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AN

INAUGURAL ESSAY

ON THE

EFFECTS OF EXTERNAL COLD,

IN THE

CURE OF FEVERS.

SUBMITTED TO THE EXAMINATION OF THE

REV. JOHN ANDREWS, D. D.

PROVOST, PRO. TEM.

THE

TRUSTEES AND MEDICAL PROFESSORS

OF THE

UNIVERSITY OF PENNSYLVANIA,

ON THE FIFTH OF JUNE, 1805,

FOR THE DEGREE OF

DOCTOR OF MEDICINE.

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BY RICHARD L. SAVIN, ✓

OF BALTIMORE,

HONORARY MEMBER OF THE PHILADELPHIA MEDICAL SOCIETY.

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PRESENTED TO THE FACULTY OF THE

UNIVERSITY OF PENNSYLVANIA,

BY

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THOMAS J. ANDERSON, M.D.

OF THE

UNIVERSITY OF PENNSYLVANIA.

ON THE 17TH OF JUNE, 1860.

FOR THE DEGREE OF

DOCTOR OF MEDICINE.

BY RICHARD L. SAYRE,

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PROFESSOR OF THE PRACTICE OF MEDICINE, UNIVERSITY OF PENNSYLVANIA.

THE UNIVERSITY OF PENNSYLVANIA,

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DEDICATION
For the politeness, with which you have
always honoured me, I shall ever retain
TO
DOCTOR WILLIAM MATTHEWS,

AND
DOCTOR JAMES SCANLAN,

OF THE
EASTERN SHORE, (MARYLAND.)

GENTLEMEN,

IT affords me the highest degree of satisfaction, to be able, in this public manner, to offer you my sincere acknowledgments, for the instructions I have received from you, whilst I had the honour of prosecuting my medical studies under your directions. Accept, therefore, this small tribute of respect for the many favours I have received from you.

DEDICATION.

For the politeness, with which you have always honoured me, I shall ever retain an heart-felt remembrance: and be assured, Gentlemen, that no possible change in life can ever lessen that real affection which is now so fervent in the bosom of

Your sincere friend,

and former pupil,

THE AUTHOR.

TO
BENJAMIN RUSH, M. D.

PROFESSOR OF THE INSTITUTES OF MEDICINE AND
CLINICAL CASES,

IN THE
UNIVERSITY OF PENNSYLVANIA,

THIS
INAUGURAL DISSERTATION

IS LIKEWISE INSCRIBED,

AS A MARK OF RESPECT AND GRATITUDE FOR HIS
PUBLIC AND PRIVATE INSTRUCTIONS,

BY HIS SINCERE FRIEND,

AND AFFECTIONATE PUPIL,

THE AUTHOR.

(8)

AN

INAUGURAL ESSAY, &c. &c.

BEFORE I proceed to mention the use of the remedy which is to be the subject of this dissertation, I shall briefly remark, that fevers have been divided by authors into different genera. By the nosologists they are designated by the names of inflammatory, putrid, and nervous. By the professor of the institutes and practice of medicine they are more properly divided into fevers of great morbid, and of feeble morbid ex-

citement. These are again subdivided into many intermediate grades and forms of fever, which it is unnecessary to mention in this place. I shall only remark, that cold is useful in fevers of great morbid excitement attended with symptoms to be mentioned hereafter.

In speaking of the use of cold in fevers, I shall consider it only as a sedative, that is, an abstractor of morbid action from the blood-vessels. It produces this effect by the diminution of the heat of the body, and of the sensibility and irritability of the moving fibres.

Cold has been applied to the body in fevers in three ways.

1. By means of air.
2. Of water, and
3. Of Ice.

1. Cold air is proper in all fevers in which the heat of the body is above its natural standard, and the pulse synocha, synocula, or synochus. It is therefore indicated in the acute and chronic inflammatory rheumatism, and gout⁺, in bilious fevers, and in the small-pox and measles⁺, when the above states of the pulse attend. It may be applied by uncovering the patients occasionally in bed, or by obliging them to lie constantly under light bed-clothes. Dr. Sydenham made it a practice to direct his patients in the above states of fever to leave their beds, in order to expose them more conveniently to the influence of cold air; but this is often disagreeable, and from their extreme weakness frequently impracticable. The following cautions are necessary in the use of cold air in the

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+ Pump water in Gout & Cold air in Measles! — *Risum teneatis*—

above states of fever: 1st. never to apply it in the chilly fit, nor during the sweats that occur in them: and 2dly, always to lessen the cold a little in time of sleep.

2. Cold water may be applied in all the states of fever which have been mentioned, also in the scarlet fever, according to Dr. James Currie of Liverpool. There are several modes of applying it: 1st, by immersion: 2dly, by throwing buckets of water over the patients: 3dly, by wetting the whole body with a sponge, or napkin dipped in cold water: and 4thly, by placing the hands or feet and legs in cold water.

The first mode is inconvenient and often impracticable. The second has

been used with success in many cases ; but the third and fourth modes are to be preferred. To be effectual, the water should be applied four or five times a day, or oftener, if the fever be violent. Its usual effects are to lessen heat, abate pain, induce a gentle perspiration, and often sound and refreshing sleep.

Some physicians have recommended the nitrate of pot-ash to be dissolved in cold water ; others have advised vinegar to be mixed with the water when it is applied to the body. Experience proves the addition of each of them to the water to be useful.

Cold water has sometimes been used in the forming state of fever. In this case the water should be thrown over

the body. By this means the system is roused into a prompt re-action, and the blood-vessels excited into universal, equal and healthy movements.

Cold water, like cold air, is forbidden in the chilly and sweating states of fever. It is likewise forbidden in those fevers in which excitement is suffocated, which is known to take place when the skin is of its natural, or of a temperature cooler than natural, and in cases of great local determination : hence it is less proper in the fevers of the United States, in which the two last symptoms so frequently occur, than in the more open, and general fevers of Great Britain, in which the morbid action is confined exclusively to the blood-vessels, and the system rarely

so prostrated as to produce what **Dr. Rush** calls suffocated excitement.

3. Ice has lately been employed in the fevers of our country with advantage. Its use has been confined chiefly to the head, to which it is applied in a bladder after being pounded into small pieces. Its good effects in relieving a pain in the head, and curing delirium, have been experienced by many people. When held in the hands it abates the frequency of the pulse, and the heat of a fever.

In reviewing the external applications of cold to the cure of fevers, and the great diminution of their mortality in all countries by its general use, we are naturally led to admire the goodness of Providence in rendering a medicine so

efficacious, that is so universal, and so easily obtained, without cost, in nearly all the countries in the world.

I cannot depart from this university without acknowledging my obligations to its medical professors. To them all I now publicly offer my sincere thanks.

That the university of Pennsylvania may long continue to flourish, is the fervent wish of one whose study and ambition it shall ever be to carry into effect the excellent, and he believes the just principles of medicine he has imbibed in it.

THE END.

"Parturient Montes"!

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