

Counteraction : viewed as a means of cure, with remarks on the uses of the issue / by John Epps.

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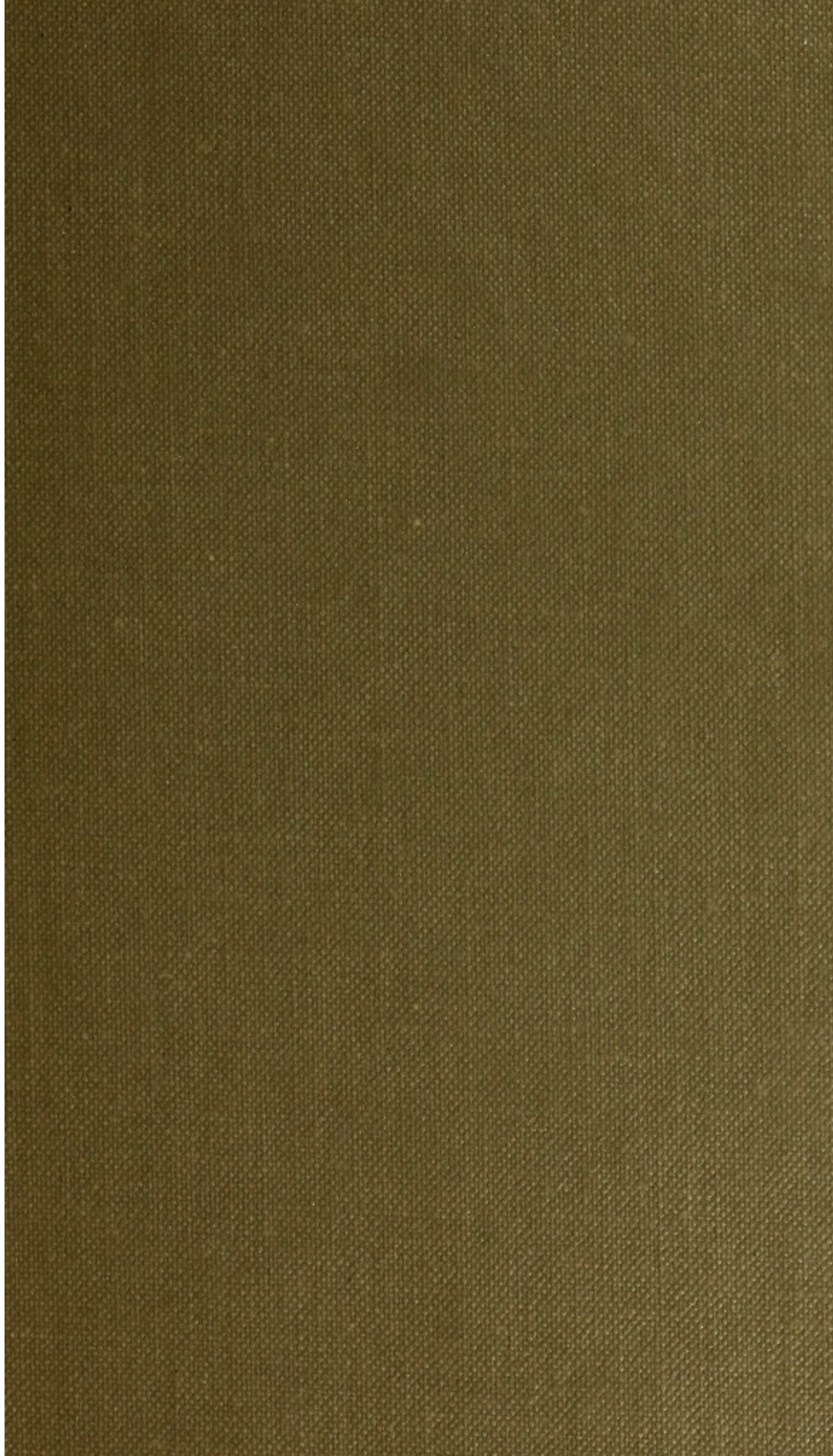
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MEDICAL DEPARTMENT,
COUNTERACTION,
VICTORIA UNIVERSITY

VIEWS AS A

MEANS OF CURE,

WITH

REMARKS ON THE USES OF THE ISSUE.

BY JOHN EPPS, M.D.

GRADUATE OF THE UNIVERSITY OF EDINBURGH; LECTURER ON MATERIA
MEDICA, CHEMISTRY, AND BOTANY, AT THE WESTMINSTER DISPENSARY;
MEMBER OF THE COUNCIL OF THE LONDON COLLEGE OF MEDICINE; AND
DIRECTOR OF THE ROYAL JENNEBIAN AND LONDON VACCINE INSTITUTIONS.

“Juvenis inchoavi : senex edidi.”

“A man may be young in years, but old in experience.”—*Bacon*.

LONDON :

RENSHAW AND RUSH, 356, STRAND.

1832.

COUNTY OF ...

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REMARKS ON THE USES OF THE ...

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John Westley and Co., 27, Ivy Lane.

DEDICATION.

TO His Grace the DUKE of BEDFORD, President of the Royal Jennerian Society, and to those Ladies, Lords, and Gentlemen, governors of the said Society, or of the London Vaccine Institution, as well as to all others, who assisted by their subscriptions in bringing forward "THE LIFE of JOHN WALKER, M.D.," this Essay is dedicated, as a token of respect; and with the wish that the perusal of it may deliver from the presumptuous ignorance of quacks (regular and irregular), by convincing the reader of the nature of the PRINCIPLE OF COUNTERACTION; and also of the necessity of the most extensive qualifications to enable any individual to judge correctly, so as to restore to harmonious action the various parts of the human body, when disturbed in their harmony by disease.

Another reason why this work is dedicated to the governors of the Royal Jennerian and London Vaccine Institutions is embodied in the following quotation from the "Life of John Walker, M.D.:"

“ The director mentions, that children are sometimes brought, for inoculation, under circumstances unfavourable for their reception of it. They have some cutaneous eruption, or other evident indisposition. He informs the parents that it will be difficult to give them the cowpox ; but that, if he succeed, he hopes the children may have very sore arms from it, which may be long in healing. Their alarm ceases when he informs them that nothing can be more likely to remove the complaint they are labouring under. That mothers often, in their conversations, are corroborating the fact, in such expressions as the following :—‘ One of my children was blind before it was inoculated ; that is, its eyes were so tender that it could not look up either by day-light or candle-light. It had very sore arms long after the inoculation ; but it was perfectly relieved, for its sight has been quite strong ever since.’ ‘ Ma’am, I can say the same thing of my child, under another complaint. It had long had a most unpleasant discharge from its ears, from which it was completely relieved in the very same way as yours.’ It is a well-established fact, which he gave to the public in the *Medical and Physical Journal*, July, 1806, that eruptions are sometimes most effectually removed by vaccination, when this is effected ; which, in some cases of eruption, however, he shows to be impracticable till the eruption be subdued ; and, in the same work (August 1806), Dr. Jenner has published his opinions nearly to the same effect.”

In conclusion, I express my wishes, that every blessing may attend you ; and that you may feel the consolation of having helped a widow ; and beg to remain,

Your most obedient servant,

JOHN EPPS, M.D.

May 1, 1832.

11, BERNER'S STREET.

PREFACE.

IN the following pages many well-known, important, and hitherto scattered facts, have been systematically embodied; and, in their illustration, it is presumed, some *new* views are promulgated. If this latter claim be too exalted, the one which maintains that fresh light has been thrown upon previously established views, will, it is believed, be allowed by all the readers of this Essay. "To brighten our perceptions," says Professor Campbell, of Aberdeen, "is to strengthen them: and to strengthen them is to give them a firmer hold of the memory, and to render them more productive of the good fruits that might naturally be expected from them." Polymetis, in his Dialogues, when referring to the utility of his inquiries into the remains of ancient sculpture and painting, in throwing light upon the classics, remarks, "The chief use I have found in this sort of study, has not been so much in discovering what was wholly unknown, as in strengthening and beautifying what was known before. When the day was so much overcast just now, you saw all the same objects that you do at present—these trees, that river, the forest

on the left hand, and those spreading vales to the right; but now the sun is broken out, you see all of them more clearly, and with more pleasure. It shows scarce any thing that you did not see before; but it gives a new life and lustre to every thing that you did see." The application will be obvious.

This Essay, too, is not the hasty production of a few months. The substance has been delivered in the form of lectures to my pupils, at the medical schools, for several courses. Many of these pupils are now putting into force the principles therein developed; and, may I not say, that I feel pleased in adding, *with success*.

I have studied intelligible conciseness. It would have been more easy to have made a large volume: but as *I* like not to wade through half a sheet, and perhaps find no more than *two or three ideas* therein (such writing is now fashionable), my conscience reminded me of the beautiful precept: "Whatsoever ye would that men should do to you, do ye even so to them."—MATT. vii. 12.

J. E.

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INTRODUCTION.

THE NECESSITY OF ENLIGHTENING THE PUBLIC UPON
THE SUBJECT OF COUNTERACTION—DEFINITION OF
WHAT COUNTERACTION IS—THE PREFERENCE GIVEN
TO THIS TERM.

THE subjects treated of in the following pages are,
at the present time, of peculiar interest.

The events that have occurred in the two past years
have induced that awakening of men's minds—the result
of danger threatening with its invading presence. When
the manslayer has been abroad the fears of society are
awakened.* The present visitation, too, of another
scourge, cholera, has still further awakened the public
attention, and has induced a willingness to receive
information on subjects connected with public and in-
dividual health.

Such a state of mind being induced, it seems proper
to direct the inquiries of the public, by presenting a
clear, concise, and satisfactory development of ONE
PRINCIPAL METHOD OF REMEDIAL TREATMENT UNDER

* See the Trial of John St. John Long.

ITS VARIOUS MODIFICATIONS, brought into notice in the late inquests;* the details connected with which have disgusted, horrified, and perplexed the public mind. This is more particularly necessary, on the ground, that thus the *remedial method itself* may be saved from the disrepute into which, from the above details, it is likely to fall. It will thus happen, that the important impetus of public opinion may be directed, not to a distrust (as is likely without this development), but to a scientific approval of this beneficial measure: a measure coeval with the earliest practice of the healing art;† the methods of putting the same into execution varying, it is true, according to the successive progressions of medical science.

The principal subject in the following pages is
COUNTERACTION.

In its consideration, some remarks will be made on
HEALTH and on DISEASE.

Cicero remarks, “Omnis enim, quæ a ratione suscipitur de aliqua re institutio, debet a definitione proficisci, ut intelligatur, quid sit id, de quo disputetur.” Cap. xi. Lib. 1, *De Officiis*. That is, abbreviated explanation of *terms* should precede explanation of *views*.

In conformity to this advice, it is proper to state that all actions in the body are produced by the existence of a *vital principle*, which vital principle may be called into

* The Inquests on Miss Cashin, &c.

† See Hippocrates, Celsus, le Clerc, Avicenna.

differently proportioned activity in any different part, according to the means made use of to direct its activity to any particular part. When any inordinate action takes place in any particular part, we excite an action *counter* or *contrary* to that, in some other part, to obviate the inordinate action, which latter must necessarily be opposed to health. To explain this more fully, it may be stated, that it is considered as a maxim in medicine, first developed in all its importance by John Hunter, THAT NO TWO DISEASED ACTIONS, AFFECTING THE GENERAL CONSTITUTION, CAN GO, ON AT THE SAME TIME, FOR ANY CONSIDERABLE PERIOD IN THE SYSTEM. There is an old proverb, "Poison kills poison;" expressing this truth under another form. Any process in which this action, contrary to the diseased action, is excited, is called COUNTERACTION.

The term *counteraction* is adopted in the following pages in preference to that of *counter-irritation*, because it may be questioned whether *irritation* is always the result, or the concomitant, of counteraction; and because, allowing that it did always result, the term expresses only *one* effect and not the *whole* of the effects. The said term is preferred also to *counter-inflammation*, because, concerning the *condition* of the parts in a state of inflammation, there is the greatest diversity of opinion.—*De Witt*.

In considering this subject of Counteraction, and in incidentally remarking on the two others—Health and Disease, the plan adopted will be the following:—

FIRST. To notice, in the human body, those occurrences produced by the *vital powers* (or what Cullen calls, *vires medicatrices naturæ*), which exhibit the important benefits arising from counteraction.

SECONDLY. To record cases, wherein *accidentally*, and wherein *intentionally*, counteraction being induced, the greatest benefits resulted.

THIRDLY. A view will be given of the widely extended influence of the REMEDIAL PRINCIPLE of this counteraction in the treatment of disease; and in unfolding this, the *conditions* of the body necessary to *health*, and those existing in its converse state, *disease*, will be rendered intelligible, so far as known, to the reader. (In this division, some remarks will be made upon the cholera.)

FOURTHLY. The respective benefits arising from the individual *counter-agents* will be pointed out.

FIFTHLY. The peculiarities connected with *constitutional* tendencies, to be attended to in the use of different counter-agents, will be noticed.

And, SIXTHLY, Some concluding remarks will be made.

CHAPTER I.

SPONTANEOUS COUNTERACTIONS.

THE inquiries occupying the following pages, it seems advisable to commence by noticing, as was before stated, first, THOSE OCCURRENCES IN THE HUMAN BODY PRODUCED BY THE VITAL POWERS (WHAT CULLEN DESIGNATES, VIRES MEDICATRICES NATURÆ), WHICH EXHIBIT THE IMPORTANT BENEFITS OF COUNTERACTION; or, in other words, *those cases in which counteraction is exhibited to us in nature, as a beneficial means of relieving either disease itself or its tendencies.*

These occurrences, technically called *cases*, are very numerous. Order is, therefore, necessary in their enumeration. A commencement may be made with that which Byron calls “the palace of the soul”—it is the HEAD.

In affections of the HEAD, the powers of the system—the vital powers very often *indicate*, if not effect, a cure, by the counteractions they set up in some other part or parts of the body. How often has the practitioner seen children, who, labouring under all the premonitory symptoms of water in the head, are wholly relieved by

a copious discharge behind the ears, occurring spontaneously !

How often has the nervous irritation connected with dentition, indicated by peevishness, startings, and even fits, been relieved by an eruption coming out over the body, or over the cheeks—the *tooth-rash* ! What is this but a counteraction ?

Corruption, water, or blood, issuing out of the nostrils, mouth, or ears, cures head-ache, says Hippocrates. *Sect. vi. aphor. 10.*

How often has the practitioner seen the individual, whose countenance and general condition spoke an apoplectic tendency, yea, even approaching apoplexy, and who would not listen to the warning voice of his medical adviser, to have recourse to *preventive* measures, delivered from the impending danger by a copious discharge of blood from the vessels of the nose !

The counteraction, induced by the discharge from an ulcerated leg, has saved many a gourmand from apoplexy.

I remember a dean, who made “a god of his belly,” and who, every morning, was visited by his medical practitioner, on account of an ulcerated leg, with which he was, he said, “afflicted ;”—the medical practitioner thought, “blessed.” Becoming tired of the constant torment of this ulcerated extremity, and being, at the same time, perhaps, unwilling to pay the constantly repeated fees, the luxurious dean went to a surgeon of considerable eminence for the cure of diseased legs.

The leg was healed, and the Chapter was left vacant ; for the worthy member, who had filled a place in it so many years with so little benefit to the public and with so much ease to himself, was absent : in other words, he died ; and apoplexy was death's messenger.

The dean's medical adviser had recommended him not to have the leg healed ; for, as the dean would eat, and, as the poet says, " would sleep," it was the conviction of the practitioner that some drain must exist in the system.

The dean, however, was not satisfied. The leg-doctor was not of the most accurate or of the most extensive knowledge. He did not see the *principle* of the treatment. The patient came wishing to have his leg healed. The object was effected. The leg-doctor was praised : but the dean, as was before stated, soon ceased to give his commendatory statements of the man's skill.

The following anecdote illustrates the same point, fortunately, however, as manifested in a different result.

Mr. Pippin, the late senior surgeon to the Exeter Hospital, a man of very considerable eminence in the surgical profession, had been sent for to attend a general officer at Dawlish, a watering-place in Devonshire, in order to cure an ulcerated leg, with which the officer, then an old man, was troubled. The leg improved much under the means used by Mr. P. One day, on visiting his patient, he was surprised to see Dr. Daniell at the house, who, also, had been sent for by the officer, but for a purpose rather different, namely, to cure *a discharge of blood from the lungs*, and other symptoms threatening

pulmonary consumption. In consulting on the case, the following curious colloquy took place:—

Dr. Daniell. You must not cure the leg, Mr. Pippin, or you will kill my patient.

Mr. Pippin. Oh, Doctor, he is my patient too, and I must cure the leg. I said I could and would; and my character is at stake.

Dr. Daniell. So is my character; and I assert that you must not cure the leg! The progress of the cure already has (the plan adopted being the exhibition of bark, and the use of other tonic remedies,) brought on spitting of blood; and, if the cure still further proceeds, as the discharge diminishes, the blood will be still more thrown on the lungs; inflammation will, most likely, supervene, then ulceration, and my patient will die.

Mr. Pippin. Well, Doctor, I cannot help it. I said I would cure his leg; and my character is dearer to me than life.

Dr. Daniell. Yes, than *your* life, but surely not *my* patient's. But if you determine to persevere, Mr. Pippin, I will give up the case; for I will not, and cannot, attempt to cure the affection of the lungs while you are healing up the sore leg.

Mr. Pippin. Well, I see it is best to be honest. I will tell the old officer that if I cure his leg he must die; and I will leave him.

He did so; and Dr. Daniell succeeded, by promoting the discharge from the leg, and by the use of other means, in saving the life of the patient.

At the present moment, there lives an old lady in the city, who, from her propensity to eat, might well fill an aldermanic chair. She enjoys very good health, with the exception of having a constant discharge from her leg. This leg she calls her "dear leg;" and has often asserted that she will not, on any account, have her leg healed; being convinced, that, unless it were for this drain, she must die of apoplexy from the effects of the immense supply of nourishment she affords to her system.

The principle of counteraction, excited by nature in one part, relieving or preventing a diseased action in another, is frequently manifested under the following circumstances. Among the members of families characterised by hereditary predisposition to insanity, (and hereditary predispositions will be explained hereafter,) some become insane, others remain sane to the day of their death. An enquiry into the liability of the former, and the non-liability of the latter, will often establish the following interesting facts. Those who were *not* attacked had *scrofulous ulceration* in the leg, neck, or some other part of the body, their continual companion through life. Those becoming subject to insanity were beautifully fair, and, in form and feature, externally most perfect.

I remember a gentleman in whom insanity was developed under the following curious circumstances, which may be mentioned as illustrating, in a singular way, one property of *coffee*. Mr. W., of Birmingham, was troubled with a constant discharge behind the ears. This

had continued many years. A few years since, Dunn's essence of coffee came into general use; to this Mr. W. was particularly partial, so much so, that whenever any friend called upon him, he almost invariably had a cup of coffee; Mr. W. finding great pleasure not only in the rapidity with which the coffee was made by means of the essence, but also in the refreshment it afforded. The discharge of the ears, however, gradually ceased, and at length, when the discharge altogether ceased, Mr. W. became deranged.

How often is insanity developed at the cessation of *menstruation*! This process having ceased, the action and the flow of blood consequent thereon take place elsewhere. The brain, being predisposed to disease, becomes the part that suffers; and insanity is the result of the diseased action thus induced by the cessation of what was its counteraction, namely, menstruation.

Hippocrates, in his sixty-fifth aphorism, section five, has the following observations:—"They in whom tumours and ulcers do appear, are neither taken with convulsions nor driven into rage or madness." On the sudden disappearance of these, from any cause, Hippocrates notices that, if they existed "on the back part of the body, convulsions and (what he calls) distensions of the nerves (spasms) are caused; but, if on the fore part, raging madness, or a sharp pain in the sides, or a suppuration of the humours, or a dysentery, if the eruption were red."

Every practitioner in midwifery is aware of the

circumstance, that insanity is a frequent concomitant of that fever, associated with the suppression of the secretion of milk, called the *milk-fever*.

What, let it now be asked, are these but illustrations, positive and negative, of the benefits arising from counteractions, established by the powers of the system themselves; and also of the evils resulting when these counteractions either cease or are stopped, *without the system being previously brought into a healthy condition?*

Leaving the head, a fact may be noticed in reference to the EYES.

Richter states, "After weaning, mothers are sometimes afflicted with inflammation of the eyes. They take to suckling, and are cured."—*Observ. III.*

Other illustrative circumstances will be referred to hereafter.

To turn to the organ of HEARING. How often has deafness been relieved by a discharge from the ears; and how often has the deafness—removed when the discharge existed—returned when the discharge has ceased! Dr. Fosbroke relates some cases in the Lancets of 1831.

Having pointed out these cases relating to the head and the face, the THROAT claims our attention. It may be noticed, that hoarseness, spasmodic feelings, and other indefinable states of the parts belonging to the neck and thorax, occurring *before* menstruation, are wholly relieved when copious menstruation occurs; the menstruation being, when viewed in relation to its effect, a beneficial counteragent.

Such cases as the following are of no uncommon occurrence. A patient is troubled with wheezing, difficulty of breathing, cough, mucous expectoration, and incapacity to lie in an horizontal position, when an attack of the *gout* supervenes, and all these symptoms pass away. The gout subsides, the other symptoms return. Asthma itself has been removed by the attack of a fit of the gout, and has returned when the gout passed off.

How often are severe affections of the LUNGS relieved by a discharge of blood from piles (*hæmorrhoids*)! “A woman who vomits blood is cured if her monthly terms issue.”—*Aphor. xxxii. sect. 5, Hippocrates*. The same observer of nature asserts, “A flux of blood is good for a woman whose monthly terms are deficient.”—*Aphor. xxxiii*. And how almost universally does it happen that, during the progress of pulmonary consumption, the menses never are secreted! The reason is apparent: the vital principle is too actively engaged in the part affected by disease to perform a function in a part that has less of vitality.

“Numerous are the females who have been delivered from all the premonitory symptoms of *phthisis pulmonalis* by a copious menstruation.”—*Dr. Saunders on Phthisis Pulmonalis, p. 27*.

Still more to the point, as illustrating the benefits of counteraction induced in the system itself, by its own powers, is the circumstance, that even aggravated instances of pulmonary consumption have been *stayed* in their destructive career by a natural counteraction set

up in the system. Reference is made to consumptive females, who, becoming *pregnant*, are temporarily relieved from all their distressing symptoms. As the pregnancy advances, the purulent expectoration gradually ceases, the cough becomes less, the sleep is more grateful, the appetite is less variable. The destined hour of giving birth to the child of affection arrives; the life-warrant to the offspring is the death-warrant to the parent. The counteraction, produced by the pregnant state, has now ceased; the diseased action resumes its power in the lungs; and the affectionate husband soon beholds, in the unprotected infant, the only pledge of halcyon days, now past, perhaps for ever. Such are the Creator's doings, and let us thence receive instruction. The leaf falls when the bud is completed.

To proceed to the ABDOMINAL viscera.

Not at all seldom in practice is the medical practitioner consulted by patients labouring under chronic inflammation of the *mucous membrane lining the stomach and the bowels*. These patients have eruptions on their face, or some other part of the body. The practitioner finds, that when these eruptions *go in* or are *driven back* by any cosmetic or other means, the stomach or bowel affection is *increased*; whereas, when, on the other hand, the eruption is *restored*, the diseased affection is *diminished*. There are ladies who regard a smooth skin more than an easy stomach, and who, being troubled with these eruptions on the surface, have persuaded their medical attendants to prescribe in order to remove the

eruption. Compliance was attended with the to-be-expected result, namely, the severest augmentation of the stomach or intestinal affection. Lovers of cosmetics will do well to attend to this.

How often, moreover, is it found, that patients labouring under stomach affections have these augmented when the skin is dry; a diminution being experienced whenever the skin becomes moist with perspiration!

The following case from Dr. Mayo's work on the Influence of Temperament in modifying Indigestion, is strikingly illustrative:—"A gentleman of a highly nervous temperament, placed in a situation of continued mental exertion, and much responsibility, in a West India island, was subjected—for some bilious symptoms, which were viewed without any reference to the predominant character of his constitution—to a severe mercurial treatment. He, at the same time, suffered from hemorrhoids, occasioning profuse discharges. His strength broken—his circulation so disturbed that apoplexy at one moment, heart affection at another, seemed closely to impend—his skin constantly adrid, and giving no relief by perspiration to these last symptoms,—he returned to this country. Time, a patient endurance *on his part* of symptoms of which it was hazardous to attempt the complete relief, and a persevering abstinence *on the part of his physician* from such measures as might relieve present symptoms, and yet increase exhaustion; and, finally, a very cautious use of bark, ultimately restored him to health. The decisive and complete

evidence of his recovery was, according to his own remark, THE POWER OF PERSPIRING FREELY."

The following case of colic is interesting, as illustrative of the effects of counteraction. A man-servant was seized with a severe attack of the colic. Every means was tried to relieve the intensity of the pain, but without any effect. At length a hot bath was made use of; the pains diminished; but, as they diminished, the eruption of small-pox broke out upon the surface. This counteraction—for the eruption on the surface was a natural counteragent—relieved, it will be seen, the diseased action in the fibres of the colon. The man, it should be remarked, had felt himself sick, cold, and otherwise unwell, previously to the attack, and had incautiously bathed in cold water, with the view, perhaps, of relieving himself. The effect of the bathing was, that the action that was about to take place on the skin was stopped, and the action occurred elsewhere, namely, in the *colon*. By the aid of the warm bath the action was drawn to the surface, the small-pox came out, and thus the action existing previously in the colon was removed, and the patient relieved. May not this serve as a hint regarding cholera, teaching the importance of the action being drawn to the *surface*, by the various means having a tendency to effect this?

In cases of that severe diarrhoea occurring in the latter stages of pulmonary consumption, when its cessation cannot be obtained by the most powerful astringents, an action excited on the skin will often succeed in effecting

this object. May not this also serve as a hint in the treatment of cholera; teaching us, by every means, to determine the action to the surface; and also that, in staying the DIARRHŒA, which occurs generally *previously to the attack of the cholera*, we should endeavour to, at the same time, keep up a proper temperature at the surface?

Affections of the KIDNEYS, attended with severe pain, dependent upon a *congested state of the vascular tissue*, are often wholly relieved by a gentle moisture diffused over the bodily surface.

But if the benefits of counteraction can be demonstrated to us in one form more than another, it is in the phenomena of *eruptive fevers*. *Before* the eruption appears, there is general constitutional disturbance; in *measles*, cough, hoarseness, running at the eyes, feverish heat, and sometimes severe pains at the back of the head; in *small-pox*, pain at the pit of the stomach, vomiting sometimes, and severe fever. The eruptions appearing, the febrile symptoms are, almost in every case, much diminished, in some cases wholly removed. The relief, too, is proportioned to the eruption, being in a ratio of proportion to the pre-existing fever; the eruption being deficient in relation to the severity of the pre-existing fever, the diminution of the febrile symptoms is correspondently small. Yea, what is more, if, after all the febrile symptoms have been fully relieved by a free and copious eruption, that eruption is prematurely driven back, all the previously existing

symptoms return much increased, and the greatest dangers result. Morgagni relates the case of a child on whom a very abundant pustular eruption having suddenly disappeared, a fever supervened. The fever gradually abated, and the eruption returned. After several days the pustules dried up. He was then seized with a diarrhoea, attended with convulsive motions, and, at the end of the eighth month of his age, died. —*Page 218.*

In addition to the above, the fact ought to be referred to, that the best means in restoring eruptions when suppressed, and thereby relieving the unpleasant symptoms produced, are the warm bath, and warm stimulating liniments applied to the skin; in other words, producing counteraction on the surface.

No one who reflects for a moment can avoid perceiving the benevolent wisdom of the Creator, who has so formed the infantile constitution, that, upon the occasion of the most trifling febrile symptoms from the irritation of teething, or of disorder in the bowels, an eruption is thrown out.

Another striking instance of the beneficial results connected with counteraction, is exhibited in the phenomena of INTERMITTENT FEVER. In the cold and hot stages, difficulty of breathing, severe pain in the head, weight at the pit of the stomach, oppression at the præcordia, are present. *All pass away at the occurrence of the perspiration;* and what is this perspiration but a

counteraction set up upon the skin, and thus relieving the internal disease?

These facts will, it is trusted, be quite sufficient to establish the first proposition: to show that counteraction is exhibited to us in nature as a beneficial means of relieving either disease itself or its tendencies.

CHAPTER II.

ON ACCIDENTAL AND INTENTIONAL COUNTERACTIONS, BENEFICIALLY INDUCED.

The second subject proposed for notice was, TO RECORD CASES WHEREIN *accidentally*, AND WHEREIN *intentionally*, COUNTERACTION BEING INDUCED, THE GREATEST BENEFITS RESULTED.

ACCIDENTS have developed the greatest discoveries, and the most useful inventions.

On counteraction, the following accidental circumstances will, in throwing some light, evidence its benefits.

Captain Ians, of the royal navy, was tapped, and nineteen pints of water were drawn off. The abdomen began again to fill, and several pints of fluid, so far as could be judged, had re-accumulated. The servant one day, in removing the kettle from the fire, accidentally spilled some boiling water on the captain's leg. Inflammation came on. An ulcer was formed. This spread. As it spread—in other words, *as the disease in the leg progressed—the accumulation of water in the abdomen*

diminished, and the officer was at length perfectly cured of his dropsical affection. This case occurred in Dr. Hutchinson and Mr. Houston's practice.

Cases similar to the following are familiar to many practitioners.

A. B., aged nineteen, has been subject to *bad eyes*, and a *discharge* from the *ears*, ever since she was fourteen. At twenty, A. B. marries; and, becoming pregnant, the eyes and the ears become well. The children are either scrofulous or scorbutic, according as the discharge in the mother partook of the one or other character. The pregnancy here acts as a counteragent; in other words, when impregnation takes place, another action—that of formation—is set up in the system. This new action overcomes that on which the discharge from the eyes and the ears was dependent, consequently the discharge ceases.

A child, who was troubled with severe cough of several months' continuance; whose appetite was sometimes good, sometimes bad; countenance first flushed, then pale; became, either from cold, or from the friction of the tightly tied bonnet-strings, afflicted with a swelling, and finally a suppuration, of the glands of the neck. All the previous symptoms passed away, and continued absent as long as the discharge continued.

Richter, in his valuable remarks on the diseases of the breasts, relates the case of a lady on whom he operated for supposed schirrus in both breasts. The tumours and the glandular portions of the breasts were wholly

removed. On the fourth day after the operation, Richter was very much embarrassed at finding an indurated gland on the arm-pit, which he had overlooked in the operation. Suppuration appeared on the fifth day, and *during* the suppuration, which lasted for about five weeks, till the breasts became well, the tumour vanished. Here the action necessarily going on in the breasts, during the suppuration, relieved the diseased action, the producer of the tumour in the arm-pit, and, in the end, altogether removed it.

The following case from Richter is still more illustrative.

“A country woman, apparently about forty years of age, the mother of several children, came into the hospital with an indurated lump in her left breast, of the size of a hen’s egg, which, as she assured me, had been first observed about five years before, after a blow upon the breast. It was still pretty moveable. Some months ago it had begun to be painful; and there was now, actually, a small opening, from which discharged a reddish ichor.”

“But this woman had, at the same time, a short breath, cough, purulent expectoration, could not lie on the left side without great uneasiness, and was evidently in a consumptive state.”

Richter operated; removing only the indurated lump, with the neighbouring substance of the breast. The wound *suppurated*; and, what exhibits the power of this, thus accidentally excited, counteraction—“after

the seventh day the pectoral complaints diminished; and, by the eighteenth day, there was not even a vestige of cough, expectoration, or difficult breathing, remaining. This continued till the healing of the wound was completed; so that we all believed she was *really cured of her phthisis.*"

"In the tenth week she went out of the hospital, to appearance, perfectly well. The wound was quite healed, and all her breast complaints were gone."

"She returned nine weeks afterwards, and informed us that her pectoral complaints had again made their appearance. She died of phthisis four months afterwards."

This case is peculiarly instructive. The counteraction, which had produced so much benefit, having ceased, from the healing of the breast, the diseased action was permitted to take place in the lungs as before, and the patient died.

Brambilla saw a phthisis cured by the amputation of a leg.

A case was recorded in one of the medical journals, lately published, in which a boy, who was affected with epileptic fits, happened to fall upon a red hot poker, which burnt his body. A sore was produced; a discharge took place; and, as long as this discharge continued, the boy was not troubled with fits. The action, connected with the formation of the matter discharged, relieved the diseased action causing the fits; and hence their cessation.

Some cases may now be recorded wherein counteraction was *intentionally* excited, and with the greatest benefits.

And first with regard to the application of HEAT.

Heat may be applied under the form of hot air, which may be named "*aeratio calida*," or the "hot aeration."

Warming the hands at the fire is a most powerful auxiliary in relieving spasmodic affections of the chest, by exciting counteraction on the skin.

The hot-air bath is a contrivance which is sometimes made use of for the purpose of applying heat in this form. There are advantages connected with it; but these, generally, are so surpassed by the hot-vapour bath, that, in almost every case, the preference is to be given to the latter.

Boerrhave, when desirous of applying heat to the feet to relieve symptoms indicating affection of the head, used to employ *heated bricks* so as to blister the feet, when unable to obtain anything better. Indeed, Boerrhave was so well aware of the benefits of counteraction, that he expresses a wish—"I wish I could make petechial fever;" in other words, I wish I could produce upon the skin that state of counteraction existing when petechial spots are formed.

But the application of caloric under the form of *hot water* is one that is most frequently employed with benefit in the treatment of diseases.

Every one is aware of the benefits of the *foot-bath* (pediluvium) in relieving temporary affections of the

head, pains in the chest, feverish irritation, the convulsions occurring during dentition, and many other morbid phenomena.*

The following case occurred in the practice of Mr. Houston.

William ———, esq. took ten grains of opium. Mr. Houston saw him in about an hour from the time of having taken the poison. He was then in an apoplectic state. Tartar emetic, white vitriol, had been exhibited, but without any effect, the power of the stomach being overpowered by the poison. Hot water was now applied to the thighs, legs, and arms alternately, and produced so considerable a degree of inflammation, as to render the parts afterwards so sore as not to allow the patient to touch them with his clothes. He awoke out of his apoplectic slumber, and spake incoherently. The application of the hot water was continued for *twenty-four* hours, when the effects of the opium began to subside, and he recovered.

The stomach-pump was not known at this time ; and the above fact is important, as exhibiting a mode of treatment at all times applicable in cases where the stomach-pump is not to be obtained.

But the most extraordinary instance of the great and beneficial power connected with the use of hot water, is contained in the following case, also occurring in the practice of Mr. Houston.

* For particulars connected with the use of baths generally, read Dr. Epps's Lectures on Warmth and Cold, in the Gazette of Health.

J. Waller, aged forty-five, a powerful, athletic man, a country blacksmith, and consequently the wise man of the place, took, with the view of ascertaining what it was, a quantity of prussic acid. Instantaneously, upon taking it, he fell lifeless apparently on the ground. Mr. Houston was sent for. By the time of his arrival, the most serious consequences had resulted. The pulse had ceased to beat; respiration had stopped; coldness pervaded the whole body; and the man appeared like a person dead from a severe apoplectic seizure. Although apparently dead, Mr. H. determined to try some means to excite the powers of life. On reflection, it seemed that the only plan that could be resorted to was, as quickly as possible, to cause the most powerful excitement in that part of the body most remote from the brain, *the part affected*; the affection of which, if not removed, or removable, must end in real death.

With the view of producing this excitement, Mr. Houston ordered a kettle of *boiling* water to be brought. This was poured on Waller's legs, beginning below the knees. Not the least effect was produced. Mr. H. then scarified, in very numerous places, the legs with the lancet, and poured over the legs, thus scarified, another quantity of boiling water. This caused a slight contraction of the muscles, and, in a short time, a spasmodic action took place in many parts of the body. The pulsation of the heart became irregularly restored, and the respiratory motions returned, though with a weak and spasmodic irregularity. In about a quarter of an

hour after these exhibitions of restoration, Waller's legs began to swell, and a general excitement occurred, without any pain. He remained insensible for twelve hours without speaking, then commencing to talk incoherently. Some tea was given; this he drank. A dose of sulphate of magnesia was taken, which acted. After the evening of the second day he became quite sensible. His legs were now excessively swollen, but were cured by the ordinary mode of practice; and Waller was restored to health, his cautiousness being at the same time, it is likely, awakened into fuller activity.

Indeed, the benefits from the application of heat under the form of *hot water* are very great. The counteraction thus produced may be kept up for any length of time, and without any inconvenience to the patient, by taking a little trouble, which latter no benevolent mind will think of in regard to the sick.

There is one mode of applying hot water not sufficiently and not scientifically enough attended to. This is *fomentation*. Fomentation, to be performed aright, should be done by means of *flannels*. A fire should be at hand, and a portion of the fomenting liquid should be kept upon the fire, so as to be always near a boiling temperature. The patient should be in bed, and lie on a folded blanket, one fold of which coming *over* him, so that, after the process is over, neither the bed-clothes above or below being wetted, no necessity for removal exist; for the moving the patient to another bed would be injurious. The flannels should be soaked in the fomenting liquid,

rinsed out, and applied as hot as the patient can bear the same. When one flannel is taken off, the other should be immediately applied, and the fomented part should never be exposed to the cold air. It is from neglecting these, what by some may be considered trivial matters, that the full amount of benefits from fomentations is not generally known. That they are not trivial is proved by the fact, that Dr. Wigton, of Edinburgh, states, that, by fomentations, attended to thus, he always succeeds in curing *puerperal inflammation*, if called before the disease have proceeded to the last stage. The pain, let it be remembered, is often increased by the two or three first applications, but afterwards the pain diminishes. The rule of Dr. Wigton is, *never to desist till the pain is relieved, yea, removed*. Perseverance is always necessary; no fixed time for the continuance of the fomentation can be named. *Till the pain is relieved* ought to be the criterion.

In the intense pain sometimes arising from the passage of biliary and urinary calculi through their respective tubes or ducts, nothing can be more beneficial than the perseverance in the use of anodyne fomentations. One of the best is the decoction of camomiles and poppy heads. They act often like a charm.

In that severe pain occurring from spasm of the muscular fibres of the colon, produced by the distending power of flatus generated in the intestine, warm fomentations are peculiarly useful.

It will be seen by the reader how these remarks may

be referred to the use of warmth in the treatment of cholera. The several symptoms connected with cholera are, in a great measure, dependent upon an affection of the nervous system, occasioned by or connected with a congestion of blood. There is great internal heat at the pit of the stomach; excessive coldness of the surface. Excite counteraction at the surface: we relieve the internal congestion. Warmth is a counteragent.

Having thus considered counteraction as induced by the agency of caloric, we have to notice next the counteraction induced by the application of bodies *irritating* or *stimulating* in their nature.

These bodies are, in works on Materia Medica, generally arranged under the classes of rubefacients, or medicines making red; epipastics, or medicines that occasion a blister; escharotics, those that make a scar; and purifacients, those making pus.

The plan I propose is, to notice some cases wherein *liniments* or *embrocations*, some wherein *ointments*, others wherein *stimulating poultices*, others wherein *plasters* others wherein *blisters*, and others wherein *escharotics*, and, finally, others wherein *mechanical irritants*, have been beneficially made use of.

In *affections of the head*, stimulating LINIMENTS are peculiarly useful. The most intolerable head-aches have been temporarily relieved by the use of the eau-du-luce and of the spirits of lavender, rubbed diligently over the head and behind the ears.

But it is principally in fixed pains, more particularly in the *back of the head*, shooting forwards occasionally towards the forehead, that the greatest benefits have been found to result from the use of liniments, rubbed not on the head itself, but on the *spine*.

Whenever, as is generally the case in these affections of the head, the *feet are cold*, these extreme parts of the body should be rubbed every night with the liniment, after the same have been bathed in hot water for five minutes.

In the debility arising from excessive sexual gratifications, dependent, as will be proved hereafter, upon the condition of the part of the brain called the cerebellum, and upon that of the spinal cord going down the back, commonly called *the pith*, we know nothing more useful as an auxiliary in recovering health than *friction with a liniment down the spine*. The pleasure that the patient experiences from this is sufficient to account for the desire generally expressed from its continuance. I have seen the languor consequent upon such debility pass away. The arms and the legs, which had in part lost their power, have regained their almost youthful vigour, and the very unpleasant feeling of *sinking*, so common in these cases, becomes absent.

The reason hereof will be apparent to the reader, when he bears in mind that the nerves which enable us to move and to feel, arise, in a considerable degree, from the pith or spinal cord going down the back-bone.

Indeed, in paralysis of the lower extremities, I

have known patients to be wholly relieved by a continued perseverance in friction with stimulating liniments.

In the *pains in the loins*, connected with imperfect menstruation, I have found the utmost benefit from the use of liniments.

Every one knows that the common hartshorn liniment is of the greatest use in *sore throat*.

In pains of the stomach, arising *after taking food*, the greatest relief is afforded by perseverance in friction over that organ.

FRICTION itself is an excellent remedy, without any liniment. Still there can be no question that the liniment itself has an efficacious power according to its *nature* ; and in reference to this I may remark, that I divide liniments into the *stimulating* and the *stimulating evaporating*. The former I use when *pain* is *not* associated with *heat* ; the latter where pain is associated with heat.

It is a lamentable fact, that practitioners are not generally aware of the benefits arising from friction over the bowels in cases of *constipation*. My plan is to order the bowels to be rubbed with *soap lather* every night on going to bed. This rubbing promotes the peristaltic action on which the evacuation of the fœcal matter in a great measure depends. I have seen such benefits arise from the plan, that I have no doubt of its efficacy. Hence Sydenham's recommendation of horse-exercise, the beneficial agency of which is, in a great measure,

connected with the gentle muscular action, bringing about a state of the circulating fluid very similar to that brought about by means of friction.

After having written so much in favour of liniments, and the friction exercised in their application, it is necessary to state, in reference to these remedial measures, some monitory circumstances, more particularly after the presumptuous ignorance of a man who has been found guilty of "manslaughter."

This man has used *friction*. And there is very little doubt that he, when using friction with moderation, produced some benefits; but not knowing the *principle* on which the benefit of the friction is dependent, *his* application of the *means* was quackery. And since, in the use of this means, he employed either such *physical* violence in the *act* of friction, or some poisoned article occasioning the destruction of the part, the quackery can be looked upon only as one not to be defended—as one to be exposed and condemned by every good and scientific man.

Let it ever be remembered that *friction*, and *liniments* with which the friction is performed, produce their beneficial influences by exciting *counteraction on the surface*. That counteraction may be carried too far, by a person not knowing the *structure* and the *vital functions* of that surface, is perfectly clear. John St. Long excited counteraction on the surface. Ignorant of the structure of the body and vital functions, he excited counteraction *too powerfully*; the parts *died* under the excessive acti-

vity of the means the charlatan used: the general system became affected: the patient died; and the beloved friend and sincerely supported protégée of metallic-headed nobles was found guilty of "manslaughter;" and, though bearing this stigma on his back, he still associates with generals, ladies, lords, and members of the *late* parliament! O tempora!—O mores!

Again, it ought, in addition, to be remembered, that, in advocating the cause of friction, we are not maintaining that friction, either alone or with any peculiarly beneficial liniment, will *cure any disease*, or that any *one* liniment is useful *in all cases*. Such ideas can be entertained only by those who are ignorant of the constitution of the human body—of the influence of temperament—of the modifications of the vital principle produced by age—of the various aptitudes of the system, in different stages of the same disease, in reference to the remedial means made use of. All these things, and many others, must be taken into consideration in forming a plan of scientific practice in each individual case. Get mankind to believe in the necessity of knowledge on all these points, and then John St. Long, and others, really quacks though not so notorious, will be obliged to find other occupations more suited to the ignorance of their minds than is the noble profession of medicine.

OINTMENTS are nearly allied to liniments.

One of the most excellent ointments for exciting

counteraction, is that prepared from one drachm of the tartar emetic and one ounce of common lard. This ointment was very extensively tried, and with the greatest benefit, at that institution which, in my mind, is associated with some of the most pleasurable emotions connected with the remembrance of the gratitude of the poor—the Royal Western Hospital—during two years which I attended its sick.

In epilepsy occurring in a strong person, or in a person having strong nervous power and great mental activity, I have found that the most efficient mode of treatment consists in the application of a blister to the back of the head, and in the friction of the tartar emetic ointment on the spine.

But it is, more particularly, in *constant* pain in the side or in the chest, that the tartar emetic ointment has been found useful. In all cases threatening pulmonary consumption, wherever *constant pain* exists in any particular part of the chest, I always use this ointment so as to produce eruption, which being produced, the pain and the tenderness generally associated with it, go away.

It is to be remembered, that the use is indicated where there is *constant* pain, and that in a *fixed* situation. Many are the severe pains in the chest which afflict females and others; but these, when temporary, or at times trifling, are best removed by warm fomentations and by friction with a liniment. It is to be remarked, in deciding on such cases as these, that in no judgment but that of the medical practitioner, who has

made himself well acquainted with all the modifications of disease, should confidence be placed.

In pain in the loins, extending down to the testes, and sometimes on the outside of the hips, occurring in persons who have little to do—are fat and indolent, the utmost benefits have resulted from friction with the tartar emetic ointment. The patients often testify to the relief as obtained when the eruption comes out: a conviction so strong, that though at other times the irritation arising from the eruption would have given them much vexation, yet, on these occasions, they do not complain, so great is the benefit afforded.

PLASTERS are next for consideration.

Of plasters, the one I use most is the *emplastrum ammoniaci è hydrargyro*.

There are feelings of *coldness* and *weakness* in the back of the head, arising very often from domestic losses, and frequently of years' standing. The common site is that part of the head situated on each side of the falx major, just above the tentorium. In such an affection much benefit has been derived from the application of the above plaster.

There are many females who are liable to *severe* pains in the back, between the shoulders, in the loins also. These pains are not *constant*, and *pressure* very often relieves. The application of the above plaster is serviceable in such cases. If much nervous irritability, or rather, perhaps, sensibility, is present, it will be found

advantageous to apply, along with the ammoniacal mercurial plaster, some anodyne.

Pains in the region of the spleen have been very beneficially relieved by means of the above plaster.

Coldness and sinking at the pit of the stomach also.

Fits in children, more particularly in infants, coming on after the calomelanizing treatment of many practitioners, who administer this potent remedy—the poison of thousands—in almost every infantile complaint, I have succeeded in curing, when life was despaired of—from the child always waking in a fit, and from the constant recurrence of the fit—by the application of the ammoniacal plaster and an anodyne *down the whole of the spine*, and, at the same time, applying continual friction to the extremities. These fits I consider to depend upon accumulation of blood about the base of the brain and the spinal cord; and, by the application of the counteragents, the action is brought to the surface, the anodyne at the same time allaying the excessive sensibility produced by the previous debilitating system. In fact, I fear, that more children are sent to their graves by calomel than by any other medicine; and if John St. John Long could draw mercury out of the heads of some medical men, society would be no losers.*

Of STIMULATING POULTICES, the one most generally employed is the *mustard* poultice.

* Lord Ingestrie stated that he saw a fluid like mercury drawn from the head by John St. John Long.

I have found this to act very efficiently in relieving paralysis of the upper extremities, and paralysis of the organs of speech. The first case wherein I tried this as a remedy was in that of a servant of my father's. He was seized with a loss of speech, and loss of the power of moving his arms. A mustard poultice was put round his neck, and another down his arm. The same had not been applied an hour and three-quarters, before he cried out, "Take it away," and put up his arm to help in its removal.

In the 308th number of *The Lancet* is a case of paralysis of the lower extremities, cured, by Sir G. Tuthill, at the Westminster Hospital, by means of *mustard* poultices.

In the course of fever, every one is aware of the common practice of exciting counteraction by the application of mustard poultices to the *feet*.

BLISTERS may now be noticed.

The most extensive employment of blisters that ever occurred to me was while engaged as physician to the late Royal Western Hospital. There I had the pleasure of observing the efficiency of this agent in relieving *inflammatory* and *rheumatic* pains. Some remarks will hereafter be made upon this remedial agent.

Concerning *ESCHAROTICS*, or those agents occasioning a scar, some few remarks may be made.

Another application peculiarly useful, and for the

introduction of which, as a part of medical treatment, we are in a great measure indebted to Dr. Carmichael Smyth, is the nitrate of *silver* in solution. This scientific physician found the application of the caustic to the junction of the sagittal and lambdoidal sutures particularly useful in cases of hydrocephalus. The form under which he employed this remedial application was that of the powder put on the surface of adhesive plaister, and renewed every twelve hours, until it produces a sufficient eschar.

There is a preparation commonly known under the name of *arsenical paste*, which has been used as a counteragent in many cases, particularly those of a cancerous nature.

Richter states, "I have employed arsenic in cancerous ulcers of the face with much advantage, and without any bad or remarkable effect." The preparation he used was Bernard's mixture. "I lay it on," says Richter, "about the thickness of the back of a knife. The pain it occasions is for the most part inconsiderable. I have even applied it to the point of the nose, where there is little fleshy substance, and to the forehead of a child nine months old."

The effect produced is a crust. This crust separates; and if, after the separation, the ulcer does not look clear, or if the appearance again becomes suspicious, Richter applied it a second time, and persevered till the ulcer healed. He states that he never saw any bad effects from it.

The action induced by the arsenic is contrary to that which constitutes the cancerous disease. It consequently overcomes it, if the patient's constitution can bear the use of it for a sufficient length of time.

The moxa is another powerful means for counteraction. It is used much among the French.

MECHANICAL IRRITANTS are well worthy of consideration.

Among these, as a most—perhaps the most—efficient means of counteraction, is the *issue*. Some cases illustrative may now be recorded.

Case 1. Miss R., aged twenty-one, was attacked with an extensive scorbutic ulceration of the right breast. This was cured by the unguentum hydrargyri nitratis; when, shortly after, an ulceration of nearly the same description affected the greater part of the thigh. This was healed; supervening on which was an inflammation of the lungs, followed by a hæmoptysis. The young lady was supposed to be in a decline. The disease, thus designated, continued for nearly a twelvemonth without being at all relieved by any of the plans adopted. An issue was now formed in the arm;—health gradually returned, and, for several years after, she has remained perfectly well.

Case 2. Mrs. Farrant, an elderly lady, aged seventy, had repeatedly, for many months, been attacked with inflammation of the lungs, accompanied with the bursting of a blood-vessel; this continuing to discharge blood

for several days after the rupture. Bleeding from the arm and other means were resorted to on each attack. Each successive attack was more violent than the preceding. Two physicians, having seen her, said that she was in much danger, supposing the lungs were ulcerated. An issue was, at length formed in her arm; which acting, the pulmonary affection was removed; and, although she had suffered nearly twelve months from this affection, she has now been several years without a recurrence of the attack.

Case 3. Miss W., a young lady, had suffered much from severe cough, hæmoptysis, and most of the symptoms of consumption, for many months. The usual remedies were used without any relief. An issue was formed in the arm. She soon became completely well. After this she entered into a matrimonial engagement; and, fearful that the issue might be objectionable to her intended husband, allowed it to heal up. At the expiration of a twelvemonth after the period of her marriage, Mr. Houston, who had recommended the issue, was sent for. She was, apparently, in the last stage of consumption—was not able to stand—was lifted from the bed to the sofa. She acknowledged that she had dried up the issue. The issue was again formed, and she gradually recovered.

Case 4. Mrs. Spear, a farmer's wife, in her forty-fifth year, was attacked with the measles, accompanied with a severe inflammation of the lungs. She continued in a weak state for two years, having frequent inflammation

of the lungs, and slow fever. An issue was formed in her arm; her health became good.

Case 5. Mrs. Turner was for many years afflicted with a severe inflammation of the *tarsi* of the eyes. She was cured. The cure was followed by inflammation in the leg. That subsiding, the eyes became again affected. They were cured. The leg again became diseased. This alternation in the seat of the disease continued for some time. *Both*, at length, became well. She was then seized with a vomiting of blood, from a vessel ruptured in the stomach. The patient lost about three pounds of blood, recovered, and was again attacked with a violent inflammation of the leg. An *issue* was formed; the inflammation subsided; and, since that time, she has been well.

Case 6. Philip James, after inflammation of the lungs, was affected with pulmonary consumption. He was cured by *two* issues in the arm.

Case 7. Mr. Henry Ware had a glandular tumour in the neck. It had existed for twelve months. Every surgeon in the neighbourhood where he resided had been consulted, but in vain. An issue was used: the tumour went away. The issue was healed: the tumour returned.

Case 8. Ann Barnes had a painful humour of the breast. It was supposed to be cancerous. Various means had been used to remove it without effect. An issue was formed: the tumour subsided.

Case 9. Mr. J. W. had a severe inflammation of the

eyes, which continued for a considerable time, destroying one eye, and endangering the other. An issue was formed in the *leg*, and the inflammation became quite well.

Case 10. Mr. B. had been a martyr, as he himself expressed, to rheumatism for years. Every change in the weather he experienced the severest pains, in his thighs and legs more particularly. I put an issue in his *thigh*, and he has, according to his own acknowledged experience, an almost perfect immunity.

Case 11. A. M., several years troubled with epileptic fits, was cured by an issue formed in the arm. Two years she remained free. She then dried up the issue. The fits returned. The issue was again formed, and as soon as the parts began to inflame did the fits cease.

Case 12. Mr. King was troubled with a very bad discharge from his leg, from a sore of a scorbutic character. Every means was tried to heal it permanently, but without effect. At length an issue was put into the leg. The discharge from the sore ceased, the leg healed, and Mr. K. remained free to the time of his death, many years afterwards.

Having thus noticed the various means for exciting counteraction—having pointed out cases in which these have been used with success—this chapter may be concluded by stating, that some further remarks will be made upon the peculiarities which must be regarded in the use of these means, in the fourth chapter.

CHAPTER III.

THE WIDELY-EXTENDED OPERATION OF THE REMEDIAL PRINCIPLE OF COUNTERACTION—CONDITIONS OF THE BODY IN HEALTH AND IN DISEASE.

THE third subject for inquiry is, the widely-extended application of the remedial influence of this counteraction in the treatment of disease. In unfolding this, the *conditions* of the body necessary to *health*, and those existing in its opposite state, *disease*, will be briefly explained.

In order that the reader may understand the following views, it will be necessary to give a *general account of the human body*.

It is hoped, that, as the understanding of the importance of the principle of counteraction will be a most powerful guarantee in preserving him who understands from medical impostors, the reader will give due attention.

Man is a beautiful mechanism, made for the habitation of life.

This mechanism may be viewed as a *whole*, made up

of several *parts*. These parts have different *duties*, or *works*, to perform, and are hence named *organs* (*εργον*, *ergon*, meaning *work*). The duties belonging to these organs are called by medical philosophers, *functions*; and as life is exhibited by the manifestation of the particular function of each particular organ, this exhibition is said to be the *functional existence of the part*.

These functions, called into activity, by whatever cause, constitute, taken in the whole, the *phenomena of life*; and when the organs, or parts with which they are associated, are called into activity by the influence of bodies or powers applied, called *stimuli*, in an appropriate and properly regulated degree, the phenomena of HEALTH are produced; when, in an inappropriate, and not properly regulated degree, DISEASE.

In order for this activity to be called forth; in other words, in order that the principle of life—the *vital principle*, may be exhibited in its functional activities, it is necessary that the life, and the organization—its associate, should be consociated with certain other bodies.

The three most important, are HEAT, PURE AIR, and FOOD.

It may be remarked, in illustration of the necessity of the first, that life, in an organic structure, often remains in a dormant or concealed state till heat be applied. Thus the vegetable existence, and many modes of animal existence, lie dormant during the cold of winter; but, directly the genial warmth of spring

returns, the vital principle is developed into activity, constituting what may be called *active* life. Many diseases, moreover, are produced by the long-continued application of cold.

Heat, too, stimulates all the fibres of the body. "Heat, of an appropriate temperature, is proved to be the supporter, nay, restorer of life, animal and vegetable; and it is so closely connected with the vital energy, that its influence is absolutely necessary to animate the works of creation."—*Green on Baths*—(a useful work), p. 3.

PURE AIR is formed by the union of two invisible bodies, or gases, *oxygen* and *nitrogen*: in the proportion, by *weight*, of 23 parts of oxygen, and 77 of nitrogen; by *measure*, of 21 of the former to 79 of the latter.

The oxygen is the grand supporter of respiration and of combustion. It has been called, with great propriety, the *vital* air, so necessary is it to the purposes of life. An animal will live longer in it than in any other, excepting the atmosphere.

By itself, it would form a *stimulus too powerful* for the system; it would, in other words, excite an action too powerful and too violent. The Creator has, therefore, mixed the nitrogen with it to modify its strength, and to render it perfectly congenial to the as present constituted human frame.

Whenever an impure atmosphere is breathed by an individual, the features lose their character of health—the skin becomes pale and yellow. This is seen strik-

ingly in those labouring in crowded manufactories.* It is also seen in London since gas has been introduced into shops and houses. I remember the time when London tradesmen had fine ruddy cheeks: now they look pale and haggard; and this I believe is to be ascribed to the impurity of the air—an impurity dependent on the gas.

Not only does the appearance of the features suffer, but the muscular powers become weakened; the nervous system becomes diseasedly active; the blood is irregularly distributed; disease ensues. Remedies are used; the patient gets better; and, in convalescence, is recommended to try a *change of air—to go into the country*; a recommendation being a virtual acknowledgment, in part, of the importance of that gift of heaven as a means to call into proper activity the powers of life.

Proper food is the third circumstance.

Proper food may be defined as *that which the digestive system can convert into good blood*. To specify any particular kinds of food is quite unnecessary, as what is one man's food is another man's poison: so various are the digestive powers of different individuals, and of the same individual at different times. Good blood is an essential to health every one will allow; for "the blood is the life thereof."

But, besides these *external* matters, giving appropriate stimuli to the various organs of the body, there are

* See Thrackrah's valuable work "On Employments." Every legislator should read this book.

conditions of the system itself necessary to the existence of health.

Essentially connected with the manifestation of life in the human body are certain tubes or *vessels* for the conveyance of the *fluids* of the body, thence called *vascular* (vas, a vessel), spoken of when classed as a whole as the *vascular system* : the *structure* constituting the same being named the *vascular tissue*. The vascular system itself consists of *arteries*, which carry the blood from the heart to the various organs of the body ; of *veins*, which convey the blood to the heart after it has been distributed to and acted on by the various parts to which the arteries carry it ; of *lymphatic* vessels, that carry *lymph* ; and of *lacteals*, that carry *chyle*, the nutritive fluid from which the blood is formed.

The importance of these vessels may be conceived when it is stated that, in the vessels connected with their extremities, called the *capillaries*, all the parts of the body are constantly forming ; and also that an entire, perfectly dry mummy of an adult Guanche, one of the original inhabitants of the island of Teneriffe, presented to Blumenbach by the illustrious Banks, weighs only seven pounds and a half : the parts evaporated being the *fluids* ; which, consequently, must bear a very large proportion to the solids, and the vessels carrying them must be highly important.

But the Creator has endowed man with the powers of *motion*, of *feeling*, of *perceiving*, *remembering*, *reflecting*, and with *desires* of various characters. These, as parts

of man, are associated (as facts demonstrate, however inscrutable the facts themselves may be,) with certain parts of his body called in the whole the *nervous system*, the structure constituting which is called the *nervous tissue*.

The parts of this system called the *nerves*, convey the impressions to the mind made by external objects; and there are nerves which enable the mind to act upon the parts which move, called the *muscles*, so as to suit the body to the various exigencies to which it may be exposed.

The *brain*, or cerebrum, is another part of the system. With this are associated the animal feelings of man, the moral feelings, the religious feelings, and the intellectual powers.

The cerebellum, or little brain, is another part, with which is associated the sexual desire.

The *spinal cord*, occupying a cavity formed by the bones of the spine, is a third part, highly important, with which and from which the nerves of motion and of sensation either are associated or originate.

The vessels that carry the fluids of the body generally carry blood; and as this blood varies in its character, according as combined or as not combined with *oxygen* (which oxygen, it will be remembered, is the grand supporter of life), in the former case called *oxygenized*, in the latter *unoxygenized*, the vessels carrying the one are called *arteries*, those carrying the other are called *veins*; the former, as was noticed, carrying the

blood from the heart *to* the parts of the body—the latter carrying the blood *from* the parts to the heart.

It seems that, in a state of health, the vessels of both kinds are of *a certain size*: that is, they are of a certain dimension; and that, if from any cause, these dimensions be *finally altered*, disease is the result.

These vessels, however, often become *temporarily* enlarged without disease. Thus the veins in the breast of a mother suckling her infant become much larger than they previously were; and the arteries that supply the womb of a pregnant female become much larger than they were previously to impregnation. But the enlargements of these vessels in these cases are the result of temporary stimuli, which being removed, the vessels gain, or nearly so, the original diameter.

All stimuli, if not so powerful as to destroy a part, *induce a flow of blood to the part* to which their application is made.

Often, from the too constant application of a stimulus, the *dilated state* of vessels, at first *temporary*, becomes *permanent*, and this will constitute, after a certain duration, *irremediable diseased structure*, unless preventive means be used. From this continually dilated state the vessels are weakened; their coats or boundaries have lost so much of the vital power as not to be able to exercise the capability of contraction to the extent as to impel forward the blood flowing through them. What are called *congestions* of blood take place; the nervous fibres, in connexion with and embracing the vessels

themselves, are pressed upon, *pain* results; to relieve the congestion, the powers of the system are called into activity, and, if the constitution be plethoric and vigorous, *inflammation* of the part or parts results.

In many cases, there is not sufficient re-action to produce active inflammatory effects. Hence delicate females often suffer severely, and for a long time, from pains arising from congestion, without inflammation marking the crisis of the malady.

This state of dilatation takes place more frequently in regard to the *veins* than to the *arteries*; and the congestion connected therewith is called, if affecting the *veins*, *venous*; if affecting the *arteries*, *arterial*.

This venous or arterial congestion, whatever be the impulsive power that circulates the blood, is dependent in this view upon *weakness of the vessels*.

This debilitated state may be *transferred* from parent to child, constituting *hereditary* liability to disease; or it may be *acquired* from an excessive activity given to any particular organ of the body. Thus, many persons have hereditary liability to affections of the lungs; others to affections of the head; others to affections of the glands of the body; which liabilities, whenever such persons are exposed to any cause, occasioning an irregularity in the circulation of the blood, cause the vessels *affected with the hereditary liability* to be affected with disease from the flow of blood upon them in their debilitated state.

Thus, when some persons are exposed to cold (which,

by propelling the blood from the vessels on the surface of the body, throws it upon internal parts), their lungs become affected; others, when similarly exposed, suffer from affections of the head; others, similarly exposed, to affections of the glands. Thus is explained the reason of the fact, that some persons are more liable to one complaint than to any other.

That excessive activity, induced by the too frequent application of powerful stimuli, brings on disease, may be easily understood. Thus, drinking spirits, by constantly stimulating the liver, induces disease of that organ. The part of the brain, called the cerebellum, is the organ of *sexual desire*; and, unfortunately, from the unsocial state of society, excessive sexual indulgence is too prevalent. The associated effect is, that this part of the nervous system becomes called into diseased activity; palsy and epileptic affections succeed; and, under peculiar circumstances, namely, when gratifying the passion, it happens that, from the flow of blood to the part, and, at the same time, from the existing debility of the vessels, a *rupture* of some of the vessels of the cerebellum takes place, and the sensualist dies in the arms of the courtesan; or, perhaps, resting on the bosom of her, who, as Solomon says, should have been, and is to him, as the loving hind and as the pleasant roe.

Let men take a warning from this truth. Let youth remember that there is a day of retribution, and that the verification of the Scripture assertion shall some day occur, "Thy sin shall find thee out."

This effect produced on the *vascular* tissue, by the too constantly repeated and the too powerfully exciting stimuli, is augmented in its injurious consequences by the circumstance that the nervous tissue is brought into such an irritable condition as to be affected by causes, which would not affect it under ordinary circumstances. And from the sympathetic connection subsisting between the two systems—the vascular and the nervous, the condition of the one aggravates the condition of the other, and each adds fuel to the fire of destruction.

One very general result of this congested state is, as was before noticed, PAIN. This pain is generally more or less severe, according as the texture of the part admits, more or less, of the dilatation taking place without producing pressure upon the nerves in connection with the vessels. When the texture is very dense, as in ligaments and tendons, the pain is very intense. When also, the texture is very abundantly supplied with the vital principle,—and when, at the same time, so lodged as not to admit of dilatation, the pain is intense. Hence the excruciating headaches frequently occurring to females, and those happening to children in the incipient stage of water in the head. Almost every one knows the pain of tooth-ache; the nerve is embedded in a hard case; the blood-vessels accompanying the nerve, becoming congested with blood, press upon the nerve; the bony nature of the parts admits no dilatation: hence the severe pain.

Such a debilitated and dilated state of parts (either

brought on by the excessive use of stimuli, or entailed by hereditary descent), existing, whenever any power is applied so as to induce an irregularity in the distribution of blood, *disease* very frequently occurs in the part so constituted; and, in that part, in particular, from the peculiarity of its condition.

Such a power in inducing irregularity, as has been hinted, is COLD. Hence the phrases, so common, of "catching cold," "taking cold," "seized with cold," "I have a cold," "it is a severe cold." These phrases are expressive of conditions of the human body really existing; although few are, perhaps, aware HOW the cold is *caught*, or *in what way* the cold influences the individual in inducing the diseased action.

The mere circumstance of being *exposed to cold* is not the *only* essential to what is commonly designated "taking cold." There must be a *certain state* of the vascular tissue of the body that departs, more or less, from a state of health. To take an example: How often has a person travelled on a stage coach, in all weathers, and not been affected with cold or its consequences. Perhaps, on even a finer day than usual, he travels the same route and takes cold. He is seized, we will say, with the *pleurisy*. If this person remembers, he will find, that, previously to the last journey, his bowels, for some time, had been slightly disordered—instead of a full evacuation daily, small hardened portions passed. He was, at night, rather restless: had slight feverishness; an appetite that sought stimulating

dishes; and pains occasionally darted through his side. The body is now in a diseased state; the effect results: and why? Because the tissue is become liable to be affected by that which would not have affected it in a state of health.

Although, very often, ignorance throws the mantle of concealment over its own hideousness in the person of the medical practitioner, when he says to his patient, with a significant nod, "Yes, I see, you have taken cold;" there can be no question that very many diseases are connected, in their production, with *cold*. The application of the cold is, as it were, the *finishing* influence of the various morbid influences that may have been, from irregularities in diet, or other dissipations, creeping on for some time. It is as a spark to the gunpowder—a light to the embers of his funeral pile. A man is exposed to cold; congestion of blood takes place in a dilated and debilitated tissue. Inflammation supervenes, and the patient dies.

How truly often do we hear it said of CONSUMPTIVE patients, by their friends, referring to the disease, "It began by a cold." And so it did, in one sense. The patient had, no doubt, the tissue of the lungs, in some part, in a debilitated state. From some cause or other, perhaps from imperfect menstruation, very commonly the case in females, there is irregularity in the determination of the blood. From this imperfect menstruation, the blood engaged in the process, and which should have been separated in the form of the menstrual secre-

tion, is thrown upon this debilitated part. This irregularity in the determination of the blood is rendered additionally injurious by the person being exposed, at the same time, to cold, which still augments the irregularity of the flow of blood, and the parts debilitated not being able to recover themselves, disease ensues. And this, if not stopped, either by direct subjugation, or by directing the diseased action to some other part, terminates in the formation of an ulcer or an abscess, the irritation connected with which, at last, destroys the individual.

In concluding these observations upon the phrases above noticed, an objection which some minds may conceive, may be anticipated by the following observations of Professor Campbell, "That an opinion is the opinion of the multitude, is to some, a powerful recommendation ; to others, it appears an infallible criterion of error ; to those who are truly rational, it will be neither."

Having explained what is the condition of the parts of the body in a state of health, what in the states both of *liability* and *predisposition* to disease, and in *disease itself*, and how *cold* acts in developing diseased conditions ; the importance of the principle of counteraction, and the *extent* of its *remedial* application are next to be noticed.

The reader is requested to call to mind that an *irregularity in the distribution* of the blood, and with that a concomitant and concurrent modification of the nervous agency, are the conditions associated with almost every disease ; that *hereditary* liability to disease is connected

with a *debilitated* and *dilated* state of the vascular tissue, which entails upon the individual part or parts thus affected the condition of being liable to have diseased actions awakened therein by any cause, occasioning an irregularity in the distribution of the circulating fluid, the blood. Thus, of several men exposed to the same cause, one man is seized with inflammation of the lungs, another with pleurisy, another with inflammation of the stomach, another with inflammation of the kidneys, another with rheumatism, &c. Bearing these views in mind, the reader will perceive that it becomes a matter of considerable importance to enquire, *Whether or not there be any means to be adopted so as to CREATE IN SOME PART (less essential to life than that in which the disease is,) ANOTHER disease, by the creation of which a COUNTERACTION is induced, and thus THE MORE IMPORTANT PART HAVING THE ACTION DIVERTED FROM IT, is enabled, by a little assistance, to recover its healthy condition?* Another matter of considerable importance is, *Whether, in cases of HEREDITARY LIABILITY TO DISEASE, we may be able, by exciting a COUNTERACTION in a part less essential to life than that having the liability, to DEFEND the part by the counteraction thus kept up, from being influenced diseasedly by any cause tending to excite in the part a diseased action?*

To both these questions the answer is the affirmative. COUNTERACTION is that means, and consequently how extensive must be the remedial principle thereof.

The importance and the extent of counteraction may

be further illustrated by a few remarks on the *means* by which this counteraction is excited.

Counteraction may be excited by means applied *internally*, by the administrations of medicines by the mouth; and *externally*, by the application of medicines to the skin.

With regard to the *internal* use of medicines so as to produce counteraction, it may be remarked that, in affections of the *head*, stimulating *purgatives* are often used to draw the diseased action from the head by exciting the action of the *vessels of the bowels*. In cases of *abdominal dropsy*, violent purging is induced to excite counteraction in order to remove the dropsy, and at the same time to overcome the action connected with the *effusion* of the dropsical fluid. Indeed, in many other diseased states, counteraction is frequently excited by the internal administration of medicines.

But it is principally to counteraction as excited by the application of remedial agents to the surface of the body that the attention is to be directed.

The advantages connected with counteraction, as here produced, are very great. Here we can regulate the operation, because the changes produced can be seen. It is to this part and to that immediately below it, that the means called counteragents (and which have been fully described,) are applied. The advantages of each will be hereafter detailed. In the application, we must be guided by the circumstances of the particular case; and, bearing in mind the principle, that our object is to

excite an action in a part of the surface, so as either to PREVENT *a disease taking place, or to overcome it when it has taken place*, in a MORE IMPORTANT part, the skilful practitioner will be led to use means *proportioned in power*, and continued for the *time* necessary to effect the object sought.

All the means already noticed as counteragents produce their effects by diverting the diseased action from the part affected to another part; or, by keeping up a diseased action in one part, prevent the development of disease in parts more important.

The remarks, however, on these means, as connected with the removal of diseases, or the prevention of the development of diseases, will be found in the next chapter.

CHAPTER IV.

ON THE PECULIARITIES OF INDIVIDUAL COUNTER-AGENTS—THE ADVANTAGES AND DISADVANTAGES OF EACH—THE NUMEROUS ADVANTAGES OF THE ISSUE.

THE remedial means externally applied as counter-agents, however numerous, and however similar apparently in the general effect (COUNTERACTION) produced, have certain peculiarities connected with their use which may beneficially be borne in mind.

These are now to be noticed.

In reference to the application of heat by means of the BATH, it may be remarked, that the peculiar benefits thereof are, the *generality of extent* of its application—the relief afforded to the *vessels of the skin*—and the consequent *equalization of the circulation*. In fact, almost every diseased state, particularly that of fevers, is connected with an *imperfect, impeded, or unhealthy* perspiration. The vessels of the skin, too, are so intimately connected with the vessels of the internal parts of the body, that their action being healthy, the action of the vessels of the other parts become healthy also. The

reader will remember the remarks on eruptive diseases. It will be well to re-peruse the same, and then to reflect on the use of the bath, as producing *an eruption* (if such a word may be permitted), *of perspirable matter over the surface of the body*. The advantages of the bath are very great.

In reference to LINIMENTS it may be remarked, that the friction, together with the stimulating effect produced by the liniments themselves, induce in the vessels of the part such a vigour, as to occasion the blood to be circulated through them without being congested. The vessels of the parts neighbouring are called into action, and, by the mutual influence of one upon the other, the loaded state of the vessels debilitated becomes relieved, and pain passes away: pain being dependent upon pressure upon the nerve in the majority of instances.

But let it be borne in mind, that the friction must be continued for some time after the pain has been removed, otherwise the effect on the vessels not being sufficiently permanent, they will soon return to their original condition. The neglect of this advice is much to be lamented. Patients use friction: the pain passes away; they immediately cease the good labour: the pain returns, perhaps with increased severity, and the friction and the liniment fall into disrepute.

The advantages of liniments are—1st. To produce counteraction without occasioning much irritation, therein producing a regularity in the distribution of the blood;

2dly. To stimulate the vessels themselves, and thereby to restore them to a healthy state, so as to prevent a return of the congestion: when the equalizing power is no longer applied; and, 3dly. To effect these benefits by so simple a means. Shampooing and friction, under its various forms, will hereafter hold a very high place among remedial measures. In fact, the healthiest families that I have ever met with, are those in whom the mother has rubbed, or has given orders to rub, the *spine* of the children every *night* before going to bed, until the children have attained nine or ten years of age.

OINTMENTS may be looked upon as *modifications* of liniments. The *tartar emetic* ointment is to be avoided where much irritation would be dangerous; for the irritation produced cannot be stayed for some time when *once* the eruption is formed. This, while it constitutes one objection to the ointment, marks the characteristic with which the important uses of this ointment are, in a great measure, connected, namely, the *permanence of its agency*.

With regard to STIMULATING POULTICES as exciting counteraction, *three* benefits are worthy of notice. The first is, that the same can be applied *hot*, the heat itself being a counteragent; and, therefore, promoting the counteragent effect of the poultices themselves. Secondly, that, from their *substance* and *adhesive* character, the heat may be retained for a considerable length of time,

and thus the counteraction be perpetuated and promoted for a longer period. Thirdly, that, from their softness, they can be applied to parts to which no other application could be so well made. Hence, in enlargements affecting the scrotum, poultices with iodine I have found peculiarly useful. How often is the latter advantage peculiarly manifested in cases of palsy, wherein a poultice can be applied round the neck, if the muscles of deglutition or of speech are paralysed; round the arm, if the muscles of that part are affected; round the leg, if the muscles of that part.

PLASTERS are advantageous from the *support* they afford to the part to which they are applied, which, at the same time, they stimulate. They have one disadvantage: they often impede the *perspiratory process* of of the part. One peculiar benefit connected with them, is the closeness of their application. In rupture of the tendo achillis from dancing, or any other cause, this benefit is peculiarly manifested. There is one fact, I have observed, in reference to plasters, of peculiar interest. That is, that a plaster—an irritating plaster, may be applied to a part for some days without producing any irritation; at length, without any apparent cause, a severe irritation will be produced, and the diseased state will be relieved.

BLISTERS are advantageous in many respects. They can be cut to any shape. The fact, that deafness is

relieved by a discharge behind the ears, induced by the natural powers of the system, leads the observing student of nature to adopt the use of blisters in cases of deafness. Blisters on infants, especially those having a scrofulous tendency, are to be avoided; or, if applied, they should be removed *soon*. Very often mortification has happened. Blisters, also, are apt to produce strangury. Water gruel, and other diluents, should be plentifully administered.

The *issue* surpasses all other counteragents in the *continuance* of its effect. The blister, the mustard poultice, the friction with liniments, act not much longer than for the time of their application. The tartar emetic ointment produces a much more permanent effect; but still the effect is not continuous; or, if the effect be continued by a fresh application, the irritation is too great. The influence of the issue can be kept up *for life*, and that with very little trouble. It is a *constant* counteragent; it is a safeguard to the system; it is a guarantee against disease.

A fact, proving the protective guarantee the issue affords, is, that whenever a patient, having an issue, and who has a particular liability to inflammatory affections, is exposed to cold, so as to occasion an irregularity in the circulation of the blood, the inflammatory effect takes place *at the issue*. The part of the arm around the issue inflames, a large quantity of pus is formed, and the patient is protected. To illustrate this with a case:—

Mr. W. has been troubled for many years, during the winter, with a spitting of blood, attended with severe cough, startings in sleep, &c. For these attacks he was generally copiously bled, and was detained at home for several weeks each season.

In the autumn of the year 1830, I was consulted by Mr. W. I recommended an *issue*. The *principle* of its use was explained. The patient forthwith had an issue introduced. This gentleman has passed through two winters without being attacked to any but a very trifling extent. He has not taken any particular precautions, nor altered his diet. But to prove more decidedly that the immunity from attack is connected with the issue, it is worthy of notice, that, on several occasions, being accidentally or unavoidably exposed to causes which, in his previous condition, would have induced spitting of blood, the arm around the issue was seriously inflamed, and pus was formed in large quantities. The blood, from the inequality in distribution, produced by the injuriously acting cause, was thrown, not upon the lungs, the weak part, but upon the *issue* and the parts adjacent.

Many other similar cases might be recorded. “*Sapienti verbum sat.*”

It may be asked, *On what is the counteraction connected with the issue dependent?* Upon the *formation of the pus*, and the *state* of the surrounding parts connected with its formation. The formation of pus necessarily implies a *new* action in the vessels of the part. The vessels sur-

rounding the part where this action is going on are brought into a dilated condition. They are thus predisposed to be affected by any cause producing an irregularity in the distribution of the blood; and thus the diseased action being induced in them, it is prevented taking place in any *internal* part, where a debilitated state of the parts may exist.

Some may imagine that it is impossible to produce such a protective power as was stated in regard to the issue, on account of the *small quantity* of matter formed. But to this we reply by a fact. A. B., a young gentleman of a high moral character, aged twenty-one, had been troubled for several years by a small transparent drop of viscid lymph being continually at the termination of one of the passages of the body. It was no trouble to him; but when, from any cause, it was dried up or was not formed, A. B. was seized with the most intolerable headaches, not relieved until the discharge was produced. Now the quantity of this was so small as not to stain the linen; yet such was the counteraction excited by this, that when it ceased the most intolerable headaches, as was just noticed, occurred.

Every practitioner is aware of the symptoms indicating the formation of pus in pulmonary consumption. The febrile heat, the excitement, the night sweats, the general constitutional irritation, the emaciation, all demonstrate the influence of a *new formation* on the system. It is true, the greatness of the effect may arise from the nature of the part affected, namely, a vital part. But it

appears to be not too great an extension of analogical reasoning to conclude, that the formation of pus in other tissues, or in other parts of the body, less vital, as from the issue in the arm, may act considerably and powerfully.

There is a *third* benefit connected with the issue, and that is, that although producing a powerful constitutional affection, the same is unattended with much irritation. The irritation from tartar emetic ointment is often so great as to produce unconquerable restlessness and other distressing symptoms. This does not happen with the issue.

There is a *fourth* benefit connected with the use of the issue, that is, you increase or diminish the number of issues and the correspondent amount of counteraction with very little trouble. It is astonishing how soon an issue will heal up in most constitutions. I make it a rule to put in issues, in consumptive cases, until I produce the effect desired, namely, to draw the diseased action from the internal parts of the surface.

There is a *fifth* benefit connected with the issue. There is no danger of the inflammation becoming dangerous; for a *sac* is often formed, surrounding the pea, which sac preserves the other parts adjacent from the irritation which the purulent matter would produce; whereas the inflammation from the tartar emetic ointment often spreads very widely, and sometimes the surface assumes an erysipelatous blush. Plasters, also, are liable to produce, as was noticed, especially in some

children, very considerable irritation, and even mortification, in the parts to which it is applied, and the parts adjacent.

With regard to the effect produced by the issue, it is necessary to remember that *pressure on the pea* will, in most cases, induce a sufficient action. When this does not succeed, it is advisable to roll the pea in the Basilicon ointment, and then introduce it. The mode of forming the issue I prefer is, the making an incision through the skin, and placing the pea in the incision thus made, and strapping it down tightly with adhesive plaster. The left arm is generally to be preferred, because the patient himself can dress the issue.

It was remarked that, in some cases of phthisis, it is difficult to obtain any effect from the tartar emetic ointment. The same observation applies to the issue. Often have I been grieved to find, that, in spite of all attempts, no discharge of any quantity could be made to take place from the issue formed in patients labouring under the suppurative stage of phthisis pulmonalis. In all such cases, the prognosis is unfavourable: at least, it indicates that the diseased action in the lungs has obtained so powerful an influence that nothing can dislodge it—nor even draw it to the surface of the body.

With regard to SETONS, it may be remarked, that the pain produced by them, and the constant recurrence of that pain in dressing them, form obstacles to their use. However, in cases where they are properly used, these

concomitants are rather benefits than otherwise. They produce a more copious discharge than an issue, and, in cases of insanity occurring at the suppression of menstruation in women of the leucophlegmatic temperament, may be beneficially employed. The very irritation tends to draw away the mind from that on which it preys. Moreover, as the irritation can be kept up *continually* by this as well as by the issue, this is an advantage, and no inconsiderable one.

With regard to different setons, that made of caoutchouc is most easily dressed, and produces the least irritation; while at the same time it will wash clean, avoiding thereby the *unpleasant smell* from the purulent matter attaching itself to the threads or to the silk, when these are used; and, if it be properly moved in dressing the part into which it is introduced, it will occasion, in most cases, a sufficient discharge.

The peculiarities connected with the individual counteragents having thus been noticed, this chapter may be concluded by reminding the reader of the conclusion to which he has previously, it is likely, arrived, namely, that where a *protection* is wanted against *hereditary liabilities* to disease being *awakened* into activity, the issue stands pre-eminent. I earnestly recommend it.

CHAPTER V.

SOME CONCLUDING REMARKS.

THE subject of counteraction having been thus clearly (it is hoped) explained—instances in which counteraction is exhibited to us *in nature*—instances wherein counteraction has been *accidentally* and *intentionally* excited with beneficial results, having been enumerated—the general conditions of the body, both in a state of health and of disease, having been unfolded—and, finally, the peculiarities of individual counteragents being made known, a few concluding remarks may now be made.

The first remark I make is, that every patient should require his medical attendant to give him or his friend, before using the means for cure, an explanation of the phenomena of the disease, and a statement of the mode of operation of the means he prescribes for the cure. If the medical practitioner cannot do this, do not trust to him. Would you employ a man to mend a machine who could not give you some idea as to the fault in the machine?

This will constitute the banishment of quackery. Science is a power stronger than prosecutions. This

would detect the licensed, the regularly bred quacks—for there are hundreds of them—whose brows expressive, and slow-drawn ejaculations, plainly declare, to a shrewd observer, a mighty abundance of foppery with an extraordinary lack of sense.

The second remark is, that attempts should be made by every one, with the view of obtaining this general possession of science for the practitioner, to effect an improvement in the medical profession by making appeals to parliament in behalf of a *consolidation* of the profession, and to render *knowledge* and *moral* worth the *only* necessities to a medical examination. Need I recommend my readers to the London College of Medicine as exhibiting the glorious principles which the medical profession must at length acknowledge? I beg legislators to study the principles of this college.

The third remark is, that vaccination is one of the most glorious exhibitions of the principle of counter-action. It induces a peculiar condition of the system, protective against the influence of small-pox; and, as such, I beg to solicit the support of the friends of humanity to the Royal Jennerian and London Vaccine Societies, which have been for years dispensing the blessings of this great boon, these Institutions being entirely dependent upon private support.

THE END.

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