calculated to secure a long life.

Experience has fully convinced me, that the later stages of human life are often abridged by unsuitable Diet, or prematurely ended by Disorders which are not treated with sufficient attention by the Faculty.

It seems little better than a vulgar error, to consider the termination of advanced life as the inevitable consequence of time, when the immediate cause of death in old persons is generally known to be some well-marked disease.

According to my observation, the disorders of Senility may often be relieved, and our declining years extended far beyond the ordinary number, by judicious management.

I need not point out to the wiser and better part of mankind, the incalculable value of those sages of our race, whose long experience and knowledge, so difficult to be communicated, may be prematurely lost in the grave; each day that we can prolong their comfortable existence,

may be of inestimable benefit to their families, and the addition of every hour to them may be of lasting use to society.

All impartial observers must have noted instances of men with contrary habits arriving at old age ; and it is both easy and plausible for self-indulgence to adduce examples of intemperate men, who attain to advanced years ; but the numbers are not so fairly stated who fall untimely by provoked disease, nor is it inquired how little those devotees have comparatively enjoyed or performed, in consequence of their disorderly conduct.

I trust my brethren will receive this Essay as an attempt to increase the respectability of our profession, by enlarging its duties, and by offering consolation and hope to those who are stricken in years.

These observations necessarily comprise both the offices of the Surgeon and the Physician, because I could not separate the consideration of

local distempers from constitutional influences ; nor does it seem beneficial to the sick, that such distinctions should be practically enforced.

The infirmities of Age assail different parts of the frame ; but some individuals are habitually prone to special Disorders. According to the laws of our nature, the vicissitudes of every passing hour begin to endanger the healthful structure of the body as soon as its growth is completed. A likeness in the composition of its materials, and an exact sameness of every texture and tissue, cannot be expected to continue, because every part is daily wasting and repairing. The error of a subordinate part will, therefore, by degrees encroach upon the organs essential to health, and the accumulation of such derangements soon declares us to be mortal.

In some persons, the vital formations fall into early and ruinous disorder, and a premature fate ensues,—but it would far exceed my present intentions to exhibit even a general view

of those causes, which so often destroy mankind before they approach Senility.

After the middle period of life, the creature is supposed to have fulfilled the command of nature for continuing its race, and the bodily fabric then begins to decline.

The teeth, those implements for grossly dividing the food, are then liable to decay and hence the raw material of replenishment is introduced into the stomach under obvious disadvantages. The compactness and vigour of the muscular flesh begin to diminish, and all the inward fittings and adjustments are prone to give way.

The eyes and the ears, those out-guards for protection, lose their acuteness and sensibility, or have their physical accuracy deteriorated, and the value of individual life seems to fall. At this critical period, it behoves the tenant to keep a strict watch over needful repairs; and, if he have a skilful medical architect, he may

then obtain useful information respecting the best materials for keeping his building together, and on the fittest cements and supports to protect it against approaching storms.

The preventive art of Medicine, and the suitability of Diet, are well worth considering; and, in the autumnal season of life, they will be found to comprise the most rational and the most practical resources of information. For, without fear of contradiction, it may be asserted, that the wholesome regulation of diet, clothing, exercise and air, are often more important than the administration of drugs, blisterings, or bleedings.

When the age of maturity has passed, and the lungs have escaped a derangement of structure, most incident to youth, the common dangers of life are to be discovered in disorders of the head, the stomach, the bowels, the blood vessels, and the liver; and they display themselves by apoplexy, palsy, indigestion, obstructions, inflammations, jaundice, or dropsy. Ma-

ny of these diseases are happily within the reach of medical skill, if attended to in time ; but they are severally much more easily avoided, by prudent regimen and preventive methods.

Few persons are attacked by dangerous disorders without due notice and repeated warnings : I have never known an instance of apoplexy or palsy, until after many previous intimations ; nor any serious affections of the stomach, bowels, or liver, without the precedence of some morbid visitation, such as head-ache, flatulency, acidity, or local pain. It is more than probable, that inflammatory diseases occur only in vitiated habits ; and when they seem to arise spontaneously, or to be occasioned by inadequate causes, they are in truth but roused into activity, and owe their remote origin to an ill-conditioned state.

I cannot adopt the irrational opinion of those, who attribute all human maladies to a single source, or who pretend to remove all distempers by one remedy. The annals of Medicine

have been too often disgraced by these and similar absurdities, although common sense, logic and science have alike, and at all times, discarded them.

Every experienced medical man must have felt the harrassing difficulty of discovering the real nature and the causes of diseases; and he must have equally felt the deep responsibility of directing safe and efficacious treatment; nor does extended practice clear away those intricacies.

It behoves every man who takes upon himself the charge of preserving human life, when endangered by the approach of fatal disorder, to search well for evidence, to ponder before he concludes, and to examine his stores of practical knowledge, before he determines to employ powerful—perhaps, desperate methods.

This careful and cautious inquiry characterizes a good practitioner; for, upon a quick, clear, and, as it were, an intuitive discrimination

between frivolous and leading facts, a sound judgment can alone be formed,—that solemn and deliberate judgment which ought to govern the conduct of every medical man, and on which the momentous question of Life or Death so often depends.

The age of Sixty may, in general, be fixed upon as the commencement of Senility.—About that period it commonly happens, that some signs of bodily infirmity begin to appear, and the skilful medical observer may then be frequently able to detect the first serious aberrations from health.

Long continued professional experience has taught me to seek for such incipient disorders in the evidences of the state of the stomach, and in its dependencies, and from the condition of the blood and its vessels. Over-fulness of the vessels, contamination of the blood, impaired digestion, and consequent crudities, mingling with the elementary materials of the blood,—obstructed bowels, and all the dangers

which result from impediments to that source of keeping the body pure and wholesome, are to be reckoned the leading causes of many diseases;—and a scrupulous attention to these points, will often discover the beginning of bad health.

A dislike to blood-letting, founded on erroneous opinions, is very prevalent in old persons, and even many Physicians sanction the prejudice.

I do not aver that plethora is an invariable condition of old age; but, whenever it does occur, it constitutes a dangerous feature.

The state of the pulse, and other signs of an excessive volume of blood, would often mark out the expediency of bleeding, if a prejudice about its weakening effects did not obtrude; but I am convinced, that the feebleness of age, when produced by sanguineous oppression, can only be removed by diminishing the quantity of

blood, and that, on the promptitude of such measure, the safety of the patient will depend.

The fibres in old persons are relaxed, and the flexible solids, together with the blood vessels, are more yielding than they are at a more vigorous period. From the same cause, that muscular engine, the Heart, labours under a diminished power, while it is obliged to drive on the circulation, under the disadvantages of weakened and distended vessels.

The separating of fluids from the blood, called the secretions and excretions, is also lessened or deteriorated, so that the ordinary methods of its purification, and of balancing its quantity, become impaired; hence, in extreme old age, the blood is liable to be disproportioned, or to be vitiated, in its composition.

The heart and the blood vessels are subject, however, to disturbances, independently of any improper quantity of blood, or any discoverable change in its qualities. Of this kind are some

disorders of the stomach, which occasion sudden and violent rushings of blood into the head, and which seem to be the immediate consequence of deleterious food. This example being one from a long list of similar maladies, shows how inadequate the mere mechanical explanations of anatomy are, in the practical service of medicine.

As to the alleged peculiarities and deviations from the ordinary course of the human constitution, which have been called Idiosyncracies, I profess myself doubtful; and I apprehend, that a deeper scrutiny will assign those apparent incongruities to the variable degrees of power in the living organs. Fortunately for the value of medical precedents, and for the utility of our experience, those alleged discrepancies are very rare, otherwise the records and testimony of our faculty would be of little value. It must, however, be confessed, that the usefulness of written knowledge is mostly confined to those who are prepared by experience to discern its correctness, and to measure its appli-

cations. Verbal representations are necessarily very general; and the things treated of by language alone, must be the most intelligible to those who are already practically acquainted with them.

Of all the preventive and curative remedies whose effects I have carefully witnessed, the most beneficial are Cathartics and Blood-letting; but those powerful means are only efficacious when skilfully directed.

It is a gross and dangerous presumption for unprofessional persons to prescribe for the sick, because few disorders wholly depend on single errors of the body; and when the co-operation of several means are called for, such as both cathartics and bleeding, their salutary effects may turn upon the precedency of the one to the other, on the selection or doses of the drugs, or on the quantity and mode of bleeding.

In addition to those exertions of an experienced judgment, it is the indispensable duty

of a medical practitioner to order the Diet, and to adapt the special articles of food and drink to every vicissitude of health.

When it is considered that many serious disorders are entirely occasioned by improper diet, and that in almost every disease, the direction of diet is perhaps of equal importance with the prescription of medicines, it is blameable to neglect this potent resource, and to rely on the unaided administration from the Apothecary's stores of a few grains of materials, whose qualities are ill understood.

Numbers of learned and honourable men are engaged in the Medical Profession, and the rank which they deservedly hold in society, places them above the suspicion of any unworthy love of mystery. Those long continued technical obscurities, which at one time constituted the very form and body of the profession, seem to be now yielding to the fairer pretensions of science and intelligible observation.

When the concealments of the medical art are laid aside, and the candid avowal of plain sense and of natural knowledge is substituted for occult proceedings, the Faculty will be more faithfully respected, and the customary fees as freely given for advice about regimen, as ever they have been for an elaborate prescription.

The propagation of what is termed general knowledge, threatens a speedy invasion of those privileged establishments which uphold medical mystery; and a prevailing suspicion attributes to all such concealments, the disgrace of mercenary motives, or the equally base design of covering presumptuous ignorance.

In making this exposition, I entertain a genuine desire that my Professional brethren and scholars, in general, should see distinctly that its sole object is to advance the claims of well-qualified practitioners to the respect and confidence of a class of persons, who ought ever to influence the opinions and actions of the mass of society.

Many valuable works, exhibiting the present state of medical knowledge, have been lately published; but as none of them correspond exactly with the results of my experience, I feel it a becoming duty to present my own doctrines in this public manner.

The particular restrictions on Diet, which I have found to be so useful to the Aged, are equally applicable to delicate and sickly persons, to young children, and to breeding and nursing women: and the divulging of these observations may possibly awaken medical practitioners to the important subject of general regimen. The difficulties, uncertainties, and perils of our art, are sufficiently known, to justify every fair attempt to improve the knowledge of the causes of bad health, and to expand our means for alleviating or curing disorders.

This brief contribution of general suggestions, respecting the medical treatment of old persons, is but a specimen and small fragment of my professional collections; it is, however,

sanctioned by experience, and composed under some peculiar advantages, at a mature age.

The most numerous tribe of disorders incident to advanced life, spring from the failure or errors of the stomach and its dependancies, (as already observed); and perhaps the first source of all the infirmities of senility, may be traced to effects arising from imperfectly digested food; nor does it seem probable, that any effectual means will ever be discovered to counteract this progressive and inevitable failure of our nature.

It is obvious, as the organs for digestion lose their vigour, the food should be adapted to the degree of decline which invades the stomach and its subordinate parts; and the state of the bile, and the discharges from the bowels, should be then attentively watched, and duly regulated by diet and medicines.

It is logically evident, that if the same kind of nutritious materials were constantly produced in the human frame for its repairs and uses, the

same compounds and textures would continue unaltered by time, and the vigour of youth and health would be steadily maintained. It is therefore clearly obvious, that every defect in the composition of our bodily materials must alter its condition.

From the steady causes which govern the accretion of figured minerals, they increase in bulk with perfect regularity, and are exempt from the limitations of age or growth; but the organized structures of living animals and vegetables are differently constituted.

The materials for the residence of life, being formed of unstable substances, are continually decaying, and giving place to new supplies derived from assimilated fluids, which are elaborated by the vital offices. By this system of borrowing and expenditure, a certain degree of renovation attends the maintenance of animal and vegetable bodies, which is wisely adapted to their liability to accidents, and to the ordinations of a limited existence.

In every stage of human life, the functions of the Stomach are of principal importance to health; and the same rules for diet, which prove beneficial to the aged, will generally apply to all invalids, unless where the exceptions, hereafter to be mentioned, forbid an exact regimen.

Whatever objections may be urged against young persons living by rule, they certainly do not apply to old age; neither do I admit of much latitude for peculiarities of constitution, especially if they tend to license habits which are known to be injurious.

The substances selected for the diet of old persons, and the cookery of their food, should be adapted to the state of their teeth; and solid viands, or those kinds which are difficult of solution, should be minced, bruised, or otherwise prepared to meet the defects of the chewing instruments.

In addition to the gradual failure of the teeth, the stomach itself suffers a diminution of its powers to convert food into the raw fluid material for bodily replenishment ; and hence it becomes needful to be more choice and particular about the diet in advanced years.

In old age the bowels are also liable to an increasing torpor, which demands that a preference should be given to meats not remarkably putrescible.

On a general view of the most suitable Diet for the aged and the feeble, it may confidently be asserted that animal substances are more easily changed into nutritious fluids by digestion, than vegetables ; and it is reasonable to infer, that the digested substance of animals is more readily converted into the medium of replenishment, than that of vegetables ; still, however, there are many exceptions to this rule, since the soluble muscilages, farina, and pulps of some vegetables, are known to be more digestible,

than the tough and hard parts of animals, which are difficult both of solution and digestion.

In like manner the several parts of meat, as the skin, tendon, muscle, and fatty membranes, differ from each other; and they are severally capable of being made more or less digestible by the culinary art. The statement of special examples will, however, best illustrate this subject.

It is a vulgar error to esteem white meats, on account of their apparent delicacy, as the fittest for feeble persons. Generally, it may be esteemed a safe rule, that veal, pork, fowl, and turkey, are less digestible, and afford less nourishment, than the redder-fleshed animals.

The intrinsic goodness of meats is always to be suspected, when they require spicy seasonings to make up for their natural want of sapidity.

In the course of practice, I have constantly found Veal to disagree with weak stomachs;

the sugar of milk which it contains, disposes it to pass into the acetous fermentation ; and besides, it possesses an excess of tough fibre, destined to complete the bulk of the mature animal, and which is a substance of difficult solution. The pot-herbs and other seasoning employed for savoury stuffing, add to its unsuitableness.

Pork is also an unfit meat for the feeble, the excess of its fat rendering it liable to ferment ; the physical properties of Fat are also different from those of fluid nutriment, of which Milk and Blood may be considered the standards of comparison.

Turkey, and the older domestic Fowls, are equally objectionable.

Salted meats, as ham, tongue, bacon, and salted beef and pork are to be forbidden, because the preserving material hardens the animal fibres, alters the juices of the meats, and impregnates them with an excess of salt, be-

yond what is convenient for the operations of the stomach.

The particular parts of meat which are improper for the aged, are the gristles, browned surfaces from over-roasting, tendons, and hard fat.

Unless the processes of Cookery render the parts of meat quite soft and soluble, they often make them more difficult of digestion. Thus overdone meats, and outside portions, as the crusty and torrifed surfaces, are less proper than the more juicy and underdone flesh.

I am also of opinion that boiled meats are for the most part less digestible and contain less nutriment, than the same meats when roasted or broiled.

Fish may be considered as ineligible for the aged, because of its aptitude to putrefaction, and because of the deleterious products of that fermentation when it happens in the bowels or

stomach. The relative degrees of their unwholesomeness may be, perhaps, fairly estimated in the following order :—The most pernicious are shell-fish, since they are often notoriously the cause of surfeits, erysipelas, &c. more especially when tainted ; and herrings, mackarel, salmon, and eels, seem to be next in the range of indigestible fish. The best sorts are whiting, perch, flounders, smelts, skate, haddock, turbot, and soals. It may be remarked, that boiled fish more frequently proves agreeable to the stomach than fried. The same objections may be adduced against salted fish, as were before alleged against salted meats.

An excessive and cheap supply of Fish to the inhabitants of large cities, is a very questionable policy ; but, in times of putrescent contagion, it seems especially dangerous.

Milk is the food destined by nature for the infant period, and it seldom proves agreeable to old persons ; the sparing use of cheese and but-

ter should also rather be permitted than recommended.

Of the Vegetable kind, those which are uncooked, such as cucumbers, onions, celery, radish, salads, water-cresses, and likewise pickles, will be found injurious. Even the hard pulped fruits, such as apples, nectarines, peaches, some kinds of pears, plums, and cherries, are apt to pass through the body undigested, to ferment, and produce a train of evil consequences.

Great choice and nicety are required in adapting the kinds and quantities of fruits to the healthful diet of the aged. The sweeter refreshing juices of strawberries, raspberries, grapes, oranges, and currants, may be occasionally salutary; but either excess, want of selection, or the indiscriminate indulgence in them is noxious. Dried fruits, such as raisins, figs, prunes, &c. are more indigestible, than when fresh; and, I believe, it is incorrect to ascribe to them generally opening properties. The nut and

almond tribe should be excluded from the tables of the aged ; and, perhaps, the whole catalogue of dessert refreshments, and sugared confectionary, should be forbidden, with the exception of the fruits already enumerated.

When Fermented Liquors are good for the feeble, those which are well fermented, and which have little sugar or free acid should be preferred. The Rhine and French wines are objectionable, as well as luscious sweet wines, and Malt liquors, because they either contain a free acid, or readily pass into the acid state in the stomach. Long continued and watchful observation induce me to conclude, that the acid qualities of fermented liquors are no less injurious than the spirit which they contain. The acid properties appear, however, to be less hurtful to youth, than the spirituous ; while the reverse obtains with aged persons.

As the determination of the relative quantities of Free Acid in ordinary fermented liquors seemed to be important, I requested my accu-

rate pupil, Mr. HARE, to make a series of chymical experiments for that purpose, under my own superintendence, the gross results of which appear in the following table :

No.	Substance	Weight	Remarks
1	Hydrogen	10	Weight above
2	Hydrogen	10	Weight above
3	Hydrogen	10	Weight above
4	Hydrogen	10	Weight above
5	Hydrogen	10	Weight above
6	Hydrogen	10	Weight above
7	Hydrogen	10	Weight above
8	Hydrogen	10	Weight above
9	Hydrogen	10	Weight above
10	Hydrogen	10	Weight above
11	Hydrogen	10	Weight above
12	Hydrogen	10	Weight above
13	Hydrogen	10	Weight above
14	Hydrogen	10	Weight above
15	Hydrogen	10	Weight above
16	Hydrogen	10	Weight above
17	Hydrogen	10	Weight above
18	Hydrogen	10	Weight above
19	Hydrogen	10	Weight above
20	Hydrogen	10	Weight above
21	Hydrogen	10	Weight above
22	Hydrogen	10	Weight above
23	Hydrogen	10	Weight above
24	Hydrogen	10	Weight above
25	Hydrogen	10	Weight above
26	Hydrogen	10	Weight above
27	Hydrogen	10	Weight above
28	Hydrogen	10	Weight above
29	Hydrogen	10	Weight above
30	Hydrogen	10	Weight above
31	Hydrogen	10	Weight above
32	Hydrogen	10	Weight above
33	Hydrogen	10	Weight above
34	Hydrogen	10	Weight above
35	Hydrogen	10	Weight above
36	Hydrogen	10	Weight above
37	Hydrogen	10	Weight above
38	Hydrogen	10	Weight above
39	Hydrogen	10	Weight above
40	Hydrogen	10	Weight above
41	Hydrogen	10	Weight above
42	Hydrogen	10	Weight above
43	Hydrogen	10	Weight above
44	Hydrogen	10	Weight above
45	Hydrogen	10	Weight above
46	Hydrogen	10	Weight above
47	Hydrogen	10	Weight above
48	Hydrogen	10	Weight above
49	Hydrogen	10	Weight above
50	Hydrogen	10	Weight above

TABLE of the Medicinal Alkalis and Earths required to neutralize the Free Acids contained in certain Wines and Malt Liquors.

Port Wine.	NEUTRALIZED BY.	Grains.	Drops, by fluid measure
A moderate sized glassful, containing two ounces avoirdupoise wt.	Henry's calcined Magnesia	3½	—
	Carbonate of Potash -	6½	—
	Sub-carbonate of Soda -	4	—
	Prepared Chalk -	9	—
	Liquid Potash -	—	11
	Liquid Ammonia -	—	13
Vidonia. Two ounces, as above stated.	Henry's calcined Magnesia	5	—
	Carbonate of Potash -	7	—
	Sub-Carbonate of Soda -	6	—
	Prepared Chalk -	12	—
	Liquid Potash -	—	12
	Liquid Ammonia -	—	19
Sherry. Two ounces, as above stated.	Henry's calcined Magnesia	3	—
	Carbonate of Potash -	5	—
	Sub-carbonate of Soda -	4½	—
	Prepared Chalk -	8	—
	Liquid Potash -	—	9
	Liquid Ammonia -	—	11
London Draught Porter. Two ounces, by weight as above.	Henry's calcined Magnesia	5	—
	Carbonate of Potash -	3½	—
	Sub-carbonate of Soda -	3	—
	Prepared Chalk -	6	—
	Liquid Potash -	—	6
	Liquid Ammonia -	—	10
Brewers' fresh Table Beer. Two ounces, by weight as above.	Henry's calcined Magnesia	2½	—
	Carbonate of Potash -	2	—
	Sub-carbonate of Soda -	2	—
	Prepared Chalk -	5	—
	Liquid Potash -	—	4
	Liquid Ammonia -	—	6

The Alkalis and Earths used in Medicine, as correctives for acidity in the stomach, and obtained from Apothecaries' Hall, were preferred for obvious reasons.

Specimens of several kinds of good Wines from Gentlemen's cellars were employed, without any regard to the years of vintage or the dates of bottling, and the average of numerous trials upon Wines of different qualities are faithfully recorded.

Due time was always allowed for the operation of the tests, and much pains bestowed upon ascertaining the exact state of neutralization.

The facts elicited from those trials, being wholly intended for medicinal and dietetic application, all particular minutiae are intentionally omitted.

Some remarkable and unexpected discordances occurred in the relative proportions of Alkalis and Earths, required to neutralize different

wines, and which may be owing to the varying affinities of native acids, derived from the fruits, and the acid products of fermentation, as they regarded the several tests.

The peculiar acids of Fermented Liquors being at present but imperfectly known to Chymists, some practical good may arise from this gross display of acid liquors, both in the adaptation of the medicinal doses of anti-acids, and in the choice of wines where disordered acidity of the stomach prevails.

The annexed table exhibits gross proofs of the quantity of Free Acid contained in some ordinary fruits, and which may serve as a dietetic indication; exclusive of the additional acid produced by fermentation in the stomach:

TABLE of the Medicinal Alkalis and Earths required to neutralize the Acid Juices contained in Lemons, Oranges, and certain Apples.

	NEUTRALIZED BY	Grains.	Drops, by measure
For a common sized Lemon.	Henry's calcined Magnesia	30	
	Carbonate of Potash -	38	
	Sub-carbonate of Soda -	34	
	Prepared Chalk - -	52	
	Liquid Potash - -	—	80
	Liquid Ammonia - -	—	92
A common sized Sweet Orange.	Henry's calcined Magnesia	12	
	Carbonate of Potash -	9	
	Sub-Carbonate of Soda -	6	
	Prepared Chalk - -	16	
	Liquid Potash - -	—	15
	Liquid Ammonia - -	—	18
An ordinary sized Nonpariel Apple.	Henry's calcined Magnesia	7	
	Carbonate of Potash -	6	
	Sub-carbonate of Soda -	5	
	Prepared Chalk - -	15	
	Liquid Potash - -	—	14
	Liquid Ammonia - -	—	16

The sum of these tabulated experiments may be practically reduced to the following conclusions. An average bottle of ordinary Port wine contains as much acid as will demand $38\frac{1}{2}$ grains of magnesia, or $71\frac{1}{2}$ grains of carbonate of potash, to saturate it: or the free acid in a bottle of Port wine may be roughly computed as equal to that of two lemons, or four nonpariel apples.

A habit of drinking any diluent liquors very freely appears to be pernicious ; such fluids not only relax the stomach, but also present the best medium for fermentations of the most unwholesome kind.

Every medical man ought to possess more accurate knowledge of the disorders which have occurred in his own person, than of those which belong to others ; and I am satisfied, from that source of experience, that acids not only act upon the stomach and its contents, but they likewise pervade the whole body. I have constantly had an eruption of serous pimples on the skin within two hours after eating crude fruits, and have repeatedly felt a gouty pain and swelling in the large joint of the great toe, while drinking half a point of Claret ; and similar facts have been mentioned to me by numerous Patients.

If the Gout should be a humoral disease, occasioned by alimentary acids, then the Diet and the corrective remedies are obvious, and experi-

ence seems to support this notion. That the gout is not a disease wholly attributable to fermented liquors is certain, because many water drinkers, and restrictive vegetable eaters, are subject to its attacks; but, perhaps, the true source of gout in such temperate persons may be found in the crude and fermentable articles of their Diet. It is both an act of justice to the public and myself to add, that my practice, whenever it has come in contact with gouty persons, has been governed by the preceding views, and attended with unvarying beneficial results.

The dark red fleshed meats are the fittest articles of Diet for feeble and invalid stomachs; such as venison, game, mutton, and beef, which should be chosen of the tenderest kinds and judiciously cooked.

The duck and goose tribe have wholesome flesh, but the fatness of their skins, and the usual mode of seasoning, render them objectionable.

The good old custom of dining in the middle of the day will be found conducive to health and sleep ; it is best adapted to the decline of animal vigour, because it affords a timely replenishment, before the evening waning of the vital powers, and which naturally precedes the hour of rest.

Bland and simple soups made of game, beef, mutton, or giblets, are often suitable, but veal and indissoluble vegetables should be excluded.

Some preparations with milk, and arrow-root, flour, bread, biscuit, macaroni, or ground rice, may afford an eligible diversity ; but the custom of eating much fermented bread, or of breakfasting on spongy rolls, muffins, &c. is improper, as they are less digestible than softened biscuit, and contain an excess of yest sufficient to promote fermentation.

That elegant, fragrant, and refreshing beverage, Tea, the hourly refection of the largest and, perhaps, most civilized nation in the world,

need not be denied to the aged. It is well suited to cleanse and wash the stomach in the morning, preparatory to the substantial meal; and when taken in moderation, it is a delicious diluent immediately after that repast.

If the Dinner be eaten at mid-day, the equivocal entertainment, called Luncheon, is superfluous.

The purity of Water for drinking is so essential, that it may be questioned whether any healthful residence can be found, where the contrary is notorious. Toast-water is best made with hard biscuit, reduced by fire to a coffee colour. This drink being free from yest, is a most agreeable beverage.

Long established use may render Coffee inoffensive, but it is more apt to become sour than either Tea or weak Chocolate, and it seems to be more heating.

The vegetable additions to dinner ought to be of the softer or farianaceous kinds, such as green pease, asparagus, cauliflower, beans, mealy potatoes, and rice, or simply dressed macaroni. Cabbage and brocoli are coarse and offensive, unless when boiled in two successive waters and rendered bland. This process of twice boiling frees the cabbage-tribe from noxious matter, which occasions flatulencies and other unhealthy effects.

Carrots are better reduced to a pulp, and Turnips should be free from woody fibres. Spinach should be treated in the French manner, by pressing its pulp through a hair sieve, and with the addition of spicy seasoning. Onions, and roots of that sort, contain accrimonious juices, and are in no way nutritious.

Several changes may be obtained by stewing Celery, Cucumbers, and other dissoluble vegetables; but it may be safely adopted as a rule, that whatever food produces flatulency, is unsuitable.

With all kinds of vegetables, as also with soups, and fish, either black or Cayenne pepper may be taken freely: they are the most useful stimulants to old stomachs, and often supersede the craving for strong drinks, or diminish the quantity otherwise required.

A little Ginger in the Tea is also stimulating, and grateful to the palate.

No apology can be expected for discussing subjects connected with Cookery, and the domestic ordering of Diet, which in my estimation are highly important matters; and a close attention to them has often proved satisfactory, when the *Materia Medica* has failed.

The great Father of the Medical and Chirurgical Art, HIPPOCRATES, laid much stress upon diet, and a whole sect of later Physicians professed to relieve disorders by Diet alone.

Although regularity in Diet and strict Temperance, both as to the quantities and qualities

of viands and drink, are of the highest consequence for the health of the aged, yet a long continued and exact sameness in strict habits is not always beneficial. Little deviations from one kind of proper Diet to another, still keeping within the bounds of moderation, are consonant with the system of Nature, and are approved by experience. Perhaps the changes of the Seasons and the consequent variety of aliment thereby presented to the animal creation, may be needful and wise ordinations to induce alterations of Diet, and of the external influences from the Air; both of them having the effect of interrupting the continuance of constitutional errors. Thus by a general, simple, and unobserved governing power, the bodies of the Animal creation are beneficially adapted to the revolution of the Seasons, and the harmony of the vegetable and animal kingdoms is beautifully preserved.

It may be doubted, whether the artificial resistance to the seasons which Affluence commands, is on the whole beneficial to the families

of its possessors, in consequence of their frequent misapplications; and I am, therefore, obliged to consider this operation of wealth, as a great source of both hereditary disease and of enfeebled progeny.

A long continued sameness of local and of family habits, does not act in the same degree upon labouring persons; but, in all cases of locally protracted generations, the consequences are, the augmentation or establishment of some constitutional and hereditary disorder.

It seems probable that many diseases are more immediately propagated by the influences of local and dietetic habits, than by taint of blood, or by corporeal and organic similitudes; and this view extends equally to Scrophula, Gout, and Insanity.

Where, however, Riches are wisely employed, the effects of unhealthful local causes may be interrupted by change of residence, adapted to the peculiar disordered tendency, and to the

unsuitableness of particular seasons. For as the animal energies are never stationary, perhaps health may in all cases be promoted by occasional vicissitudes. It might be wished that Art could secure an equable state of health, but the laws of animal life seem to forbid it, and the following notorious facts support a contrary decision.

In the training of athletic men, of race horses, and fighting cocks, experience has shewn that their strength cannot be preserved in its highest vigour for many weeks together, and every attempt to force its continuance is followed by disorders. Temperance may be carried so far as at length to border on abstinence, or it may be altogether erroneous and directed to wrong objects. Excessive abstemiousness is seldom conducive to health, because a copious supply of fresh and wholesome material seems to be peculiarly needful for the aged, whose bodily offices are becoming every day less perfect: frequent and abundant supplies of renovating juices are more requisite in a vitiated condition

of the fluids, and where the maintenance of a due quantity of blood is precarious, both of which occur when the vital operations are enfeebled. The obstinate fasting of maniacs often occasions a disease which resembles the sea-scurvy. The errors of temperance depending on an unsuitable choice of food and drink, as they regard different constitutions and the younger stages of life, form an expansive subject far beyond the intended limits of this Treatise; it may, however, prove expedient at present to remark, that a weak stomach is wholly incapable of digesting many substances, which are commonly esteemed simple and inoffensive.

For example, persons liable to Heart-burn, or St. Anthony's fire, may think it right to restrict their diet to fruits, raw vegetables, shellfish, and lemonade, although each of them are adequate causes for such habitual disorders. In like manner, the victims to Gout may assume great merit to themselves by abstaining from animal food, and by living upon a simple acescent diet, most pernicious to their constitutions.

Diet, judiciously ordered, equally promotes bodily and moral health; for good digestion favours refreshing sleep, and causes a state of corporeal hilarity conducive to moral enjoyments; while, on the contrary, a disordered state of the stomach and its dependancies creates troubled dreams and irritations of the temper. May not some kinds of mania be attributable to continued disturbances of the stomach and bowels, and which in time deprive the oppressed sufferer of the power to distinguish between his sleeping and waking impressions?

Cold baths, and what is called "bracing air," do not appear to produce much tonic effect upon old persons; and, besides, any sudden chilling of the skin repels the capillary circulation throughout the surface of the body, and drives the blood upon the inward parts, which is always attended with danger to persons advanced in life.

Tepid baths may be recommended, as no less pleasant than salutary; for ablutions of wa-

ter have a constricting influence upon the living fibres, independent of temperature, an effect perhaps similar to that of crimping fish.

Warm clothing is proper for the aged, and the maintenance of a temperate atmosphere in lofty and well ventilated rooms. Where a choice of climate can be made, a preference should be given to that which possesses a dry warm air, and where the vicissitudes of the seasons are moderate.

Exercise should never be imposed as a task, nor continued until it produce fatigue; but should be moderate and suited to the inclination of the party, otherwise it becomes labour.

The tranquil sorts of indulgence are to be preferred; and it is pleasing to reflect, that most of the essential accommodations for Old Age are nearly as attainable by persons in moderate circumstances as by the affluent.

Those simple and wholesome requisites for advanced life are not expensive ; since when the vanities and turbulent propensities of youth have subsided, and the bad passions of envy and ambition have passed away, it is the condition of our nature to be more easily satisfied.

The medical administrations for old persons which experience warrants me to commend, are few, and, I trust, rationally supported. In addition to special Diet, they consist of cathartics, bleeding, acids, alkalis, mercurials, and chalybeates.

The health of the body cannot be maintained, unless the bowels perform their natural offices regularly and sufficiently, and when this wholesome evacuation is impeded, it must be forced by art.

There are various causes of obstruction of the alimentary passages ; they may be rendered torpid by oppression of the brain, or sluggish by the advancing insensibility of age ; or the

muscular powers of the stomach and the intestines may be exhausted upon crude and indigestible food, so as to disable them from duly protruding their feculent contents. The Bile, that natural cathartic stimulant, may be deficient, or obstructed; it may not possess its requisite qualities, or its effects may be counteracted by improper Diet.

The class of cathartic medicines comprises a numerous list, and each differs in its mode of operation, either as it affects the stomach, or the upper or the lower intestines; some act by increasing the muscular contractions, some by causing an increased flow of watery juices into the bowels, and others by stimulating the biliary vessels to pour out their cathartic fluids.

Although each of such medicines may be fit remedies for particular disorders, yet the success of their employment will depend on the adaptation of the drugs to the nature of the malady, the amount of their doses, and the times of their administration. In exhausted states of the

body, dry and hard pills are slow of solution, and they are apt to create head-ache and great distress, until their concentrated materials dissolve and become diffused over the interior of the stomach. I have found such pills undissolved in the stomach on the third day after they had been taken; but my professional thoughts upon Cathartics are before the Public in a copious tract, printed in *THE LONDON MEDICAL REPOSITORY*, for the year 1814, Vol. 1.

The leading indications which guide the skilful and discriminating practitioner in directing cathartics, are to be observed on the tongue, which shows the condition of the stomach and bowels; in the colour of the urine and fæces; and on the appearance of the skin; by which tokens, the state of the biliary system may be discovered.

These evidences are, however, liable to be blended with disordered states of the sanguiferous vessels, and on the detection of such errors

the question of blood-letting depends. The signs of over-fulness or scantiness of blood are commonly well marked. A strong beating, large pulse, with high temperature of the body and limbs, deep-coloured lips, and tense, swollen veins, express the state called plethora, or excess of blood.

When those symptoms are accompanied by frequent obscurations of sight, swimming in the head, giddiness, intense head-ache, drowsiness, laborious breathing, or feelings of terror, blood-letting should be confidently directed without any reference to the age of the patient. Many fatal diseases of the head or lungs in very old persons originate from plethora or local congestion, and free bleedings with the lancet, by cupping, or leeches, are the only effective remedies. How many persons in the most advanced stage of life are respited from the grave, by spontaneous bleedings from the nose, or from piles?

It is true, that mere anatomical or mechanical practitioners, are unable to appreciate the peculiar advantages of topical blood-letting, but the more scientific part of my brethren, who have considered the hydraulic discoveries of VENTURI, and the experiments of SPALANZANI on the circulating fluids of animals, will perceive the practical bearings of those discoveries.

Intermissions of the pulse in old persons afford no justifiable objection to blood-letting; but, on the contrary, that irregularity rather seems to depend on oppression of the heart from surcharges of blood beyond the rate of its enfeebled muscular powers, and the pulse generally becomes more equable after the excessive volume of blood is reduced. Neither does a sudden œdema supervening on true inflammatory diseases forbid blood-letting, because serous effusions are frequently the known effects of such diseases. I have seen persons above the age of seventy, labouring under dangerous inflammation of the lungs, with a sudden acces-

sion of dropsical swelling in the legs, and who were acknowledged to be saved from the jaws of death by resolute and copious bleedings in contempt of the œdema.

The judicious direction of Blood-letting forms an essential part of medical skill, but unfortunately the judgment which is to guide the practitioner, is unattainable except it be derived from experience.

A small, weak beating pulse, pale lips, a low temperature of the body, cold hands and feet, and a remarkable aptitude to become chilled in cold weather, are the signs of paucity of the blood and feebleness of the circulation. The complexion of the face is not a criterion of the quantity of the blood, for I have often known the true sanguineous apoplexy to attack persons with remarkably pale countenances. That disordered condition which is produced by scantiness or poverty of the blood, must be remedied by plentiful and nutritious diet, suited with respect to quantity, quality, and times of refresh-

ment to the digestive capacities of the individual. Wines, if agreeable to the constitution and habits of the weakened invalid, are often beneficial. They seem, when congenial, to invigorate the heart, to augment the bodily temperature, and to improve the nervous and sensorial powers. They are diffusible and temporary stimulants to the whole vital system. In some instances of debility, suitable wines appear to strengthen digestion; but, perhaps, that salutary consequence is rather due to their influence upon the sanguineous and nervous organs. The intimate connection between the health of the stomach and the circulation of the blood, renders wine allowable where the vascular system is habitually weak; and, probably, in such cases, wine prevents greater evils than those which it is known to produce. The most cordial Wine for old persons seems to be mild and old Sherry, when free from acidity.

There is a poverty of blood which seems to arise from deficiency of the red colouring particles, and for which medicated preparations of

iron and chalybeate waters are well known specifics; of all the remedies for pale-faced debility at any age, chalybeates are the most efficacious: it appears from the best chymical analysis, that the red colour of animal blood is derived from iron, and the exhibition of it as a medicine is only the artificial supply of a constituent part of the body, where it is obviously wanting.

Impaired Digestion is an extensive source of disorder; for, whenever the food is not quickly acted upon by the living stomach, it becomes liable to fermentations. In old persons the food remains longer uncontrolled by the vital energies than in young persons, and is never so perfectly digested; hence the food of old persons admits more readily of both the acetous and putrefactive fermentations, either of which happening, even in a small degree, occasions disorder of the stomach or intestines, and suffuses the body with vitiated fluids. The acetous fermentation is most common, and it is especially incident to those who eat raw vegetables,

fruits, sweets, and fatty substances ; and every excess in diluent liquors is apt also to produce it.

Experience and meditation persuade me, that alimentary acidities are the chief if not the sole cause of gout, of one kind of erysipelas, and of many herpetic diseases. When this tendency to acid has long prevailed, it is not easily corrected ; and unless the most circumspect attention be constantly given to Diet, it will continually recur.

Acidity of the stomach is, moreover, a cause of obstruction to the flow of bile, and, under such disordered state, the whole body becomes tainted with crude humours. I have known many examples of acid stomachs linked with eruptions on the skin, and which were always sensibly aggravated within five minutes after taking acid food or acid drink.

The rapid consequences which follow that state, called a surfeit, are further proofs of the

quick transition of disordered humours from the stomach into the rest of the body.

Some of the dangerous and sudden disorders which arise from intemperance, may be averted by instant emetics; but vomiting is an unsafe operation for old persons, and it is only warranted by pressing necessity. Purgatives should follow those emetics to expel the reliques of corrupted aliment, and great precaution must be adopted afterwards respecting diet, and the free passage of the bowels. From neglect of these rules many disorders are allowed to accumulate, until at length they assume a formidable aspect.

Diseases, purely inflammatory, appear to be few and of rare occurrence; whilst the most dangerous spontaneous inflammations are connected with established and vitiated conditions, which only require an exciting circumstance to bring them into activity.

Diseases of the sanguineous system are the most frequent causes of death in all ages ; but they seldom occur to persons, whose alimentary organs and whose blood might be considered free from impurities. To these causes may be confidently ascribed erysipelas, gangrenous inflammations, carbuncles, and many kinds of apoplexy, pneumonia, and gout,—diseases which, according to my apprehension, are closely allied to each other : obstructed bowels are likewise not unfrequently the cause of an obstinate and distressing species of sciatica.

Alkalis are the medical remedies for occasional or habitual acidity in the stomach ; and twenty grains of carbonate of potash given as a corrector, in a wine-glass full of milk twice a day, will generally answer the temporary purpose. This medicine seems to act beyond its chymical operation in the stomach, and when used frequently it probably may pervade the whole body. I have often known it to speedily remove painful conditions of the bladder and urinary passages, which were connected with sour-

ness of the stomach, although the disorders had continued for several months. The affections, called gravel, are generally of this kind.

Alkalis, judiciously employed, possess both preventive and curative virtues for many disorders, especially for herpetic and long established eruptions of the skin ; and the rationale of their uses is better understood than those of most other medicines.

In all cases of lowness and depression the volatile alkali is preferable, because of its cordial property. May not its utility, when taken for gangrenous erysipelas, be owing to its anti-acid effects ? To whatever extent hypothetical doctrines may assign the powers of life, as capable of destroying all chymical effects within the human body, experience affords practical evidence to the contrary ; and a scientific observer will soon perceive the great utility of administering Acid and Alkalis as chymical remedies, making due allowances for the abatement of their action and want of precision in their doses, from the

variable and complex operations of living structures.

A popular hypothesis is now very prevalent, which attributes nearly all diseases to a disturbed state of the Liver; and for which, mercurial drugs are lavished almost indiscriminately, as the professed remedies. The folly of expecting to repel this, or any other opinion which is favourable to the natural indolence of mankind, is obvious, especially when it is at the same time upholden by the empirical interests of greedy individuals.

The patrons of the universal bilious system, and the abettors of its universal remedy, Mercury, may, perhaps awake from such reveries when they are warned of the variable and opposite ways in which the liver and its vessels may be deranged. The organ which makes the bile, may yield too much or too little; or the bile may possess too much acrimony, or it may be deficient in the requisite degree of stimulus. The bile may be too rapidly discharged from

its reservoirs, or it may remain too long confined. The issues of the bile may be disturbed by disorders of the stomach, or errors of the bile may cause those disorders; added to which, the liver and its functions may be healthful, while the intestines upon which the bile is destined to act as a stimulant, may be too irritable, or not sufficiently so. From this view it cannot be questioned whether bilious disorders ought to be considered as of one and the same kind, or whether the same remedy can be rationally employed for maladies so widely different.

Such intricacies and complexities in the perilous art of Medicine ought to deter unqualified pretenders, and to demand greater deliberation and study from the regular Faculty. It is, however, but justice to say, that the respectable and grave Referees of the profession are seldom turned aside by popular delusions.

The various preparations of Mercury are, doubtless, of great value in the Medical Profession; but their excessive employment for eve-

ry supposed disorder of the liver cannot be defended, and the indiscriminate use of them as cathartics is often injurious.

The profession of Medicine seems to be advancing quickly into a rational and physical Science, and its progress must be accelerated by viewing the natural causes of diseases, and the rationale of remedies, according to the rules of Natural Philosophy.

The free and unsophisticated practice of English Medical Officers in the Army and Navy, during the late war, has done much to elevate the rank of their art, heretofore abused by mysteries, formalities, and mercenary intrigues. Under the auspices of common sense, the treatment of two putrid diseases by acid antiseptics, which, perhaps, differ very little in their nature,—namely, Sea Scurvy, and pure Typhus Fever,—has been most successful. The latter has been also alleviated in one of its direful symptoms by a mere reduction of bodily temperature. The improvers of Medicine seem also

to be on the verge of determining with practical certainty the respective physical causes of putrid and intermittent Fevers, and of fixing the curative Diet and Medicines for each.

I know full well the danger of stepping beyond the pace of the multitude, and of anticipating improvements; but having taught these doctrines satisfactorily for more than twenty years, I may now venture to claim and offer them to my Brethren.

Both the mineral and vegetable acids are powerful correctors of putridity, but they do not contain any substantial nourishment; as articles of Diet or Medicine, their uses are of the antiseptic kind, and become needful where excessive quantities of animal food are employed.

The Aged are liable to untoward disorders of the urinary passages, and when any sudden obstruction of this sort occurs, which does not arise from strictures or stone, it is commonly the sign of oppression of the brain, tending to

Apoplexy or Palsy. It is of leading importance to discover whether the urinary impediment has any connection with vascular plethora, or with alimentary depravities, because the life of the patient will hinge upon speedy, powerful, and proper administrations. The temporary and delusive relief derived from drawing off the water artificially, is of no avail to the patient's safety ; whilst diseases of the brain or the bowels are sapping the chief organs of life. This ill-omened malady requires the aid of an experienced and resolute master of his art ; and under his auspices, the uplifted hand of death may be often turned aside, even at a very advanced age.

It is a vulgar error to consider all dropsical diseases as the signs of debility, and the results of mere weakness. They are generally symptomatic of impaired constitutions ; but they often proceed immediately from inflammatory causes, and from organic derangements. The local dropsy in the scrotum, called Hydrocele, is seldom of serious character, and ought not to create alarm. I pass over the diseases peculiar

to women, because it would be improper to introduce them in a work, which is addressed to general readers.

In reverting to my first assertion, that Diseases and not the mere exhaustion of Age, are the ordinary causes of death in old persons, it may be beneficial to recapitulate those of most dangerous tendency, the apparent origin of them, and the remedies which medical skill has discovered for their prevention or cure.

Apoplexy, palsy, or pneumonia, arising decidedly from plethora, require vigorous bleedings, cathartics, and abstinence. The same diseases, when occasioned by intemperance, or injurious diet, require evacuants and correctives. Erysipelas, carbuncle, or gangrenous inflammation, arising from surfeit in the stomach, or from foulness of the bowels, must be treated according to their ascertained causes. Gouty diseases, which are provoked and maintained by improper diet, can only be remedied by having recourse to a diet that is exact and appropriate.

While the great excretory outlets of the body, the bowels and the urinary passages, with all their connections, must be constantly watched ; and when impeded, they must be timely assisted by art.

From a wish to awaken the attention of my Brethren to these important cares and duties, I have ventured to solicit the confidence of the Elders of our race toward the Medical Profession, with a full assurance that the Faculty now possess the power to protract life, and assuage suffering, under many of the circumstances which I have attempted to describe.

To pass over the long list of *Materia Medica* in modern use, may be thought presumptuous ; but I prefer to risk the imputation, rather than waste my own and my reader's time in treating of the qualities of medicines, which are either altogether useless or uncertain in their operation. The art is already too much encumbered with frivolous prescriptions, and obscured by unworthy mysteries. Experience has satisfied me, that

many diseases may be prevented or removed by Temperance, and by the rational administration of Medicines whose operations are understood, without much encroachment on the fair enjoyments of life.

It is a wise maxim in Physic, that diseases which are long in their advancement, are generally only to be remedied by long continued curative attentions. Common sense points out the fallacy of expecting to eradicate old established errors of the body, by any single or sudden remedies. The warnings of dangerous diseases should never be forgotten; and the diet, or medical regimen of such persons, should be undeviatingly suited to their disordered tendencies.

To this general exposition of my individual experience and opinions, I shall add a few remarks upon the moral propriety of Surgical operations on Old persons.

The greater exertions of my life have been devoted to the collection of materials for a general review of Surgical Ethics ; a subject which appears to be at this time imperiously demanded, both for the welfare of the Public, and for the character of the profession of Surgery.

Dangerous operations are rarely adviseable in advanced age ; because the living powers are then diminished, and old persons are seldom exempt from constitutional disorders. The disastrous consequences of unsuccessful or imprudent operations are most extensively injurious ; and those desperate expedients are not justifiable upon the false and horrible plea, that the value of life decreases as age advances.

Whenever the immediate danger to life from a surgical operation exceeds the probability of recovery from its effects, the act is unjustifiable.

When the consequences of a mortal disease are only to be averted by a dangerous operation, the enterprise may then be expedient.

When a contemplated operation involves the immediate danger of life, it should be carefully balanced with the pending danger from the disease for which it is proposed; and the operator should be governed by that prospect, which affords the best hope of procrastinating life.

When a safe operation will alleviate the sufferings, or remove the inconvenience of a disease, it is preferable to one which promises permanent relief at the risk of life.

When there is any striking probability that a patient may die under an operation, or of his being constitutionally unable to recover from its immediate effects, such operation is unwarrantable.

When other fatal diseases are known to be lurking in the frame, such as consumption or tendency to apoplexy, it is right to avoid all violent operations.

The performance of surgical operations upon old persons, for the removal of harmless tumors or mere deformities, ought to be objected to.

It is unsafe to perform operations upon old persons who are liable to erysipelas.

The satisfaction which follows the observance of these rules, induces me to submit them to my Brethren of the profession; but as the vital powers vary in old persons, some exceptions will arise to any general rules which may be laid down for their treatment.

I consider all the larger amputations, as those of the arms and legs, to be seldom adviseable for persons on the confines of Seventy, unless the occasion be sudden, and the patient of sound habit.

The operation for the stone is, at all times, dangerous; and I think it better for men advanced in life to bear the pains of that affliction, in preference to the risks and consequences of a

terrible expedient. I have at this time the care of three old Gentlemen, who have each had the stone for several years, and who are all thankful to me for dissuading them from the operation. One Gentleman, now in his Eighty-fifth year, has passed the last twelve months in comfortable ease from living quietly, temperately, and taking alkalis.

Strangulated ruptures, in old debilitated persons, are generally reducible by the hand, the parts being more lax and yielding than in young persons, and the propensity to violent and dangerous inflammation is at that period abated.

Hydrocele is most prudently treated by simple tapping, particularly when the patient is feeble or in bad health; because the attempt to cure that disease radically has often proved destructive to old persons.

It is revolting and disgraceful to hear of the numerous instances of fatal operations performed upon persons who are altogether uneligible; and

it may be remarked, that these mischievous effects are not confined to the suffering parties, since evil reports spread widely, and are generally unaccompanied by the paliative explanations which may belong to them.

These rash proceedings are also injurious to Society, by deterring many persons from availing themselves of Surgical skill, in cases where they might derive real benefit.

However earnestly the afflicted may desire relief from loathsome, painful, or incurable disease, even if they prefer the sacrifice of life to the endurance of protracted suffering, still the Surgeon should refuse to comply with their improper wishes, and not become a party to homicide.

To prolong life under any circumstances, and to diminish the intensity and duration of bodily misery, is our bounden duty; but we are not called upon to decide, whether it be better for a Patient to die under a violent struggle, or to

wait for the Almighty command,—such questions are indeed above human authority.

The same imperative objection is likewise applicable to the practice of giving poisonous doses of Opium, toward the close of painful and apparently fatal diseases,—a measure which ought to be equally reprobated, both from professional and moral considerations.

Medical judgment is not infallible, and the event of recovery from the most hopeless state, is seldom impossible ; but to preclude even a forlorn chance, or to abridge the sufferer of one lingering moment, is far beyond the province of Medical Men.

Desperate operators should be reminded, that it is not uncommon for persons to recover from diseases, which are generally supposed to be mortal ;—but I must reserve the further observations upon that grave and momentous subject,

until I am enabled to lay before the **P**ublic the particular evidences of my own practice, and my special deliberations upon **S**urgical **E**thics.

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