Discourse on the enlarged and pendulous abdomen : showing it to be a visceral affection, attended with important consequences in the human economy : with cursory observations on diet, exercise, and the general management of health : for the use of the dyspeptic / by Richard Frankum.

DISCOURSE

ON THE

ENLARGED AND PENDULOUS ABDOMEN;

SHOWING IT TO BE A VISCERAL AFFECTION,
ATTENDED WITH IMPORTANT CONSEQUENCES IN THE HUMAN ECONOMY;

WITH

CURSORY OBSERVATIONS ON DIET, EXERCISE, AND THE GENERAL MANAGEMENT OF HEALTH.

FOR THE USE OF THE DYSPEPTIC.

SECOND EDITION,

AUGMENTED BY

A DISSERTATION ON GOUT,

SUGGESTING

NEW PHYSIOLOGICAL VIEWS OF ITS CAUSE, WITH DIRECTIONS FOR ITS TREATMENT AND PREVENTION.

BY RICHARD FRANKUM, ESQ.

SURGEON.

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PREFACE.

FLATTERED by the manner in which this little work has been received, the Author is anxious that the present edition, from the importance of the matter appended, should be deemed not only of equal, but of greater value than the preceding.

He has ever been impressed with the conviction that it is the duty of every man, who by a scientific pursuit has acquired knowledge that may in any way be rendered useful to mankind, to endeavour that that knowledge be made available to the best of his ability.

There are few professions whose practical utility is greater than that of medicine; and, so extensive and various is the field of observation which it affords, that there is no member of that profession, however humble, from whom he does not think it possible to derive instruction on many points which may have escaped the notice of others.

Whatever may be the final opinion of the merits or demerits of this attempt, the Author humbly hopes to claim approval for his motives, and indulgence for his deficiencies. He has a firm reliance on the judgment, candour, and growing intelligence of the community, and it will ever be his greatest pride to be regarded as having added his mite to the gradually increasing store of knowledge.

Finally, he entreats to be acquitted of all pretension or arrogance in the views which he has ventured to give on that "still vexed" subject, the Gout, believing that if he be not wholly right, he has gone in the right direction so far as such a brief sketch would permit him. It will be his wish, upon some future occasion, to treat the subject on a scale more extended and more nearly commensurate with its importance.

17, *Albemarle Street.*

A DISCOURSE,

&c.

INTRODUCTORY REMARKS.

THERE are few disorders that have so great an influence on the well-being of individuals, as those which are incidental to the alimentary canal.

Not that those disorders are of greater severity, or attended with more danger, than many others. The frequency of their occurrence, the many anomalous forms and characters they simulate or assume, and the difficulty that often ensues of ascertaining not only their precise seat, but the nature, and even reality, of their existence, will sufficiently account for the importance we ascribe to them.

The artificial state of society at which we have arrived, may be considered as one of the most constant and productive causes of these invasions upon health, from which man in a less refined, and even in a savage state, devoid of

those corroding cares, conflicting interests, and other exciting influences with which we are surrounded, may be greatly if not wholly exempt. Such a view of pre-eminence, or disadvantage holds out, however, no inducement to a retrogression, but, on the contrary, should stimulate us to the discovery of means, by which the evils of our condition may be lessened, and the good still further increased and secured to us. It is, indeed, but fair to hope that science will ever keep pace with our wants; that the value of life will be, as it has been, gradually and greatly extended and improved; and that the comforts and happiness of the species will be multiplied, notwithstanding the predisposition to disease, which imperfect civilisation may still entail on us.

We are often prevented arriving at clear conclusions, in a great variety of matters, from the disposition we have of generalising too much; we accept names for things, attach importance in the wrong direction, and are fain to content ourselves with a ready, but inappropriate sequence.

We overlook the great and simple truth, that

all things are compounded of parts, and that, to arrive at a just comprehension of the whole, it is necessary that we should have a correct knowledge of each particular. To no subject, perhaps, does this remark apply with more force than to this branch of medical inquiry.

DISORDER OF THE DIGESTIVE ORGANS

is the general and accepted term for almost all alimentary affections; and yet how many delicate, and even dangerous diseases, may be included therein! Nor will our wonder be lessened at the want of a more precise nomenclature, if, for a moment, we consider how many organs, or parts destined to perform particular functions, are comprised in what may, with propriety, be said to constitute, or belong to, the *digestive* organs. We have the stomach, liver, spleen, pancreas, and duodenum, and no inconsiderable length of the great and small intestines; any spot of which may be the seat of disease, and present a diversity of character, according to the part affected, or the degree of the affection. And such is the delicacy with which in many of these parts diseased action is clothed, that sha lows

may be said to make differences, and to be the only guides by which the necessary distinctions can be drawn.

The following attempt to throw some light on an affection which belongs to that class of diseases, happily termed by Good, in his Nosology, *cœliac**, in reference to the abdomen or "lower belly", will have for its justification the hope of establishing a greater attention to it than it has hitherto received. Some of the consequences induced by this affection will probably be looked upon as no less startling than true; but the most indubitable test of the correctness of the view here taken, will be found in the individual experience of those who are the subjects of such intestinal disorder. Various anomalies in the derangement of health, to which many individuals with the greatest care and attention to themselves are still exposed, may be thus explained; and those apparently never to be eradicated dispositions to gout, rheumatism, and various other bodily and mental ailments, to which some persons are all but perpetual martyrs, will, it is presumed, be obviously and satisfactorily accounted for,

* From κοιλία, venter, alvus.

as such dispositions will seldom be found to exist unattended with the affection in question.*

Long and attentive observation has also confirmed us in the opinion, that the affection we are about to consider belongs peculiarly to the adult, and is not confined to sex. The form which it causes the abdomen to assume is its chief outward distinctive feature, and so well known as to require no further comment. It is ordinarily of so slow a growth that it attracts but little attention up to a certain point, when of itself it proves the means of adding daily to its own increase; and, in an aggravated degree, is attended with many serious consequences and inconveniences, which we shall hereafter endeavour to point out.

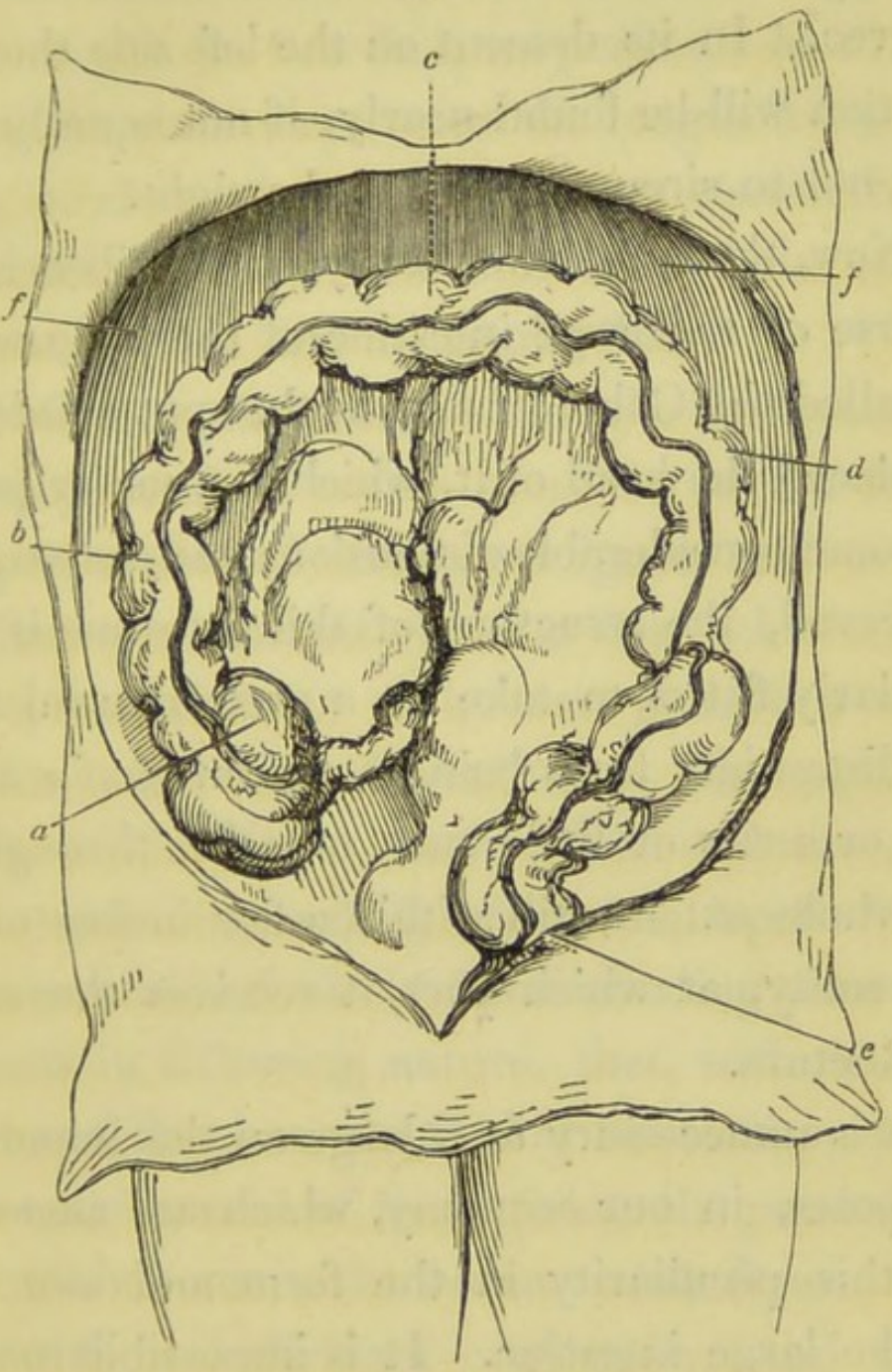
* Scarcely were these pages in print, when we had to regret the almost sudden death of one of the most amiable and enlightened men, Lord Holland. Had his personal condition been under the views herein advanced, it is more than probable that it would have been long ere we should have had to deplore what was so beautifully and becomingly expressed in the *Examiner* of that day, as — "the rupture of that golden link with the genius of the last age."

LOCAL AFFECTION.

We shall also venture to distinguish this disorder as one belonging to a *part* only of the system appropriated to the functions of digestion, requiring a separate and distinct consideration from those disorders which affect the *primæ viæ*, or first passages of the alimentary canal; our object being to establish the fact, that the seat of the affection which we have selected for observation, is to be found primarily, and for some time, solely confined to the large intestine.

Corroborative of this opinion, we shall discern, as we proceed in our inquiry, a conformation of these parts highly favourable to the setting up of this disorder; and a careful examination of the progress of it, under ordinary circumstances, would be attended with the following results:— It would be observed that a sense of fulness would be found to exist, and to have commenced, from that spot which lies just immediately within the hollow of the right iliac or haunch-bone—a space which the hand might cover. This fulness will be found gradually to ascend, still on the right side, upwards towards the liver; then, taking a direction across over the stomach to the left side

Fig. 1.



a. The head of the colon.
b. The ascending portion.
c. The transverse.
d. The descending colon.
e. The sigmoid flexure.
f. The diaphragm.

of the body, filling up and forcing out the substance or bulk of the abdomen to an unnatural degree. In its descent on the left side the iliac portion will be found nearly, if not equally full, but not so circumscribed as the right.

Now, the course we have just described is the course of the large intestine of the body which is called the Colon; beneath the spot alluded to is placed the head of it, which is a sac or pouch of some considerable dimension; and, as we have observed, the structure of this intestine is particularly fitted to take on a preternatural state of distension, from being constituted of a number or series of little sacs, or cells, throughout its whole extent, till within a few inches of its extremity, at which part it receives the name of Rectum.

It is unnecessary to enlarge on the important purposes, in our economy, which are answered by this peculiarity in the form and structure of the large intestine. It is impossible to conceive any plan by which so great a continuity of surface could be obtained in a space so limited as the cavity of the human abdomen. Among the many advantages which result from this construction we may place symmetry and com-

pactness; but, above all, let us observe, that the mysterious chain of digestive functions appears to be carried on "as full, as perfect," as if the intestinal canal were twice the length it is; indeed, its elongation would be very considerably increased, if every tuck and fold of the colon were unravelled into a straight line.

It will not, we trust, be thought irrelevant to our subject, if we revert to a view of the form and proportions of the human figure, such as the excellence of ancient Art has best achieved in its representations. Who can gaze but with wonder, and with admiration, at the exquisite beauty of the Venus de Medicis, and the still more rapturous, and all but divine, Apollo!

So careful and nicely discriminating were the ancients in following nature, that, with the exception of Bacchus, the God of Sensuality, there is no one instance of their giving the pendulous form of abdomen to the human adult figure, unless to show individual conformity, and then only as a sort of portraiture.

Regarding, as we do, the pendulous form to be typical of disease, it would be cruel and unjust to have it inferred that we intend, by the above exception, an oblique censure on those

who have the misfortune to be afflicted with the infirmity. Habits of indulgence, from the indolence and repose engendered by them, are undoubtedly favourable to its formation; but a life of the most rigid virtue cannot be exempt, so long as, in the language of St. Paul, "Man is of the earth, earthy." Our object, at this stage, is not to seek for causes, but to claim admission for a fact long observed in one sense, and here insisted on in another, viz. that the pendulous belly is no less a departure from the natural shape of the human figure, than it is from a state of health; and that no individual, so circumstanced, can be said to possess either of those conditions so essential to our welfare: nor, in addition, do we think it will be difficult to prove, that the line *nearly perpendicular* is the line of health — that is, that the abdomen should not project but in a very slight degree beyond the chest-bone;—and, as a corollary, whatever conduces to the maintenance of that direct line, is the best security of health, as well as the surest path to longevity.

It will be better, before we attempt to explain of what this affection consists, which operates so prejudicially, and to what this fulness is owing, which leads to such important results, to

describe, as far as in us lies, what are the natural functions of the parts in question, in reference chiefly to a principle of mechanism, which we conceive to appertain to them, and in the right use of which, a principal part of their duty seems to consist. It will afford us at once the best means of arriving at the conclusion of which we are in search, by first observing the operation of this principle simply upon the contents of the alimentary canal, and, for causes before alluded to, more especially of the large intestine. The full and efficient daily discharge of effete matter from the body can be second only in importance to the necessity of food. It is a function equally constant and persisting: and as this principle is the chief instrument by which it is to be secured, we shall find much of the evil in question to depend on whatever interferes with, or renders the operation of this principle incomplete.

NORMAL ACTION OF THE BOWELS.

The provisions that have been made for the due and sufficient performance of this exonerant function, appear, like all the arrangements and designs of an allwise Being of which we presume to have cognisance, to be most perfect and most

admirable. In the first place, it may be said to be in a certain degree placed beyond the immediate influence of the will. The peristaltic motion, or movement of the intestines, particularly of the larger one, undulating and vermicular, is the most constant and enduring in the animal body: it is even found to exist many hours after death. By this propelling motion, the food, or matter taken into the stomach, is gradually carried onwards till it reaches the first great receptacle, which is found at the termination of the small intestines, and the commencement of the large, *caput coli*, or the head of the colon. The same action is still continued, but in a greater degree, from the assistance of strong muscular bands with which the large intestines are supplied; and the matter, which has now become fæcal, is urged on, till it reaches another receptacle, the Rectum:—within which latter portion of the bowels, by the assistance of the sphincter, or closing muscle, the fæces are, or ought to be, allowed to accumulate, till, by the stimulus of distension, the abdominal muscles, and others connected with the lower intestine, are called upon to act—not so much by the will, in a natural state, as by a peculiar and distinct, a

sort of self-acting, impulse, which is placed beyond the will, and which is bestowed upon such parts, and upon such conditions, for the wisest of purposes, viz. that the mind should not independently control actions so essential for the preservation of life, although it has, providentially, a full share in restraining or assisting them. The relief obtained may be defined as the result of a simple act of expulsion, in aid of which the pressure produced by the action of the abdominal muscles has been mainly and chiefly instrumental.

We shall now direct our attention to ascertain, how far this function becomes changed by an alteration in the action of the abdominal muscles, which is found to exist whenever the pendulous belly is formed.

The self-evident mathematical proposition, that the nearest path between any two given points is in a direct line, is excellently adapted to explain the simplest mode of applying mechanical power, to which all muscular action may be said to belong. Experience and every-day observation teach us, that mechanical, or motive, power is always most *effective* when used

in a straight line. With muscular power it is the same; and the proportions and beauty, as well as the strength, of the human form, are greatly owing to such an arrangement. It is to the muscles of the abdomen that we intend chiefly to apply this rule of mechanics. They form an elastic and strong covering to some of the most important viscera of the body; they descend from the chest and ribs to the lower and bony parts of the trunk, having both ends, the one termed origin, and the other insertion, firmly fixed and supported. In the middle these muscles, especially those which are called Recti, from their running in a straight line, are divided into small bellies, each of which may be separately called into greater action than the others, by which excellent contrivance, a degree of pressure is given more directly to the part requiring it, and which is often the case during the passage of some irritating matter in the alimentary canal. Had these muscles been continuous, and of the same substance throughout, these partial compressions upon the bowels could not take place, but the whole extent of the abdominal cavity would be equally, and at times

unnecessarily, acted on. The beneficial purposes of this provident arrangement are immediately felt in an attack of the cramp or spasms: the cause of the attack may be a sudden distension of a portion of the intestines, from wind, or the presence of some acrid, or irritating, matter moving over that particular spot. A sympathetic action is immediately communicated to the abdominal muscles, and, by placing our hand upon the spot, which we almost involuntarily do, we not only find a rigid action of the muscle beneath it, but we assist that action by manual pressure, and enable the peristaltic motion of the intestines to remove the offending cause onwards from the part affected. This is one of the important uses, then, which arise from these great abdominal muscles being divided into a series of separate smaller ones, a provision which not only admits of distinct actions, but also bestows the power of a combined effect, so as to act as one general muscle, or, as many smaller ones. It is impossible to conceive any thing more provident and harmonious in design, or more beneficial in effect, than this simple arrangement of the abdominal muscles.

CHANGE OF CONDITION.

We now come to show a disturbance of this harmony, by which the proportions of the body become affected, and the belly, instead of being maintained in its natural form and figure, begins to assume a pendulous and projecting aspect. There may be those who consider such an appendage no ungraceful attendant, and who would quietly balance the inconveniences for the portliness of appearance, which it is said to induce. It is much, however, to be questioned, whether those who actually bear the burthen would not be amongst the first to decline the distinction entailed by it, and would be but too happy to be blessed with their natural figure, rather than afflicted with such an exuberance; more especially, if, like all other exuberances or excrescences, it be looked upon as an infallible sign of a diseased, rather than of a healthful condition.

As soon, then, as the abdominal muscles begin to lose their direct and perpendicular action, in which their principal force lies, there is a diminution of their compressible power on the

Fig. 2.

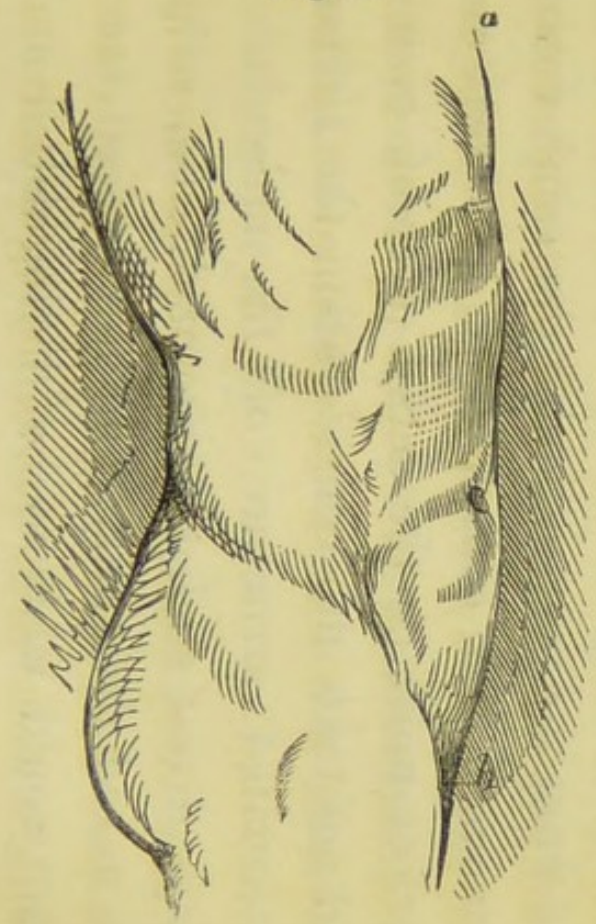
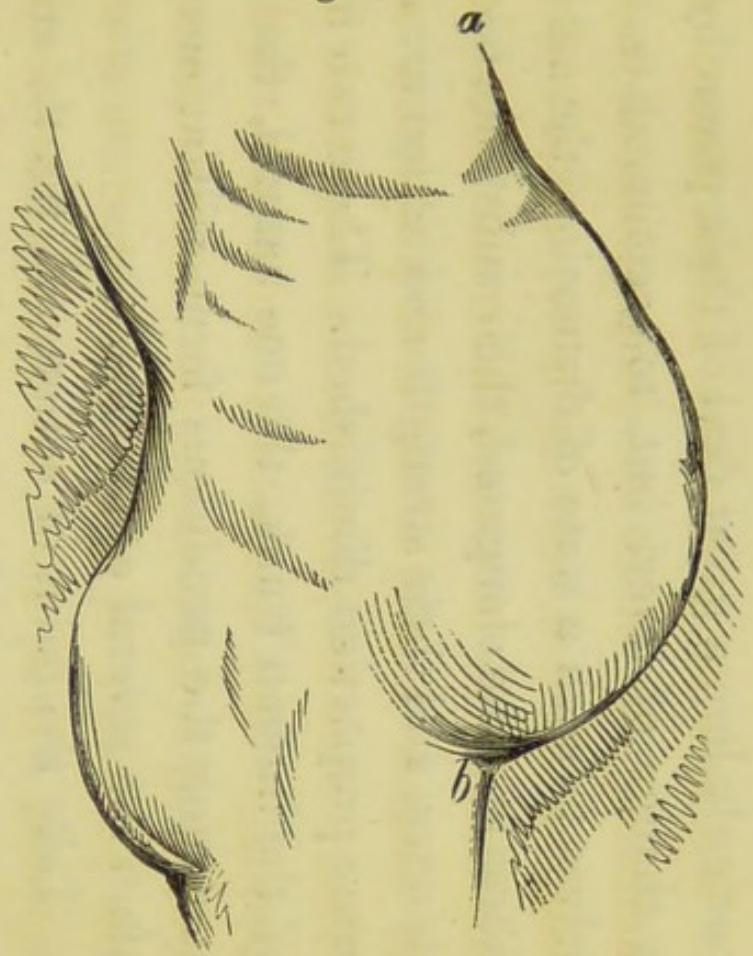


Fig. 3.



contents of the bowels; and, in proportion as they are compelled to act upon a curve, they not only lose a great deal of their power by such a change of lever, but, to accommodate themselves to such a state of distension, the muscular fibres become elongated, their substance becomes thinner, and their strength and action are in the same proportion diminished. These two figures of the human trunk, the one natural, the other assuming the pendulous form, will at once explain the several conditions.

Take the point of action, *a b*, fig. 2., and the same point, *a b*, fig. 3., we shall easily comprehend how much shorter the line of action is in the first, and, consequently, how much more perfect and vigorous; in the second, we find how far from the perpendicular the same means are removed, and, consequently, how weak and imperfect must be the action thereof, even if we did not take into consideration the altered and attenuated structure of the muscular fibre. Nay, divest such a figure of disease, strip it to its naked deformity, and few indeed are those who would wish to be distinguished and oppressed by such an appendage.

COMPENSATIONS.

It will naturally be inquired, if it be so necessary that the abdominal muscles should preserve their direct line, to produce their proper and expulsive action on the contents of the bowels, how is it that those who have such enlargement appear to enjoy as much health as others do in their more natural condition? To this it may be replied, that nature is provident under *every* circumstance, and that, in proportion as these muscles lose, or have lost, their power, there is established a loose and irritable action in the bowels themselves. It is, indeed, rare to find a large and pendulous abdomen with a costive habit of body. On the contrary, we shall generally find it, particularly in advanced cases, connected with a relaxed condition of the bowels, as if under the continuous operation of aperient medicines; at least such is the effect, and such the common impression, conveyed by it.

This irritable state of the internal surface of the bowels is one of the provident and contingent means by which the excretive actions of the alimentary canal are carried on. There is another

means established through the medium of the omentum. This membrane, which lies over, and covers, a great portion of the intestines, has unquestionably many important uses; it is generally studded with fat, and has been supposed to perform the purposes of a blanket to the bowels, by retaining the heat. Two of its chief uses, however, we believe, to be that of affording an additional quantity of exhalant matter for lubricating the bowels,—a circumstance of no small importance, if we reflect, how much it must assist and facilitate the continuous motion of their surfaces one upon another; and also, to form an intermediate layer upon which the abdominal muscles may act without coming into immediate contact with the bowels. The quantity of fat which is occasionally deposited between the layers of this membrane is almost incredible. This appears to be another of those provisions which are set up for the purpose of supplying the loss of power in the abdominal muscles; it rises as an elastic cushion against their relaxed and attenuated surface, and abridges the necessity of their muscular contraction, by filling up the space, and affording a uniform fulcrum for

their pressure on the bowels.* An enlarged omentum is, therefore, one of the indispensable conditions of a pendulous form of belly, and renders it so difficult to remove after it has been for a long time established.

RECAPITULATION.

The following, then, are some of the physical alterations that take place from this affection of the alimentary canal.

1st. A gradual enlargement of the area, or bulk, of the intestines, both small and large; but particularly of the large intestine, which is called the colon. Vide diagram, p. 7.

2. A relaxation, or giving way, of the healthy actions of the abdominal muscles.

3. A preternatural enlargement of the omentum.

4. A constantly relaxed state of the bowels. †

5. General constitutional debility.

* This opinion of the use of the fat omentum is, I am aware, very different from that of many, who suppose it to be simply a deposit of superfluous nourishment, which may occasionally be made available to the wants of the animal under a deficiency of supply. Further than this, I am not acquainted with any other use to which it has been made applicable.

† Oportet sanorum sedes esse figuratas. — *Med. Aph.*

If we were to treat each of these most obvious effects separately, we should find that many serious diseases result from and are incidental to those changes in structure and healthiness of action, which assume the type of an enlarged or pendulous abdomen. One observation, however, cannot but have its importance; it is generally remarked that persons of this habit of body do not bear attacks of illness so well as might be inferred from their appearance of health and robustness. We have seen how specious these appearances are; and the readiness with which such constitutions are pulled down, and the difficulty of recovering health even under ordinary departures from it, but too clearly prove the correctness of the remark. Two circumstances contribute greatly to this result:—

1. The first relates to the effect of abdominal distension upon the diaphragm, by which means the cavity of the chest is diminished, a lesser quantity of air inspired, and the blood is not sufficiently, or properly, oxydised; shortness of breath is inevitable; it is the only means of compensation by which the blood can be at all kept sufficiently pure and vital. A dark maroon colour

in the face but too frequently testifies the want of a more ample space within the chest. The blood becomes deteriorated in quality, the breath foul, and many of the animal secretions excessively offensive. Nor are these the only evils: a determination of blood to the head is but a too common and almost an inseparable attendant; and the greatest number of apoplexies and cases of paralysis that I have seen, have, for the most part, been ushered in under these conditions.

2. The second is a circumstance having more of a mechanical effect, but of little less importance than the preceding. During the time of growth, if it may be so termed, of the enlarged and pendulous belly, the blood-vessels have been gradually accustomed to an increasing degree of pressure, both in giving their supply of blood to the heart, and in their conveyance of blood from the same vital organ. A false and unnatural degree of support has been thus given to them, which from habit, and the length of time it has been established, has become all but indispensable to the due performance of many of their important duties. The heart, too, has

accommodated its action both to the nature of this supply and expulsion, and is, consequently, most sensibly affected by any change in its habitual but inordinate functions.

Let us take then, for example, the case of an individual thus circumstanced; subject him to the action of a disease superadded to the one with which he is already afflicted, and let us suppose, that disease to be one of those to which, from previous long standing morbid irritation of the bowels, there is the most predisposition, viz. diarrhœa, dysentery, or cholera, and we shall not be at a loss to account for the frightful rapidity of these complaints, and the difficulty of replacing the constitution in a state of health. An event of this kind is by no means uncommon. It occurs almost daily, bearing out the remark before given, that we see persons who but as yesterday were, in the world's eye, and in their own estimation, in the possession of robust health, of portly and majestic gait, reduced to a defunct, or living skeleton; from the insidious manner in which their constitutions have been undermined, by what has not hitherto been thought of sufficient importance, to be classed amongst diseases, or

ascribed to the effect of disordered systematic action.*

To these observations, it may be objected that there are individuals with a pendulous belly who approach the defined limit of human existence with, apparently, as much health as those who have it not. There is no denying the truth of such an assertion, any more than that there have been individuals who have lived for the whole period of human life upon the verge of a volcano. It is only a question as to the fitness of things, and whether a greater state of security might not in both instances have been obtained. There is no doubt that this affection, like almost all disorders, if attacked incipiently, may be most successfully combated, however strong the predisposition or habits of the individual to confirm it may be.

* Shakspeare, however, with his all-comprehensive and intuitive knowledge of mankind, thus refers to it. He makes Harry V., on his return from his coronation, disown his old acquaintance Falstaff, giving him, at the same time, this advice,—

"Make less thy body; ———
——————— the grave doth gape
For thee, thrice wider than for other men."

Second Part of Henry IV. Act V. Scene 5.

Some few requisites are, vigilance, attention to diet, exercise, medical means, and an active and cheerful disposition.

After these physiological views, we may be excused by the medical reader from entering on a more popular account of

THE HISTORY OF THIS DISEASE,

which is as follows. It is chiefly manifest about the middle period of life: it comes creeping stealthily on at, or about, thirty-five or forty years of age. There is at that period no diminution of physical power; that is, the muscular system is in as strong a state of development, and as capable of action and exertion, as at probably any earlier period of life; fatigue, and a deprivation of sleep, can be, for the most part, better sustained. There is one thing, however, which is clearly established; the nervous system seems to have acquired a state of repose; there is less excitability in the constitution, and the stream of life flows with a smooth and equable current; the mind becomes sedate, and is not so readily influenced by inciting causes; the dreams and anticipations of youth have passed into the

realities of life, and man at that period of his existence seems best to understand its value, and to endeavour to make the most of it. The sensual appetites are strong, but they are more readily subdued by reason. The gratifications of the palate are, where the means afford, the most frequently indulged, and with indolent habits, or an abridgment of exercise, in proportion to the quantity of food conveyed into the system, the foundation, or groundwork, of the pendulous abdomen is often to be found.

The digestive power of the stomach is, in general, proportionate to the quantity of food given to it. There is no mistake more common than that a large eater has always a full and a foul stomach: the interference with health seldom arises from an imperfect action of this most vital of our organs, supposing it to be in healthful condition. It is by no means intended to affirm that the stomach is not frequently the seat of disease, and of disease peculiarly and almost specifically its own; but it may nevertheless be confidently asserted, that disorder of the stomach is more frequently brought on from its sympathy with other parts, than from readi-

ness in itself to take on diseased action. If it were not for this provident exemption, seeing the incongruous materials that are daily and hourly submitted to its action — and by the healthy performance of which action the life of the individual is to be sustained — how capricious and uncertain would be the term and tenure of our existence! The natural powers, then, of the stomach are in proportion to the quantity of food it has to feed on *, as the size of a blacksmith's

* Admiral Byron thus describes the effect of sitting down to a meal after months of suffering, and hunger, and exposure to an almost tropical temperature: — "The governor ordered a table to be spread for us with cold hams and fowls, to which only Captains Cheap, Hamilton, and myself sat down, and in a short time we despatched more than *ten* men with common appetites would have done. It is amazing that our eating to that excess we had done from the time we first got among these kind Indians had not killed us; we were never satisfied, and used to take all opportunities, for some months after, of filling our pockets, when we were not seen, that we might get up two or three times in the night to cram ourselves. Captain Cheap used to declare that he was quite ashamed of himself." — *Byron's Narrative*, p. 181.

This imprudent indulgence in a northern climate would no doubt have been attended with fatal results, as was the case with some of Dr. Richardson's companions in their expedition to the Mackenzie River, and Great Slave Lake. It also shows, that if, as we know, cold will produce appetite, heat is the best means of throwing off the repletion.

arm increases according to the strength demanded from it. This power of the stomach may however be increased beyond the power of other parts in connexion with it, and whose duties should be reciprocal and equally well performed; and a deviation from health takes place, if the balance of functional performance be not evenly sustained. Let us take, for example, the consequences of a healthy, vigorous stomach being frequently, and in no small quantities, supplied with food: by the peristaltic, and contractile action of the stomach it is quickly passed into the small intestines, and from the small into the large. Allow those large intestines, from causes voluntary or involuntary, to be daily, and for some time, only capable of throwing off half, or any quantity less than the quantity thrown into them, there must of necessity be an accumulation, which must become greater and greater, the area or bulk of the colon considerably enlarged throughout, and a degree of irritation will be, more or less, communicated to the whole extent of the alimentary canal. The stomach, from its insusceptibility to take on diseased action, is however, in the end, although it may be

the last, affected by this obstruction, for its capacity is diminished by the distension of that portion of the colon which passes over it; and by the same cause, too, the bile from the gall-bladder is frequently prevented in its course to the intestines, and a yellow hue becomes blended in the complexion with the maroon already alluded to. The machinery at this point gets rapidly out of order.

The stomach is not only restricted in its capacity to receive the usual quantity of food, but its power to digest that food is in consequence proportionably diminished; such, however, is the force of habit, and the reluctance with which we yield up any thing to which we are accustomed, that great mischief is frequently done in this state of disorder by compelling the stomach to submit to the will, and to endure being crammed to constant repletion, rather than the gratification of eating should be dispensed with: weakened, overcharged, stimulated, and again fatigued, neither the actions, nor the secretions, of the stomach are any longer what they were, or ought to be. From the continuance and excess of this sort of

irritation, the brain, in some constitutions, becomes affected, and sickness, fever, and general constitutional disturbance take place, unless recourse be had to some remedial means. Long before such a condition of general disturbance has been arrived at, it often happens that many minor disordered actions have been set up in various parts of the system, which become the seats of chronic disease. And, although they have not sufficient importance, and connexion with the constitution, to affect or endanger the general health of the individual; they, nevertheless, often prove the source of unceasing discomfort, and from their being removed to parts which are with difficulty reached by means which operate through the medium of the circulation, they admit but a feeble hope of cure, or, at best, require great perseverance to effect their removal. Such are the rheumatic affections of the joints, of the aponeuroses or coverings of the muscles, as also of the sheaths of tendons, and even of the nerves. These affections, modified or not, as they may be, with gout, have *general* disorder of the digestive organs as their chief and principal cause. They seldom, if ever, arise

from the disorder we are treating, but as secondary results, and when the stomach has begun to suffer from excess of intestinal irritation. They are then, as we have before observed, no unfrequent and most distressing attendants.

ORDINARY COMMENCEMENT.

We have attempted to explain how, from causes the most simple, the large intestines become surcharged, from which point we date, under ordinary circumstances, the commencement of this disorder. With the principle we have in view, we do not think it necessary to inquire as to the natural or unnatural conditions of this surcharge, as the same effects will ensue in both cases, but it will readily be believed in a much more aggravated degree, according to the quantity of undigested matter to be found therein. Vegetable food, as we shall hereafter observe, is the least likely to be assimilated; and the consequence of its lodgment in the cells of the colon — subjected as it must be to heat and moisture — is the extrication of large quantities of gas, in addition to the larger quantity of

feculent matter always produced by that kind of food.

Hence a sense of discomfort cannot but arise, even in dispositions the most apathetic and indifferent, and, under the influence of a feeling that we may be excused for terming *instinctive*, there are constant but ineffectual efforts towards relief,—efforts which only serve to accelerate the irritation into which the parts are thrown, without producing the benefit to be desired.

So differently organised are various parts of the alimentary canal, that this irritation may exist for years without influencing the healthy action of the stomach, or apparently affecting the health of the individual. It should, however, be borne in mind, that nearly all disorders do, if long continued, in the end produce disease of structure: and dissection proves to us, that of all parts of the alimentary canal, the large intestines appear to be the most frequently the seat of disease.

When we consider that the long continued disorder, which has the pendulous belly as its most distinctive feature, is but the natural precursor of such disease, it is matter of great as-

tonishment that it has not been more narrowly looked into, and examined. Mr. Abernethy, whose observations upon the disorders of the digestive organs have had so great an influence upon the public health, was himself the subject of an enlarged and pendulous abdomen, and, whilst thundering out denunciations against others for overloading the stomach, was himself a sufferer from over-distended bowels! His views were chiefly directed to the functions of the stomach, and the secretion of the liver; and he appears to have overlooked altogether the consequences of that disturbance of the large intestines, which led to his own case, and that of hundreds who consulted him in the same condition. It is, nevertheless, obvious that the facts upon which we are dwelling had not altogether escaped his observation, as he tells us*, "where the disordered state of the bowels had been of long duration, I have found (in dissections) the villous coat of the intestines tumid, turgid with blood, and apparently inflamed, and sometimes ulcerated; and *these appearances have*

* *Surgical Observations*, 7th edit., p. 54.

been most manifest in the large intestines." To account for the large intestines being more frequently affected than the small ones, he gives the following neither very clear nor conclusive argument, but much to our purpose *: — "If digestion is incomplete, the undigested food must be liable to chemical changes, and the products resulting from this cause are likely to be most stimulating to the large intestines," — (he breaks off here to regard the advanced stage of this disorder,) — "when mucus, and jelly tinged with blood, are discharged, and it seems probable that a kind of chronic dysentery may be thus induced."

Now, had Mr. Abernethy's attention been directed, to the many intermediate consequences, gradually developed by any permanently exciting cause of disturbance in the large intestines, and the peculiarity of their structure, so favourable to a commencement of such disturbance, he would have been enabled to trace the course of those changes which form the history of this complaint, and the establishment of the

* *Surgical Observations*, p. 55.

pendulous belly, as a disease to be included among other disorders of the digestive organs.

REVIEW.

We may thus, then, briefly re-state some of the natural causes and consequences which lead to, and are the results of, this complaint. From whatever cause, whether the stimulus of confined matter, or the incongruity of the matter itself, irritation, is produced in the bowels, weakness will be the necessary result of a continuance of that irritation; and an increase of distension takes place as a matter of course in the large intestines, they being, from causes before referred to, principally affected. The parietes, or walls, of the abdomen, subjected to this distension night and day, gradually yield to the pressure from within, lose their compressible power, alter in their structure, elongate, and from weakness, and disease, the muscles of the belly, which form the walls, seem to have no other property than would be answered by an elastic membrane.

Having proceeded thus far, nature seems sensible of the consequences of this unnatural state, and sets about preparing equivalents. Of the

first of these it is difficult to say whether it be cause or effect. There is, in these cases, a tone of mind enviable from its placidity; and it may be justly remarked, that few individuals possess a greater repose of mind than those who have the disposition to a full and enlarged abdomen. The philosophy of it is probably as difficult to account for, as it is for the bright and ever-cheering views of those who are, even on the point of death from consumption, or the gloomy fears and moodiness of others, who have affections of the liver. The fact, too, is indisputable as to cheerfulness, but that continues only up to a certain point of the disease. Whether cause or effect, such a state of the mind seems most favourable to the growth of the disorder; and obesity*,

* Obesity is not an invariable attendant on this complaint. On the contrary, we may have large and "fat paunches," but attenuated extremities, particularly in advanced cases; the belly being the last part to exhibit the reduction of constitutional powers, which is perhaps more to be marked in the features than elsewhere. I am also induced to believe that the quantity of fat, occasionally deposited anterior to the abdominal muscles, is in part an equivalent; keeping the skin, which we know to be elastic, on the full stretch, by which a certain degree of pressure is sustained.

Localities, have diseases peculiarly their own. We may instance ague, from marshes; the swelled neck, or goître, from

if it supervene, as it often does, is more especially evident in the lower abdomen, and in the membrane lining the bowels, which we before showed to be an important equivalent for the want of action in the abdominal muscles. The third, and last, is the frequency of action in the bowels themselves, by which relief is attempted to be obtained, and without which frequency of action, the health of the individual can scarcely be sustained for twenty-four hours. This frequency of relief, may be regarded as an almost inevitable, and indispensable concomitant to an enlarged, but more particularly, to a pendulous form of belly, and the exceptions, if any, are extremely few.

One moment's reflection as to the consequent weakness of such continued intestinal irritations,

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bad air and bad water, &c. Obesity, too, seems confined to the plains. Mr. Longworthy, in his *Year among the Circassians*, says, "Obesity is there held in disesteem; and a fat Circassian I never saw." Lord Byron, while apparently snuffing the "caller air," alludes to the same effect produced by a bracing atmosphere: —

"Oh! there is sweetness in the mountain air,
And life, that bloated ease can never hope to share."

Childe Harold, Canto IV. xxx.

would cause us to inquire, how such persons enjoy health at all under such conditions. They do, however; and have, apparently, a tolerable share of it.* A large and frequent indulgence in food is absolutely required to compensate the reduction of strength from waste and irritation. Nor is sleep less requisite, nor ever with less difficulty indulged in, which may arise both from the dark and stagnant qualities of the blood, and the want of repose as a restorative for the wear and tear of the system. Again, to account for the apparent exemption of such persons from the usual consequences of disease, — sickness, ill health, &c., we must bear in mind that the progress, hitherto, may have been simply disorder† in the functions of parts, that do not possess the sensibilities of the stomach and small intestines. It nevertheless excited the surprise

* There are some other conditions induced by this disease which are the source of great domestic affliction; but as they come not within the reach of a more direct explanation, they are only alluded to for the purpose of observing, that in removing the cause, we obviate the evil.

† Disorder and disease are relative terms, and their difference depends upon degree.

of Mr. Abernethy himself *, "that such a state of irritation, and imperfect performance of the natural functions of these parts, should exist for so long a time as in many cases it is known to do, without producing organic disease."

That such exemption, however, is not always the case, may be collected from the frequent evidence afforded by dissection.

PERSONAL HABITS.

Some further attention to the habits of those who are thus afflicted, will render it less a matter of surprise, that they should go on so long in such a critical state of body, without some serious event happening to them. Although large eaters of food, there are probably no individuals who are so afraid to deviate, from regular and accustomed habits, as those who have to endure this visceral derangement. Animal instinct, may in such matters, be a better guide than rule or reason, especially if aided by the force of experience; and hence it is that such persons, in spite of all their presumed indulgences, take the greatest possible care of themselves, and are

* *Surgical Observations*, p. 54.

seldom induced by example, to follow other than their own way. Their precautions, however, are not always equal to the progress and tendency of the disorder, with which they are afflicted: ignorant of their real situation, the evil day is too often unwisely put off, till, remedial means and constitutional powers, both fail in re-establishing health upon a secure basis.

Before we proceed to the treatment of this disorder, we shall say one word with respect to the attitude of those who have a protuberant, or pendulous belly, in justice to those, and many are they, whose feelings are any thing but ostentatious, as their gait implies. It is certainly somewhat odd, that presumed dignity of personal appearance should be derived from unnatural causes, and that the erect position of the body is conceived to be the *most dignified and imposing when corporeal substance and a projecting form are given to it.* All this is not less curious than true; and the strut of a man thus circumstanced is attributed to any but the right cause, viz. the infirmity of his condition.*

* The Irishman's sneer at Johnson was founded on this circumstance. Foiled and defeated in his argument with this

None but those who feel, and suffer from, this infirmity, can understand the pain that modest minds are subject to endure from the construction which the world is but too apt to put upon it. Now this is the reason, no matter what the cause of this attitude may be, nor whether in man or woman. It is, an effort, to throw the weight of the body *in a direct line* upon the feet, — in other words, to maintain the centre of gravity. The head and shoulders are thrown back in proportion as the belly advances; the muscles of the back are the antagonists of those of the belly: if both act in unison, an equilibrium is tolerably well maintained; but if those of the abdomen give way, as they do in persons of whom we are treating, there is a necessity for the muscles of the back to act with such force as to maintain the best equivalent they can. Hence, is necessarily entailed upon the individual the assumption of such an attitude, in proportion as the abdominal muscles give way, which is best

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leviathan, the only revenge he could take was, as Johnson rose and departed, to remark, "He has a most ungainly figure, and an affectation of pomposity unworthy of a man of genius." —*Boswell*, vol. i. 383.

evidenced by the projection of their contents. Under all circumstances, it is a case that requires the kindliest instead of the harshest construction, and the silence of commiseration rather than the finger of remark.

The unbecoming position, too, in which persons who are thus afflicted are *constrained* to sit, is thus to be explained. It depends upon the relief which they experience from their legs being placed asunder, by which the blood in the lower veins is allowed to pass upwards into the trunk with greater ease: any other position produces sensations of deadness, and discomfort at the groin, and in the lower extremities, that cannot be well defined, nor long endured.

We may close these observations by adding, that many individuals of either sex, long before they reach the age of forty, have reason to wonder, at the gradual but complete change which has taken place in their bodily habits, from a state of constipation, to the very opposite; but have no idea of regarding the growth of the full and enlarged abdomen as at all in connection with it.

It may also be further remarked, that at all

periods of life there is no condition of the body so favourable for the setting up of disease, or the disturbance of health, as an unbecoming and unnatural fulness of the bowels, even if it fall far short of the aggravated form under which we have viewed it. This is a consideration not only of importance to every individual, but more especially deserving the attention of parents in regard to the management of children.

We trust to be held excused, if we seize the opportunity of a Second Edition, to dwell once more on the value and importance of the observations to which we have above referred. If, as may be truly asserted, in all ordinary departures from health, *the full habit of body*, is the one we most commonly find affected, how much more readily, may we not believe it to favour those attacks of illness, which have the most serious, if not fatal effects upon the human constitution! *A loaded and enlarged state of the bowels is at all times to be regarded as the very hot-bed of disease.* In all attacks of inflammation and fever, we particularly allude to those forms which in the adult assume the types of pneumonia, pleurisy, and typhus — in children,

the *worm-fever*, a sort of typhus from intestinal irritation, scarlet fever, measles, and in acute hydrocephalus, or water on the brain — in all these, and many others equally important, we have not only to deal with the active form of the disease, under which the patient is suffering, but we have to remove a plethoric condition which may, in the majority of such instances, be regarded as the *proximate*, if not the *primary*, source of diseased action. It is, therefore, but too apparent, that the strength and danger of the disease must be proportionably increased, and the recovery in a great degree protracted, despite of means the most active and usually efficacious. Nor can we dismiss from our minds the unsatisfactory conviction, that the cure is at best to be regarded but as imperfect; there being always present in the system a strong disposition to relapse, so long as such an unnatural, and burthensome condition is allowed to prevail.

To the already too extended catalogue of infirmities, brought on by the condition which forms the subject of our little treatise, is to be added the fact, that a very great proportion of

the individuals who are so circumstanced, especially females, and those who have borne children, are afflicted with *rupture.* Bearing in mind the loss of power, the attenuated structure of the abdominal covering, the forcing and pressing outwards of the bowels, from enlargement and distension, together with the diminished resistance, that is daily offered from the progressive weakness induced by the complaint — our surprise arises more from the absence than at the presence of so much evil. Pressure and support, of some kind or another, are the means usually employed; but an indiscriminate application of them may have injurious, rather than beneficial results, and they require more consideration than is ordinarily bestowed upon them — we may instance among the bad effects a change of locality, or the reappearance of rupture in another place: but the most serious objection is perhaps to be found, in the increased force with which the blood is driven into parts or cavities, where no corresponding resistance can be presented to its influx. Congestion, as a matter of course, takes place in the lungs, liver, spleen, and the large

internal veins, and even in the heart itself. Coldness of the extremities, and a want of a more perfect circulation in them, is but a minor evil; the brain is the organ most apt to suffer, from the difficulty with which it gets relieved of its venous blood, and apoplexy, as we have before observed, is but the too common termination.

ABDOMINAL PERCUSSION.

From a long series of attentions that we have paid, to the various conditions that prevail in the abdominal figure, in health, and under the influence of disease, we have arrived at a firm belief, that a great discriminating power is to be acquired, by a careful manual examination over and around the whole region of the abdomen. We regard it as an all but infallible diagnostic means in many latent states of disease, which may exist in the stomach and bowels, &c. It is also, equally indispensable, if we wish to arrive at any thing like a correct knowledge as to the loaded or unloaded state of these viscera. We may ascertain by this mode of examination, the different degrees of *tension*, from the firm, elastic resilience of health, to the

yielding, flaccid, and membranous condition, bespeaking a state of the greatest constitutional debility and decay. By the manner of applying percussion, not only can we detect morbid sensibility in various parts, but we eliminate *sounds*, which indicate distensions from gas, or the presence of obstructed fæcal matter; nor is it difficult to acquire a knowledge as to whether the contents of the stomach and bowels are in a loose, liquid, or more compact condition; and which is of much value in directing us as to the best remedies to be employed. We may have, apparently, a diarrhœa to contend with, the real cause of which is irritation from the lodgment of hardened fæces: in another case, we shall have obstruction in a part of the lower bowels; and the intestinal canal above it, in a diarrhœal or even dysenteric condition. To ascertain these several states, requiring treatment so opposite, percussion affords us most valuable assistance, and ought seldom to be lost sight of in all medical investigations, as to the state of health. In cases of typhus fever, and there are few diseases incident to the human body, that are more benefited by a judicious course of purgative medicines, we never omit to

ascertain by the hand the actual conditions that are daily presented by the abdomen; and, without indecorous presumption be it said, so tangible are the alterations that take place in the progress towards amendment, that we believe the exact period when disease ceases, and convalescence begins, may be known by an indescribable sensation, which a returning healthy action imparts to a hand, practised in discriminating a healthy, from a morbid tone of the abdominal viscera. In many subordinate diseases, and even irregularities, in the state of health, the same means may be most advantageously had recourse to; affording information for our guidance, that can be acquired in no other way. But to return ——

Our treatment will necessarily embrace four points of consideration,—Food, Sleep, Exercise, and Physic.

First, as to

FOOD.

To have a just and proper knowledge of animal wants with respect to food, our first inquiry would naturally be into those provisions with

which we are endowed for the conversion of it into the means of nourishment. This inquiry would lead us too far, and after all would afford us but little instruction in that sublime and wonderful chemistry by which matter, apparently the most foreign to our nature, may be converted into substance similar to our own. We must take man as he is, and not, altogether, as nature has made him. Society has surrounded him not only with fresh desires, but also affords him the opportunity of a more ready indulgence of them. Nearly every part of the habitable globe is rendered tributary to his appetite, and industry and art are made the ready and subservient means to his increasing gratifications; the incitements to indulgence are therefore manifold, and reason is often but a poor guide when the animal propensities are strong. That we eat too much, that is, in proportion to our absolute wants, cannot for a moment be doubted.

But the pliancy of nature to throw off such repletion shows the skill of the Great Architect in our construction: if it were not so, our health and happiness would be perpetually subjected to all the hazardous consequences arising out of

the blindness of our appetites. As rational and recording beings, the time may come when it may be far otherwise. We are already far removed from the hunting savage, whose appetite, like that of the boa constrictor, is glutted at one meal for the sustenance of many days. But the true philosophy of eating will not be understood till we have discovered the means by which food may be so varied as to be the best antidote to disease.

It must always be remembered that as the waste of the body is constant and progressive, so ought to be the supply. Much is said of the virtues of abstinence, but abstinence would be seldom required if intemperance did not exist: temperance is the happy medium by which both may be avoided.

By the time we arrive at the age when the pendulous belly begins to form, experience has generally made us the best acquainted with the food most suited to our individual wants and habits. It is in quantity, and the fallaciousness "of leaving well" (which is not well) "alone," wherein most people err. To those who observe the disposition to an enlargement of the abdomen

coming on, some recommendation may not be unattended with good; as the earlier the attention be directed to the predisposition, and proper means taken to arrest its progress, the greater and more permanent will be the wished-for result. If habits of indulgence in frequency of meals, and in too great quantities of food, have led to it, nothing can be so self-evident as the necessity of some change both in the one and the other. With respect to meals there would be no rule more easily laid down, than that two would be found sufficient for supplying all the animal wants of an adult in twenty-four hours. The quantity of food to be taken at each meal must very much depend upon the habits of the individual; nor less so the quality. If it be necessary to take exercise immediately after, that meal can be neither too light as to quality, nor too little as to quantity; and both may vary in proportion to the rest that can be secured after eating. The greatest and most enduring animal exertions are those which are sustained with a stomach the most slenderly supplied with food; as the running messengers of the East, who will travel immense distances, and in incredibly short

spaces of time, with no other support than a little gum. The effect of exertion immediately after meals, in arresting the process of digestion, and in oppressing the animal powers, is not confined to ourselves, but operates on all animals whose organization is like our own. The dog and the horse present us with frequent and familiar examples of its consequences; and the experiment of Professor Harwood of Cambridge upon two dogs, which has placed the fact beyond all doubt, is probably too generally known to require repetition. They were fed precisely in the same manner; the one was immediately taken out to hunt, the other was allowed to remain warm* and quiet; after a few hours they were both killed: in the stomach of the former the food was found unchanged, whereas in that of the latter it was completely digested.

* Cold has a remarkable effect in increasing the sensations of hunger. Even the poor starved Esquimaux dogs are so sensible of it, that they cannot be induced to drink cold water; they will lap a little snow, and by that means abate their thirst, but not enough to pass into the stomach. It is not difficult to account for this effect, if we suppose that hunger arises from a contraction of the coats of the stomach, as the action of cold must serve to increase the contractions, and quicken the pains of appetite. Sir Edward Parry says the dogs will devour dirt

Another great requisite for perfect digestion is tranquillity of mind, as well as rest of body; and those times of the day should be chosen for the hours of meals when both conditions are best obtained, care being taken that the latest meal be not too near upon going to bed. Cheerfulness of mind contributes greatly to rapidity of digestion: the process is more natural if that cheerfulness be the result of unoppressed animal spirits, and not the effect of stimulus. The severities of a climate like our own have rendered the use of stimulants almost an essential in the cup of human comforts. Their abuse is no argument against their use; and their use, if judiciously exercised, tends greatly to the development of that hardy character, and that daring enterprise which have, for ages, distinguished the sons of Britain.

Those stimulants are to be preferred whose

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and rags, or any thing else by which their stomachs can be distended. One may often remark how quickly appetite can be induced by swallowing a small quantity of soda-water.

Dr. Elliotson has, in his admirable work on Human Physiology, given it as his opinion, that this effect of cold arises from a contraction of the inner surface of the stomach.

action is pure excitement, slowly and gradually procured. If the stimulus be too strong, an unnatural condition of the juices of the stomach is the consequence; and whenever carried to the extent of producing torpor, digestion is always for the time retarded. The bitter of the hop would be much more wholesome, and conducive to an increase of the powers of digestion, if it were divested of its narcotic property. All ingredients in our beverage which have that effect are injurious to persons thus disposed, and should be carefully avoided, or but seldom indulged in. It will be easy to understand the injurious effect of the narcotic principle in arresting the process of digestion, and diminishing the power of the stomach, if we explain, that *digestion cannot be carried on without a concentration of nervous energy in the stomach.* It is only necessary, therefore, to state, that the brain is the seat and source of that nervous energy and action: and that whatever disturbs the free and healthy action of the brain must influence those functions which it has to perform.

Now all narcotics have this property; they dull and stupify the brain; they dispose to

sleep, and sleep is the restorer and not the expenditor of nervous action. The hop is a mild narcotic; but its narcotic effect is counteracted in a great degree by the digestive property of its bitter extract, which, from its preservative qualities, renders it so valuable an addition to beer. Beer, however, that is highly charged with the hop, is by no means to be preferred; it neither strengthens the stomach nor facilitates the digestion, but, on the contrary, affects the brain, and impedes that important process. Other narcotics, as the darnel seed, the cocculus indicus berry, nux vomica, and tobacco, are, it is supposed, occasionally employed to impart their properties to malt beverage, and although neither poisonous, nor dangerous, if care be taken in their quantities, should be carefully and strictly shunned in all cases of weak and slow digestion.

One of the most invigorating, healthful stimulants that the stomach can receive is the *carbonic acid gas;* for, unlike other stimulants, no after-debility seems to result from it. To insure its good effect, care should be taken that the vehicle in which it is introduced into the

stomach should have no property tending to counteract its salutary influence. In this respect, champagne is highly objectionable: nor can it be matter of surprise when we know that it is made of the immature juice of the grape, and, but for the care taken to effect the production of the gas, it would be in all respects detestable. There can be no doubt that malt liquors of good body impregnated with this gas would be more wholesome than without it. But if we were called upon to point out a beverage the most useful to aid digestion, to add comfort to the stomach, to exhilarate the brain, and to prevent oppression, we cannot conceive one better calculated to answer all these purposes, than a mucilaginous drink charged with carbonic acid gas, and such quantities of the best brandy* added to it as to suit the age and habits of the individual: the temperature may be always regulated by a superaddition of warm water.

* Pity it is that so necessary an article to human health should either be abused in its use, or rendered so difficult to obtain for the service of the poor, from the enormous tax upon brandy that our fiscal law imposes on its importation: it is equivalent to nearly 300 per cent. on cost price.

Wine is too generally used for social purposes to render it a subject for medical comment: the only rule is moderation. Its most recommendable properties are soundness of body, sufficiency of age, and the absence of all other spirit than that produced by its own fermentation. The qualities of white and red are not so similar as to make their choice indifferent, — it must depend much on the habits and wants of the individual; but, as an ordinary beverage, there are few that would be found more beneficial to all habits and ages requiring a simple stimulant, than port wine and water.

The attention we have thus given to the effects of stimulants arising from drink has, in some measure, led us too far away from the subject of food. We were drawn on from a necessity of showing how often the best of food is robbed of its good properties by the impediments to its perfect digestion, arising but too frequently from those causes which we have just attempted to explain.*

* The temperate and philosophic Franklin was in the habit of illustrating, among his fellow-printers, the benefits of his own system, — that is, water drinking, — in opposition to those

As animal health must always be more or less influenced by the vigour and completeness of the process of digestion, there can be nothing more requisite in all deviations from it than a careful selection of such viands as have the following essentials: —

1. Facility of mastication.

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who drank beer, by holding out a piece of bread, stating that the whole nutriment to be derived from beer was to be found in it, and that the difference of expense was most burdensome to a working man; many of them being in the habit of taking, as he tells us, five pints a day. Habits of temperance cannot be too strongly recommended, but Franklin's position was not altogether the most tenable; and some excuse for those who differed from him may be found in the absolute physical necessity there is in many constitutions for keeping the heart and blood-vessels distended to a certain pitch of fullness; for lassitude, weakness, and bodily incapacity immediately take place, if this artificial support be not regularly maintained.

There can be no doubt that we are perfect hydrostatic machines, and that much of our strength and firmness of nerve and fibre depends greatly upon the facility of accommodating the inward man to his outer circumstances. How few are there who do not feel the sudden effects not only of transitions of temperature, but of those changes of atmospheric pressure which are still more obvious upon our sensations! Farther investigation of the effects of atmospheric pressure on the body will hereafter throw great light on many obscure and hitherto unaccountable effects which arise from this cause.

2. Readiness to become pultaceous or pulpy.
3. Such as require the least change to render them animalized.
4. Those which, in the smallest compass, contain the greatest quantity of nutritious matter.

The knowledge we have of the digestive power of the stomach is, that it does not consist in triturating the food, but in secreting a fluid possessed of such an extraordinary and inexplicable solvent property as not only to be capable of reducing the food into a soft, smooth, and pulpy mass, but that it will even act upon iron, and in some cases dissolve, in part, the stomach itself; and, as we have before observed, the vital or quickening property of this fluid must depend on the quantity of nervous energy with which the stomach is supplied. Great as this property of solution is, we shall nevertheless find it necessary, or rather an advantage, to attend to the before mentioned considerations.* The best test of their truth would be in apply-

* In these and many other dyspeptic cases great good will always result from diminishing the superabundant bulk of the circulating fluid: it may be effected with the least incon-

ing their opposites, — that is, giving a negative to each; and the results will be, what they but too often are: —

1. Weight at stomach.
2. Imperfect digestion.
3. Crudity of assimilation.
4. The elaboration of bad and inefficient elements for the repair of the waste of the body.

Besides, a permanent state of irritation, if once set up in the alimentary canal, but particularly in the large intestines, where this bad and vitiated matter is allowed to accumulate, will, as we have previously observed, of itself become the exciting cause of diseased action,

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venience by gradually diminishing the amount of the daily fluid, of whatever kind it may be.

By purging we effect the same purpose; but the quantity thrown out of the system is derived from such innumerable sources, that the heart, unless the purging be carried very far indeed, is not made suddenly sensible of the loss. In bleeding it is just the contrary: we reduce the bulk too rapidly to allow the heart and blood-vessels to accommodate themselves to the diminution which follows. The consequence is, that fainting almost inevitably ensues; and the remark is borne out, that no persons bear the loss of blood from bleeding so badly as those of a full habit.

and more especially lead to the foundation of that peculiar deviation from health which is observable in the pendulous abdomen.

The experiments of Spallanzani, Mr. Hunter, and of others, have long since confirmed the conditions we require in the choice of food, whether animal or vegetable. Nor can there be a doubt, that a mixed diet, or one compounded of both, is the most natural and the most conducive to health.

OF ANIMAL FOOD.

The fibre of flesh is wholly soluble; but there is a great difference of fibral solubility, not only in the flesh of various animals, but in the various parts of the same animal.*

* There is also great necessity for attention to the mode and degree of cooking our food. In this and other European countries, we are accustomed to allow the flesh of the animal to become cold before we consider it proper to eat. Belzoni being invited to dine with some Arabs, beyond the upper cataracts of the Nile, expressed his surprise at the exquisite flavour of some mutton that was cut from a sheep but just killed, and roasted whilst reeking.

This circumstance will probably explain to us the use made of animal sacrifice: it was the only sanctified time for eating flesh. The priests were the purveyors, having a regard, as we

Wishing to effect the fourth essential with respect to this sort of food, our first choice would be, in the selection of animals whose flesh contains the smallest fibre and the greatest quantity of red and healthy juices. Mutton must therefore be preferred to beef, as the flesh of kid should be preferred to lamb; the fibre of the one being more easily comminuted, and that of the other containing less of the immature animal juices. The veal of other countries is far more wholesome than our own: the animal is nurtured with less confinement, and the whiteness of the flesh is not considered, as it is here, mistakenly, as a proof of its delicacy. Nor is it all but bled to death many times before the last stroke be given to the animal, as the redness of its flesh and the freshness of its flavour incontestably prove.

It is in this country, and deservedly, amongst the forbidden meats in our valetudinary list.

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observe among the sons of Eli, for all the best parts. It is curious to observe the habit of the butchers of Rome of the present day: they are dressed in white linen tunics, such as we can imagine the sacrificial robes to have been.

Pork and poultry may also be properly added to it; and fish will fall under the same restrictions, —viz. the inability of supplying a sufficiency of nutriment in a small form. Game is most deservedly esteemed both for lightness of digestion and quantity of nourishment; it should, however, be looked upon as the diet of the valetudinarian, and not of the would-be robust. Venison belongs to the rich and the luxurious; it comprehends, however, every quality, if not kept too long, that can be desired from animal food.*

OF VEGETABLE FOOD,

the best and most perfect for human subsistence is pure white bread.

Various farinaceous substances prepared after the manner of bread, that is, reduced into powder and used in that state, or in a more palpable form, possess many of the properties of bread, and would be nearly as useful, were

* We may close these remarks on meat by observing, that, under the process of digestion, it does not appear to undergo any change, but at once submits to its union with the gastric juice: when in that state it is called chymous.

they equally abundant. But in the diet necessary for the prevention and removal of this complaint, we confine our preference to bread —embodying, as we believe it does, the greatest quantity of nutrient vegetable matter in the lightest form. All green *, and other vegetables, we would wish to be wholly excluded, from the difficulty of their conversion into the elements of nourishment, and the flatulent consequences which ensue from their passing through the bowels unacted on by the gastric juice. Nor should there be an inducement from any fancied necessity of stimulating the stomach, or of expelling flatus from the bowels, to the use of peppers, spices, or mustard. There is no evil more common than that produced by the irritating effects of these indigestible condiments; and we do not hesitate to say, that when taken in excess they cause, or increase

* Live or fresh vegetables are in a manner killed in the stomach: they become sodden and flabby of texture, as if boiled, and then the gastric juice acts on them; and no greater proof of the difference of solubility between animal food and vegetable can be given than in the greater quantity of excrementitious matter that is necessary to be thrown off in the latter case than in the former.

the cause, of the very ills they are generally intended to remove. In cases of exhausted vital energy, as in constitutions debilitated by a long residence in tropical countries, this anathema may be in some measure relaxed; but even then it would be much better to bring the stomach into a more natural condition by other means. It is the use that is made of these condiments in high-seasoned dishes, soups, &c. that renders them so exceedingly objectionable and unwholesome.

I have been particularly struck with one of the experiments (No. 8. 4th series) of Dr. Beaumont, to whose work I shall have occasion hereafter to refer. His patient had an opening externally into the stomach, through which could be seen what took place under the process of digestion. The experiment alluded to is thus described:—

"Oct. 2. 1833. At half-past one, P. M., he (his patient) dined on *lean boiled beef, potatoes, and bread*, dressed with a liberal quantity of strong *mustard* and vinegar, and continued his usual exercise: 3 o'clock, 30 minutes, stomach nearly full of heterogeneous mixture: at

4 o'clock, 30 minutes, stomach still contains chyme, and some undissolved food; fluids taste, and smell quite strongly of the mustard; complains of more smarting at the edges of the aperture than usual; slight morbid appearance on the mucous surface: 5 o'clock, the stomach empty."

We learn that precisely the same meal without mustard, *was digested the day before in three quarters of an hour less time*, and that the stomach showed no sign of unhealthiness previous to the ingestion of the latter meal. Dr. Beaumont remarks on this case, that—

"It would seem that stimulating condiments, instead of being used with impunity, are actually prejudicial to the healthy stomach. They can only be required, and taken with benefit, when the gastric apparatus is languid and relaxed, and requires stimulants to excite the tone and action of its vascular tissues." (Combe's Edition of *Dr. Beaumont's Experiments, &c. on the Gastric Juice*, p. 258.)

It is a frequent question of debate, even among medical authorities, whether eating and drinking at the same meal are compatible or

not? Bruce observes, that the Abyssinians, who, in another place he states to have prided themselves on having derived all their wisdom from Solomon, use this maxim —

Plant first, and then water.

"Nobody, therefore," he continues, "drinks till they have finished eating." *

There can be no doubt that to many individuals such a restriction would be attended with much benefit; but it cannot be, for a moment, enjoined as a general rule. †

Our own homely proverb, although we are not able to boast of acting upon such hereditary wisdom, is far more to the purpose: —

Eat when you're hungry, and drink when a-dry.

It will be unnecessary, where manly habits

* Bruce's Travels, v. 75. edit. 1813.

† We may here observe, that all fluids appear difficult of digestion, but are more or less so in proportion to the presence or absence of a coagulating principle. We have examples in milk, and broths, which are solutions of fibrine, gelatine, &c. We also thus account for the difficulty of digestion and the pain experienced from drinking pure water beyond the actual want of abating thirst; hence, too, the advantage and benefit of mucilaginous drinks. Spirits appear to undergo some saccharine change previous to digestion, and sweets are converted into acid. The sugar of the cane is by no means so wholesome

are at all established, to place restriction on pastry; where other tastes prevail, inconvenience from its use will be the best preservative. The same may be said of fruit as a dessert, &c.

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or so digestible as the beet-root sugar; it arises probably from a greater concentration of the saccharine principle, which in the stomach produces an acid more difficult to be digested: there is also some reason in the preference of French sweetmeats to our own.

A curious circumstance connected with digestion is taken from what has been observed in camels. It is well known that if they are fed on very sweet dates, and allowed to drink soon after, they become intoxicated, to such a degree, occasionally, as to be unable to stand. It is very easy to account for this by supposing that, previously to digestion taking place, fermentation ensues in the sweet watery solution, and alcohol is disengaged in the stomach, with as much certainty and upon the same principle as in a distiller's vat. We may account, too, from the same cause for the moodiness and stupefaction of the brain, induced by an excess of sweet wines and other liquors, more especially when in an incipient state of fermentation, the process having then to be completed, or arrested, in the stomach before digestion can render such drink innocuous. Our soldiers were great sufferers in the Peninsular war, from their imprudence in drinking the wine of the country in that state which our great epic poet has called "inoffensive must."

A singular confirmation of the stupifying power of home-made *sweet*-wines is given (as reported in the *Times*, March 5th, 1841) in the evidence of the Rev. John Black, who says, speaking of the defendant, a brother clergyman: "*He has known a glass or two of home-made wine have such an effect upon him, as to make him look* SILLY."

No opinion can be given on this subject more to the purpose than that of Celsus*:—"Secunda mensa bono stomacho nihil nocet; in imbecillo coacescit;" that is to say, "Pippins and cheese to come" may do well for a strong stomach, but are not proper for an invalid.

SLEEP.

There are few of our habits that require more resolution to prevent than over indulgence in sleep. But there are no moments in which we are called upon so imperatively to throw it off, as when it makes its approach after a meal. We have already alluded to its consequences upon digestion; and, whether induced by artificial means, or from the fulness of the meal, or from the force of habit — no matter indeed what the cause may be — it can only be attended with a bad effect upon the progress of that important function.

Eight hours of sleep out of the twenty-four are sufficient for the refreshment of the mental and bodily powers under ordinary exhaustion; and a further indulgence, if habitual, can only

* *Celsus de Re Medicâ*, lib. i. sect. 2.

be productive of evil. Those hours should be chosen from ten in the evening till seven in the morning; and as no part of our experience is more confirmed than the advantage arising from early hours, there is, perhaps, no condition of the body that is to be more benefited by a strict attendance to this rule than the one we have been considering, especially if the early hours of the morning be devoted to

EXERCISE,

of which walking is the easiest to practise; riding the most useful, but not so easily had recourse to — but where it can be done, upon the back of a smart-trotting and short-stepped horse, and continued for an hour or two, no exercise can be compared with it. The effect it has upon the action of the abdominal muscles, as well as upon the peristaltic motion of the bowels, renders it in the highest degree serviceable: with the aid of medicine and a regulated diet, it is all but a certain means of restoring the body to a healthy condition.

There is no exercise that we can employ as an

equivalent*; but as a substitute, there are many productive of great benefit. The use of the dumb-bells, or instruments of any kind that will call into exercise the muscles of the upper parts of the body, particularly if the motion induced by them can be communicated to the trunk; swinging the body, when suspended by the arms; or, what would be of the greatest advantage as an in-door exercise, an instrument, which could easily be contrived, by which the body would be

* Horse exercise was a great and favourite remedy of Sydenham's. The following is an amiable trait of that excellent man, and somewhat curious. As an illustration of treatment in those days, though not connected with our subject, we may be excused for the extract.

"During these years, 1671–2, one of my poor neighbours yet living was seized with a most violent bilious colic, which he had long endeavoured ineffectually to relieve by cathartics, glysters, and *swallowing leaden bullets.* I had recourse here to the frequent use of opiates; nor did they prove unsuccessful, for he remained tolerably easy whilst he was taking them. But perceiving they only palliated, and did not eradicate the disorder, for it returned immediately after the effect of the opiate was gone off, I had compassion on the man, labouring under low circumstances and a violent disease, and lent him a horse to ride to a considerable distance, as above directed; and after riding a few days his bowels became so strong as to be able to expel the remains of the disease, and he recovered perfectly by this means without further assistance." — *Opera Sydenhami*, cap. 7.

put into such a motion as that of a man who is called a top-sawyer. In such labour there is a continual play of all the front and back muscles of the trunk; and the whole kingdom might be searched over in vain to produce a man with a pendulous belly who follows that calling.

The general rule with respect to the employment of exercise is, that it should never be taken but upon an empty stomach, or at least from three to four hours after a substantial meal. The process of digestion is not then interfered with; but the chyle, or new blood, which is made from it, is, by the increase of the circulation which the exercise brings on, more rapidly carried into the general system, and is the chief cause of the glow of health and cheerfulness of spirits which invariably ensue, if the exercise be not carried too far.

MEDICINE.

In laying down the preceding rules for diet, &c., one always encounters the fear and almost certainty of falling into common-place observations. Every man's experience is in some measure his best authority; and as there are none, as a

nation, who bear restriction in any matters with so little grace as the English, it will never be cause for surprise to find us, after all, persevering in our own way: so true is it, and generally applicable, that, although "we know the right, we yet the wrong pursue."* One use, however, it is hoped, may be derived from them, that many may be corroborated in their opinions of themselves, where information and instruction would be wholly needless, if not impertinent. However, to our province. In the medical treatment of these cases, our course will be governed by the conclusions to which we have come as to the conditions which prevail in the system; and of their truth we hope no doubt can remain.

Having, then, established these premises, we may add that simplicity of means is ever most conducive to certainty of result. It only requires that we should carefully select such means as are most likely to attain the desired

* I never knew this perversity so well explained as by the following reason: —

"There is in human nature generally more of the fool than of the wise; and therefore those faculties by which the foolish part of men's minds is taken, are most potent." — *Bacon's Essay on Boldness.*

object.* We shall arrive at this knowledge in the best way, if we attentively watch those indications that nature seems to point out to us. We have alluded to the lax and irritable state of the bowels as an invariable attendant in this morbid condition of the belly. Such a state, without further inquiry, would lead us to the adoption of a treatment the very reverse of the one which we are about to propose. There is so much positive evil in the application of remedies which fall short of a general relief, and which only go to the extent of adding to the previously existing excitement, that we do not wonder at the just complaints of those who even suffer from the effects of a *few grains* of rhubarb. It is from this susceptibility to small impressions, and the lowering effects which ensue from a further extension of the customary irritation, that many persons are deterred from submitting to medical treatment. The fallacy lies in the relief sought for not

* "Variety of medicines," says one well skilled in human philosophy, "is the daughter of ignorance; and it is not more true that many dishes have caused many diseases, than this is true that many medicines have caused few cures." — *Bacon.*

being carried far enough: the bowels are *teazed*, and not *relieved*. That one full and copious evacuation of the bowels will do more good, and at less expenditure of the physical powers, than the same effect when produced from half a dozen efforts, is so obviously consistent with reason, that it will carry with it its own recommendation. Our object should be then, in this plethoric condition of the bowels, to aim at relieving them of their contents by such agents as will call upon them to exert their dormant powers, stimulate them to action, and cause them to expel the matter of offence. The action thus induced seems as if the bowels were taken by surprise, — that is, subjected to the influence of some new stimulus; and the relief obtained is often so full and effectual as not to be described. Now there are but few medicines with whose action upon the human constitution we are acquainted, that will have this full and sweeping effect, without at the same time producing some after-drastic consequences which militate against their employment; our wish being to obtain relief at the least possible expenditure of constitutional power. All re-

sinous aperients, from the difficulty of their solution in the stomach and bowels, have from this cause much that is objectionable in their operation: the surface upon which they act, for that reason too, is limited. Acrid in their nature, they stimulate the parts with which they come in contact, and cause those violent and partial contractions, the cramps and gripings of the intestines, for their removal.

Amongst these we may particularly distinguish the scammony, gamboge, aloes, extract of jalap, compound extract of colocynth. Indeed, the form of pill in which these substances are generally given, particularly if hard, renders them still more objectionable, from necessarily confining their irritating effects to mere lines of action instead of large surfaces. For in proportion to the extent of surface stimulated, we have the intestinal secretion (*succus intestinalis*), poured out; so that the irritating matter is more quickly passed on, and at the same time it does not come into such close contact with the tender, delicate, and lining membrane of the bowels.

This is worthy of consideration, and of no

small importance in our view of treating these, as well as many other, diseases and affections. The medicine that we have found to be attended with the most decided success in these cases is the powder of jalap, with a few grains of calomel, and a little ginger, and there is no small advantage in selecting a proper vehicle for its administration. The pulp of roasted apple best covers its taste, lessens the nausea it otherwise produces upon the stomach, and quickens, in a very remarkable manner, the action of it. There is no want of solubility nor extension of surface when thus exhibited. Its action at once commences on the stomach; it goes sweeping on, unchecked in its career, through the whole extent of the alimentary canal; and the relief afforded is both salutary and most effective.

It is matter of great surprise with many persons, when treated in this way, to find how little inconvenience and abatement of strength they suffer after the effect is over, a few grains of rhubarb and magnesia having previously teazed and distressed them for hours without producing any effectual relief or benefit.

Notwithstanding the extended operative in-

fluence of the first impression made upon the bowels, the effect would too suddenly cease to have all the good we desire from it. It will therefore be advisable to subjoin, a few hours after the exhibition of the powder, an aperient of sal-polychrest, or soluble tartar with infusion of senna, or, what is better still, a combination of castor-oil, with a drop or two of the oil of croton. By this combined operation both of remedies and remedial effects, we produce a greater certainty as well as steadiness of action; and, after the operation has ceased, the bowels must be left quiet and undisturbed for a few days, when the same means and method must be repeated, and so on, from time to time, till the disease be eradicated. It will be occasionally necessary to add strength to the respective doses, or to diminish their force, although the second dose, of precisely the same proportions, but seldom produces so extensive an effect as the first, for the bowels have already gained strength from the respite afforded them, and from their being less oppressed with so great a quantity of matter.

It will be also occasionally necessary to vary

the means, from the bowels becoming less susceptible to the impression of a medicine which has been frequently repeated. From this principle (a mere change of stimulus), a dose of pure castor oil, will have a most marked and beneficial effect.

One of the principal objects we have had in view, has been to produce a propulsive effort or action in the bowels. Such a result was not to be attained by keeping them under the constant operation of small doses of medicines; the effect would be no other than to add, as we have before remarked, to the previous state of irritation. Now, by relieving them now and then copiously of their contents, we take away the exciting and immediate cause of morbid action, and remove to a further period the next solicitations for intestinal relief. The importance of this interval is not easily over-rated. There is not only a change produced in the action, but the bowels are made sensible of the distension going forward within them, and the next attempt towards relief is accompanied more or less with an effort of expulsion, a sure indication of a returning healthy action, and a promise

of final success to our endeavours, if we swerve not from the path we are pursuing.

We shall, therefore, again repeat, that one of the great advantages of this simple mode of treatment results from the time that the bowels have to recover their lost tone and ordinary capacity after so effectual a relief has been given to them. It is not to be expected that parts which have been so long preternaturally distended, should immediately regain their due size and proportions, even although completely emptied of their contents. Great assistance will be afforded by the means of external pressure and support; the application of a belt, or bandage, will not only contribute to secure the reduction of the size, but will give that support to the action of the heart and blood-vessels to which they have, from the diseased cause, been so long subject; palpitations of the heart and even faintings may ensue, without an attention to this provision. Friction with the hand, armed with a flesh-brush, or clothed with a glove of horse-hair, or rough serge, if duly applied, night and morning, will be of considerable benefit, not only in this, but in most affections

of the *viscera* requiring strength, energy, and regulated action. Nor must the bracing effects of cold shower-baths of salt-water, and bathing in the open sea, be omitted in the list of remedies which will conduce to the restoration of a vigorous state of health.

Having by a judicious and persevering combination of diet, exercise, and medicines, either attained the object, or placed the individual in a right direction to arrive at it, we may, with much propriety, finally revert to the necessity and beneficial effects of a frequent recourse to medicines. If the disease has been once set up, there is always a predisposition to relapse into the same condition: it therefore requires much personal care and observation, so as to give such timely checks as will prevent its proceeding too far, before attention be paid to it. There are few disorders to which the old proverb applies with more force, that "prevention is better than cure;" there are also few valid excuses for omission, the evidence being so clear as to the tendency of the complaint, and the many consequences and inconveniences that result from it. It would be assuming too much to

lay down therapeutic plans for the usual and every-day habits, beyond those which every man of sense and observation will readily apply to himself. Although insidious ills are those which generally work the greatest evil, it is not to be endured that every departure from health should be made a source of anxiety and painful solicitude. A chief part of the philosophy of life is assuredly the preservation of it; but with all the advantages we derive from a sense of the "divinity that stirs within," and the consequent hope of immortality, our happiness here would be marred with perpetual fears and forebodings, our high aims and aspirations would sink into indifference, if the lapse of time, and the frailty of our existence, were always thus to be brought before us, —

"—— Each moment on the former shuts the grave:
While man is growing, life is in decrease;
And cradles rock us nearer to the tomb." YOUNG.

Such views may do for the ascetic; ours are hopeful of greater, better, and brighter things. The knowledge of man, inwards of himself, was perhaps never more coveted than at the present time; the value of life, as to its duration,

was probably never greater, from a more extended acquaintance with the means of preserving it, and the enjoyments and conveniences that result therefrom. Nor was the finger of Providence ever more marked, nor our progress onwards more clearly shown, than in the glorious discoveries which have of late been made in science both moral and physical; discoveries which have enlarged the mind, exalted our virtues, and extended the sphere and sum of human happiness.

A more fitting conclusion cannot be given to this brief work, than in the words and advice of one of the greatest men of a past age — one deservedly to be remembered in the present, and of whom we are but the rightful executors: — "Nihil magis conducit ad sanitatem et longævitatem, quam crebræ et domesticæ purgationes." — BACON.

DISSERTATION

ON

GOUT.

"I scruple not to affirm, from a long course of experience, that most of those who are supposed to perish by the Gout, are rather destroyed by wrong management than by the disease itself."— SYDENHAM'S *Treatise on the Gout*, sect. 67.

DISSERTATION ON GOUT.

THE gout being so frequent an attendant upon that condition of body which we have before treated, we shall devote a separate portion of our little work to its consideration; hoping, if not to cure, at least to offer some means to assuage so painful a disorder, and, at any event, to lessen the probabilities of its recurrence.

There is always something constitutional in this disorder, although its most obvious form is local. We shall explain this "something" by supposing the individual to be born with certain susceptibilities to diseased action. "*It is rare*," says the philosophic Celsus, "*to find any one who has not some weak part in his constitution**;" in which undoubted truth we readily agree. The peculiar susceptibility which we have in most instances observed in indivi-

* "Raro quisquam non aliquam partem corporis imbecillam habet."—Lib. i. sect. 3.

duals afflicted with a gouty disposition, is an easily excited or inflammable state of the mucous membrane (a membrane which we shall simply define as lining the whole surface of the alimentary canal), accompanied with its all but inevitable consequences, acidity at stomach, frequent attacks of indigestion, great tenderness at the pit of the stomach, an irritability of temper, and a sense of discomfort from the prevalence of easterly winds, with a harsh, dry, and unperspirable state of the skin. The intimate relation, if not identity, of the inner mucous membrane of the body with the outer skin or cuticle is too evident for any one to doubt of their action and re-action, the one upon the other; nor is it difficult to prove how much the health of every individual depends upon a reciprocity of their functions; the perspirable matter of the skin, if checked, having a chance of being carried off through the mucous membrane and the kidneys: and if these be deficient in their emunctory action, the skin, by an effort of nature, may quickly restore the balance. There are few individuals whose experience will not bear them out in the belief that they have escaped many

attacks of illness from a sudden and copious perspiration. It is seldom, however, in a climate so variable as our own, that such nice dependencies can be kept in harmony, to say nothing of the tendencies which are induced by our habits, food, errors in clothing, and mental disquietudes.

ORIGIN.

The seat and source of gout are to be found, we shall venture to assert, in the stomach; and the affection of a joint, as we trust hereafter to prove, is but the transference of the diseased action from a part so vital to one of comparative unimportance to the system. Favoured by the predisposition to which we have referred, and which, for the most part, arises from a delicacy in the original organisation or structure of the individual — increased by accident, set up by other disease, or influenced by circumstances as various as indefinite — we shall find the progress of the complaint in direct proportion to the inflamed condition of the mucous membrane of the stomach, and the extent of the functional disturbance which has been established. In its com-

mencement, and under every form, the disease is inflammatory, and in its origin it is confined to the stomach; by which we mean, that the affection of no other part, or organ, is *per se* capable of originating it; and had not nature the power of causing a metastasis, or change of action, from one part to another, gout would be probably one of the most frequently fatal disorders to which we are subject: its danger is but too well known, when from any cause the action is either wholly concentrated in the stomach, or when a revulsion thither of the morbid action has suddenly taken place from an extremity. We shall not, however, dwell on this unfortunate issue of a complaint which is ordinarily more tractable, and in many cases even sanative in its effects. Nor do we allow it to be *hereditary*, as generally supposed, only so far as the before-mentioned predisposition may be the result of innate qualities of structural formation; *in which case* there is always a readiness to take on a particular form of disease. It is upon the existence of those innate or connate conditions of our bodily formation, that the system of temperaments has been founded, as the sanguineous, phlegmatic, leuco-

phlegmatic, &c. Hot and cold are more intelligible terms; and their intermediate degrees comprehend all that is essential and to be understood of temperaments, which, after all, means little more or less than susceptibility to impressions arising from peculiarities of organisation. This may explain the reason of its appearance in various members of the same family, as well as in their descendants: there is no other link by which the chain of gouty action can be perpetuated.

Among the various derangements of health incident to our nature from climatic influence, there is probably no form so frequent as that which is commonly known under the term of *acidity of stomach;* and we are so accustomed, in this particular instance, to regard an effect as a cause, that it will be difficult to induce a belief to the contrary. Acidity is (shall we say it for the first time?) not a *cause*, but an *effect*, — although the remedies employed are always with a view to diminish the effect, the disease producing it being unthought of.

The secretions of the lining membrane of the stomach, in a state of health, are as tasteless and insipid as the saliva of the mouth, — perhaps

somewhat blander and sweeter, — and are continually being exhaled from the surface; by which means its temperature is kept at a proper standard. As soon, however, as an inflammatory or inordinately excited action is set up, the whole surface becomes so surcharged with blood, that the mouths of the exhalant vessels are closed or obstructed, by having to act on a fluid that has been hurried on in too great a quantity, and unprepared for their due office: the consequence is, that whatever secretion does take place is not only unnatural of its kind, — that is, it is acid, or it quickly becomes so, — but the mucous surface becomes in a manner dry, the quantity of fluid secreted is diminished, and the temperature of the part is raised. *The same cause which prevents exhalation from a surface will also prevent absorption.* Thus two conditions of the healthy action of the stomach are at once interfered with. It is true, the exciting cause may be only temporary, or other means may be set up to obviate the disturbance; but when, and as often as, any cause exists to produce this state in the stomach, the same effects (acidity, and heat, and disturbed digestion) are sure to follow. We may also further add, that a sense of oppression, or a

weight at stomach, is at these times always more or less felt, — the consequence of the contents of the stomach being less energetically acted on; and, at the same time, much of the ingested matter, particularly the fluid portion of it, being vitiated by this acescent and depraved secretion, is prevented from rapidly passing off, as it otherwise would, by the usual channels of absorption.

CAUSES.

The action of cold upon the surface of the body, especially if occasioned by dry easterly winds, by checking perspiration and driving the blood inward, tends to cause some part of this derangement*, and forms a strong reason for great attention to clothing. The most frequent and ordinary causes are, however, to be looked for in improper food, undue stimulus or excitants, or long-continued disturbance in other parts of the alimentary canal; nor must we omit the depressing effects of the passions and other

* The vicissitudes of the seasons may well be granted to have a great influence in producing gout; but it is apparent, that, as such vicissitudes operate generally, there must be some other cause, such as that we have given, otherwise all persons would be afflicted in the same manner.

mental perturbations, and, above all, the predisposition to which we have before alluded. The most curious and interesting facts connected with the state of the stomach, under various influences of food, stimulants, &c. brought to light by Dr. Beaumont *, in the case of a Canadian who, in consequence of a gun-shot wound, had an aperture in the stomach which enabled that author to make many observations visibly as to what took place not only in the action, but also in the condition and appearances of the stomach as various matters were introduced by him experimentally, have almost led us to the belief that the stomach has *a life of its own.* † We give an extraordinary proof of its vitality, which we take from Dr. Beaumont's own words.

* *Experiments and Observations on the Gastric Juice, &c.*, by W. Beaumont, M.D. (*U. S.*)

† The thing of all others which to me seems most to bear an analogy to the action of the human stomach is a species of polypus, a zoophyte which Dr. Grant designates as "all stomach!" The same writer's curious and original definition of *an animal*, in reference to the importance of the stomach — to its existence — is thus expressed: — "An animal is but a moving bag which converts organic matter into its own likeness, and all the complex organs of animal life are but subservient to this digestive sac." Vide Dr. Grant's *admirable Lectures on Comparative Anatomy*, lect. 41. Lancet, No. 570.

"A circumstance occurred to-day which I had not noticed before. On settling the stem [of the thermometer] down into the stomach, a strong contraction of the muscular fibres was indicated when the bulb had descended near to the pyloric end, by a sudden and peculiar movement of the tube communicated to the thumb and finger that guided it, and also felt by St. Martin [the patient] himself. The stomach appeared to contract at that point forcibly, and grasp the bulb of the thermometer, giving it a sudden impulse downwards, so much so as to require a quick compression by the thumb and finger to prevent it from slipping suddenly into the pyloric end. This grasping sensation would continue for half a minute or more, and then appear to relax again. This action occurred every time the bulb passed this point, either up or down. Sometimes the *suction* motion was stronger than at others; and when the stem was released from the fingers, it would be drawn down towards the pyloric end, its whole length, ten or eleven inches, occasioning considerable distress, vertigo, and a sense of sinking at the pit of the stomach."—*Experiment* lxxix., 3d series.

We also gather from Dr. Beaumont the following facts, which bear strongly on our physiological views and arguments: —

That he ordinarily found *no bile* in the stomach, — except under peculiar circumstances, such as from a fit of anger, or a full, fat, or oily meal.*

That drinks or fluids, such as wine, spirits, water, &c. were copiously carried off by absorption, and did not go through the pylorus; that is, they are not digested, but enter the circulatory system without much change. †

That the lining membrane of the stomach, from being a pale pink, its usual healthy appearance, as soon as food or other matter came in contact with it, became much higher coloured, the blood-vessels enlarged, an a copious secretion of gastric juice took place. ‡

That whenever a feverish state was induced by obstructed perspiration, undue excitements, improper food, stimulants, or emotion, the mucous or villous coat became *red* and *dry*, and

* *Experiment* xxxii. 1st series.

† *Remarks on Experiment* xxvii. and *Inference* xliv.

‡ *Remarks*, chap. vii.

lost its soft and healthy appearance. *If the feverish state increased considerably no gastric juice could be procured, not even by the usual stimulus of food* *, — a fact to which we have before alluded, and to which it is necessary again to recall attention, showing how improper under such circumstances it is to eat and overload the stomach, as nothing but an increased derangement and an aggravation of the evil can ensue from it; we therefore find that those whose appetites are strong when suffering from or threatened with an attack of the gout, are generally the most severely afflicted. To which we may add, that digestion is always in proportion to the quantity of gastric juice secreted upon the ingested meal, regard being had to quantity and quality of food, due mastication, &c. Dr. Beaumont's 40th Inference, is particularly applicable to a former part of our argument, and ought always to be regarded as an observation of great value: —

" That the quantity of food generally taken is more than the wants of the system require;

* Chapter vii. pp. 97. 99.

and that such excess, if persevered in, generally produces not only functional aberration, but disease of the coats of the stomach."—*Inferences drawn from Experiments.*

The following description of the appearances of the stomach under the influence of diseased action cannot fail to be regarded with considerable interest, particularly if we bear in mind the fact—perhaps unparalleled in the history of man since his creation—that it was taken from actual inspection of the *live* and still living subject. We shall merely remark that, for the most part, they were effects produced from slight and transitory causes and in an apparently healthy and temperate individual.

"There are sometimes found," says Dr. Beaumont, "on the *internal* coat of the stomach, *eruptions or deep red pimples*, not numerous, but distributed here and there upon the villous membrane, rising above the surface of the mucous coat. These are at first sharp-pointed and red, but frequently become filled with white *purulent matter*. At other times, irregular, circumscribed red patches, varying in size or extent from half

an inch to an inch and a half in circumference, are found on the internal coat.

"There are, also, to be seen at times small aphthous crusts in connection with these red patches. Abrasions of the lining membrane, like the rolling up of the mucous coat into small shreds or strings, leaving the papillæ bare for an indefinite space, is not an uncommon appearance."—(Combe's edition, p. 99.) Dr. Beaumont consolingly adds, "that these appearances, when very slight, do not always affect essentially the gastric apparatus."

Our inference is, that GOUT is the result of such a state of things long continued, in an aggravated degree, and in a subject predisposed. Nor shall we be surprised, from what we have ourselves seen, that future discoveries will establish the fact, that that dreadful disease, hydrophobia—at least in dogs—will be found to have its seat in the stomach. The intensity of the inflammation of that organ in those poor creatures, whose viscera we have examined, exceeds belief; hence their unassuagable *thirst*, and maddening desire to tear and devour every thing within reach.

The periodical attacks of gout are to be explained upon the principle of circumstances — either of diet, clothing, or climate — conspiring to produce an accession of the disordered state of the stomach, until, as a matter of security, the "morbific action," so called by Sydenham, is expelled to some remote part of the body, there to await the beneficial effects of abstinence, rest, want of appetite, or some other remedial process, by which the inflammatory action is sufficiently subdued, or rather until the habit or cause — whatever it may be — has been so long suspended from operating on the stomach, that Nature has been enabled to right herself.

There is probably no disease which has led to so much learned disquisition, from the time of Hippocrates to the present day, as that which I now attempt to treat, and my observations upon which I condense into so small a space. By some persons I may be censured for temerity; but having looked at the complaint for many years, uninfluenced by theories and speculations — having narrowly watched its visitations, progress, and end, in the personal sufferings of my own father — unswayed by reasonings on a wrong

basis, wherein effects are treated as causes, and causes as effects—I have never been able to separate from my conviction the simple fact, that gout, under all its forms, is essentially the same thing, and invariably accompanied with a disordered state of the digestive organs. It is so far *constitutional* that its attacks are always favoured by a certain condition of the mucous membrane of the stomach, original or induced. All its premonitory symptoms are those of indigestion; and however mild or aggravated, however various and multitudinous, incipient or confirmed, they still resolve themselves into one principle of action—the inflammatory; into one chief seat—the stomach; but they may differ in the manner in which they are developed, as much as the faces of those differ in whom the disease is found. It is hopeless, and one might almost say useless, to attempt any other definition; and the success of the treatment founded upon this view will of itself amply bear out the position we have taken.

DESCRIPTION.

The ordinary conditions are—hot and dry skin; irritability of temper; restless and disturbed

nights; mouth clammy and bad tasted, particularly of a morning; thirst; appetite none, or depraved; eructations, attended with offensive breath; heat and load at stomach; heart-burn, and great acidity, often to such an excess in regurgitation, or sickness, as to appear to burn the throat, and set the teeth on edge; scanty urine; high-coloured, and quickly depositing a red, brick-dust like sediment, occasionally, in nervous people, being altogether colourless and in larger quantities; the evacuations dark, almost to blackness, and excessively offensive; and the bowels, either in a state of constipation, or, if relaxed, irritable and inefficient in their action to disburthen the system, or produce relief; there are occasionally premonitory flying pains about the head, body, feet, and arms, till the inflammatory action becomes fixed to a joint, which is most commonly that of one of the great toes.*

* We may be asked to explain the nature of these changes of diseased action from one part to another. It would be difficult so to do by a pretended knowledge either of the resources of nature or of the laws by which these erratic states of disease are governed: they exist under many forms, and are at present more easily dealt with than satisfactorily explained or accounted for.

This is the usual progress of this disorder, in its simple form: in its more complicated state we shall generally find it owing to the alterations arising from individual peculiarities of constitution, or the effects of repeated attacks of the disorder on otherwise healthy constitutions. It is most frequently combined with rheumatism, with which it seems to have the greatest affinity of action — if it be not the same thing — but differently modified by innate, or accidental, or constitutional causes; this combination, for the most part, takes place when the disorder exists in a chronic form. In its acute or active form, we shall not hesitate to place, among the most prominent indications, evidences of a decidedly inflammatory state of the mucous membrane; — we shall find the lining membrane of the lips and mouth red, and smooth, and surcharged with blood; the small vessels of the lining membrane of the nose and the lower eyelids equally turgid, and the breath of expiration come steaming up against the hand, comparatively speaking, like the heated air of a furnace; — we shall generally have a pulse bounding and full, not hard and compressed, as is

the case in deep-seated inflammation, such as in the substance of the lungs, or of the bowels, &c. There is also occasionally a pulse the most flurried and excited; but in these cases we may expect to find a mixed form of the disease — rheumatism with gout.

TREATMENT.

We shall now proceed to say what is the treatment we observe, in addition to "patience and water gruel," so wisely recommended by our forefathers. Having ascertained, as we believe, that this too generally considered

"Effect defective comes from cause," *

under whatever name we term it, our mode of dealing with the complaint will, we trust, be as simple and as intelligible as in practice it is efficacious,—because we have principle and facts to guide us in the course to be pursued. We deny the power of all *specifics* in cases of this kind. In the language of Sydenham, "I know of none, and fear that those who boast of such medicines, are no wiser than I am." † I have

* *Hamlet*, act ii. scene 2.

† *Treatise on the Gout*, sect. 69.

closely watched the effects of the common gout-medicines, and have found that, in their most salutary forms, they resolve themselves into either powerful purgatives, or great depressors of the action of the heart—two effective but not specific means of arresting inflammation. Such are the weapons of empirics, who, without reference to, or any knowledge of, the actual state of the disease upon which they have to operate, are, in consequence, as often slayers of men, as they are successful in cures. Now, the means we employ may be said to be the same; but there is surely a great difference between applying them in removing a cause which we not only know to exist, but of which we have defined the nature and locality—and using them indiscriminately to produce effects which *may chance to be* salutary, but which, without this knowledge, afford us no satisfaction as to how they are produced. The candid and amiable Sydenham lamented that, after thirty-five years' personal suffering, he knew of no remedies that were not rather *protective* than curative—for he held it "as absolutely improper to purge gouty persons, either at the beginning, declen-

sion, or in the intervals of the fits." There can be no doubt that this opinion was founded on the imperfect means with which he had to deal; for, some time after, having experienced great benefit from manna*, which he describes as "neither an aerial honey, nor a certain heavenly dew," he retracted his assertion†, but still with great caution. It will create no surprise in the present day, that he should have failed in his treatment, if we give a sample of some of the best means which such a man could call to his aid.

RECIPE OF SYDENHAM.

"Take of the roots of angelica, sweet flag, master-wort, elecampane; the leaves of worm-wood, the lesser centaury, white horehound, germander, ground-pine, *scordium*, common

* The following mode of accounting for the somewhat rare effects of this harmless drug clearly shows, we think, that our distinguished logician knew a great deal more of the operations of the mind than of those of medicine: —

"The pain and sickness caused by *manna* are the effects of its operation on the stomach and guts by the size, motion, and figure of its insensible parts." — LOCKE.

† Vide SYDENHAM *on Bloody Urine, &c.* sect. 6. (Swan's edition.)

calamint, feverfew, wild saxifrage, St. John's wort, golden rod, thyme, mint, sage, holy thistle, penny-royal, southernwood; the flowers of camomile, tansey, lily of the valley, English saffron; the seeds of treacle mustard, garden scurvy-grass, carraway, and juniper berries, of each a sufficient quantity.* Let the herbs, flowers, and roots, be gathered when they are in their utmost perfection; dry them in paper-bags till they are reducible into fine powder. To six ounces of each, well mixed together, add enough of clarified honey and Canary wine to make the whole into an electuary, of which let the patient take two drachms, night and morning!"

And this was a remedy which he recommended the patient "to continue in the use of for a long time;" namely, "for the most part of his life." — *Treatise on Gout*, sect. xxxii.

A singular and well-established fact in the history of gout is, that in proportion to the severity and duration of the *first* attack, are the

* No wonder, with such a consumption of medical herbs, that our great poet was struck with the *smell* of "Bucklersbury in *simple*-time." (*Merry Wives of Windsor*, act iii. scene 3.)

frequency, obstinacy, and fixedness in the constitution of future attacks. This is only to be explained upon consideration of the immense mischief the stomach must have received by the action of the disease; the functions of the stomach are ever after impaired, and each attack tends still further to lessen its vitality, so that it becomes less sensible to the impressions of natural or ordinary stimulants. From this induced loss of tone in the muscular fibres of the stomach, it dilates easily to distension from flatulence (a most constant and distressing attendant); and food, even of the simplest kind, remains in it hours longer than in the usual course of digestion, and it appears to have still less power to dispose of fluids, which an all but perpetual feeling of thirst and emptiness seems to require as necessary. I never remember an old and confirmed state of gout in any individual whose stomach did not convey the sensations of a large loose bag or bladder, containing a great quantity of fluid — no doubt, a gradual accumulation; nevertheless proving what we say — the decline of its energy and vital power, till it becomes what we have often heard described, but not accounted

for, as in the case of the amiable nobleman to whose death we have before reverted — *a paralysis of the stomach.*

With this warning fact before our eyes, and the train of evil to which it leads, how important is the nature of our treatment in a first attack! — how necessary that we should have clear and defined notions upon which to found it — to render it promptly curative and successful in arresting the injurious progress of the disease! Unfortunately, it is only in the climax of the disease that art is usually had recourse to: days and weeks, perhaps months, have been passed in a dyspeptic condition, till at length, aggravated to a degree beyond further endurance, a sort of counter-irritation is set up by the unassisted powers of nature, which, no doubt, would be in a great degree pregnant with relief were there no return in the habits or circumstances of the individual to those causes which had at first induced the attack. The pain and suffering which follow or accompany this outward manifestation of the complaint cannot be described: they amount to *a state of torture*, and present us at least with some idea of the importance of the

organ whose affection they are intended by nature to alleviate. Why the joint of a great toe is selected as the seat of this transferred inflammatory action, is not easy, as we have before observed, to be accounted for; suffice it again to say, that there are many other instances of metastasis of diseased action from one part to another, which are equally difficult to explain, except by analogy and hypothesis. That the toe, however, has nothing to do with the disease, but to suffer so much as may be thrust upon it, is as clear as the light of noon-day. In the space of a few hours we shall see it red, swollen, shining, and as painful as if a red-hot coal were placed upon it, and the whole limb so affected as to be rendered scarcely movable at will. Without any apparent reason, the whole of this inflammatory action shall be transferred to the other great toe, leaving the one previously attacked as if nothing whatever had been the matter with it. A succession of these transitions may take place, even where both joints are affected, one being visited with more severity than the other.

In whatever part or joint the diseased ac-

tion becomes permanently fixed, the least mischief that ensues is debility; thickness and tumefaction remain long after, and assist to make the part a ready nidus for the gouty action to nestle in. This explains, when taken in connection with the state of the stomach, what Sydenham observed, "that a fit of the gout, of however long a duration, was not to be esteemed as one continued fit, but a series, or succession, of many little fits." (*Treatise on Gout*, sect. 5.) The peculiarity attending the transference of the gouty action from one part to another, to which we have just referred, not only tends to confirm us in our view of the disease, but warrants us to seize what we believe to be the intentions of Nature, and to assist as far as we are able to carry them out. We shall but passingly allude to the old notion, before alluded to, of *expelling morbific matter:* it was sufficient for the day, and meant any thing, or nothing; it at least had the property of salving many a difficulty. Our plan of operation is two-fold: metaphorically speaking, we storm the citadel, and carry the out-post at the same time; not that we think them both of

equal importance, we secure the victory on surer grounds.

In simplifying the disease in the way we have done, it may be said that, in ordinary cases, we have but a disordered stomach, and a counterfeit inflammation with which to deal. Such, indeed, we hold to be the facts; but the treatment must be governed by the various modes and degrees of severity, in which these facts are found to exist in individuals. Age, temperament, and constitution, are also to be deeply weighed and considered, as they form important features in the treatment of every case; but keeping steadily in view the cause and consequences of the disease as we have described them, we shall not be disappointed in applying remedies, the *modus operandi* of which appears to be in strict antagonism with the action of the disease. We apply leeches and poultices to the local or counterfeit part of the disease, wherever it is to be found, and we repeat them from time to time till we have relieved the heat, pain, and swelling; we fear no retrocession, or revulsion, from this course; we only follow Nature in her attempt to lessen or exhaust the

more important disease within — nay, let us suppose the revulsion to take place, it must do so with diminished force; and its danger must be so much the less, even should the stomach have to sustain the whole brunt of the disease. We, however, but grant the postulate — of its reality there is little fear. In our more general treatment, our chief object is to unload the stomach, to allay fever, and to act freely on the bowels; all which we effect at the least possible expense to the constitution. Bleeding from the arm we seldom find either necessary or practicable; and attempts to enforce perspiration are worse than useless. Should it supervene spontaneously, there are many ways in which it may be beneficially encouraged; but whilst we are endeavouring artificially to produce it, we are often losing golden moments which might be employed to better purpose. Its natural occurrence not only indicates a decided subsidence of the disorder, but also relieves and expurgates the system more easily and effectually than any other preservative effort of the animal economy; and art, if judiciously directed, is, after all, little more than

giving nature fair play. Much discrimination is, however, required, to know when and how this can be done, and when it ought not to be attempted.

Purging is one of the best and safest *diaphoretics* that can be employed in the gout, especially in the first stage of the treatment; and when we have reduced the secretions to a natural and healthy character, we shall seldom fail to find the second or restorative part of the treatment other than an easy task. The use of emetics * can only be recommended upon one

* The employment of emetics appears to have been a matter of ordinary, if not of daily, use among the Romans. Cicero, in his account of a visit which he received from Cæsar, thus describes this great man's toilet before dinner: — He first "took a walk on the shore; bathed after two P.M.; had verses on Mammura (by Catullus) read to him whilst bathing, at which he never changed countenance; was rubbed, anointed, sat down to table. Having taken *a vomit* just before, he ate and drank freely, and was very cheerful. The supper was good, and well served —

"——— sed bene cocto et
Condito sermone bono, et si
——— quæris libenter."

Best Englished by the well-known line —

"The feast of reason and the flow of soul."

It would be highly interesting to know what was the emetic that could be so conveniently resorted to.

principle — that of the stomach being oppressed by a quantity of undigested food. "*Concocted and not crude matters are to be evacuated**," forms part of the instructions we derive from Hippocrates, and needs no comment. It is much better for the patient's comfort, that such matters should be ejected from the stomach, rather than be forced through the whole length of the intestinal canal, by the action of an aperient. It is not to be expressed how much additional discomfort may arise from a disregard to this circumstance. The only greater evil is, to allow the same vitiated matter to remain unremoved. Even the ordinary state of acidity which pervades the contents of the stomach should, in a great measure, be

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"It was used by them," says Middleton in a note on the above, "as an instrument both of their luxury and of their health." "*They vomit*," says Seneca, "*that they may eat, and eat that they may vomit.*" He also quaintly observes, "that Cæsar's vomiting before dinner was *a sort of compliment* to Cicero, as it intimated a resolution to pass the day cheerfully, and to eat and drink freely with him." — MIDDLETON'*s Life of Cicero*, vol. ii. p. 410., 8vo. ed.

The "cena," or supper, is still the principal meal throughout Italy.

* "Concocta medicamentis educenda ac movenda sunt, non cruda." Aphor. 22.

counteracted by some absorbent or neutralised by some agent, in the combination of which we may also assist in the curative intentions.

No presumption can be much greater than to propose a remedy, which, even when founded on the most just and rational principles, shall be presumed to be applicable to all cases. Sydenham, under the like difficulty, says, "I never thought myself obliged to write prescriptions, but rather to note the true curative indications." * The shadow of this great authority would be more than sufficient to check any rising feeling which might induce me to act otherwise. Early and effective treatment, founded upon the physiological views we have suggested, will most conduce to a restoration of health. The employment of colchicum, or the meadow saffron, in all its forms and preparations, from its powerful but uncertain action on the heart, requires great care even in the hands of the most scientific. I have known it cure like a charm. I have seen death follow in an incredibly short space of time after its exhibition, from a translation of the

* *Treatise on the Gout*, sect. 31.

gout to the heart; and I think it may be truly said, that the safest manner in which its prophylactic properties are to be obtained is by uniting it with an aperient.*

In like manner we dismiss digitalis, ipecacuanha, tartar-emetic, and even opium. They are remedies that can only be skilfully used by a medical man, and are but seldom usefully resorted to in gout.

In respect to remedial means, the greatest paradox with which we have to contend is the benefit which some persons state they have derived from the immersion of the affected foot in cold water, or by causing a stream of cold water to fall on the part inflamed. Without dwelling on the system of Dr. Kinglake, we shall merely add, that such a man as the late Mason Good gravely asserts, that he was completely cured of a severe attack in less than eight-and-forty hours *solely* by the application of cold water to the feet† — that "he made use of no collateral

* It is colchicum which is supposed to form the chief base of the well-known French remedy, the "Eau Médicinale."

† I remember a gentleman, a free-liver, and of a full habit, who told me that he invariably had recourse to a cold-water

means, nor ever found the use of cold water productive of the least inconvenience." — *Study of Medicine*, vol. ii. p. 521.

If this be true, and no other explanation is given of it, the whole of the facts upon which we have built this sketch fall like a "baseless fabric!"; but it cannot be; we cannot go backwards and deal with shadows as substances, or with effects as causes, and satisfy ourselves that we are acting rationally. I have little personal experience of the property ascribed to this kind of treatment; but I cannot divest myself of the belief that some error existed, even in Dr. Good's own case, which it would not be difficult to unravel, had a closer observation been made of the particular circumstances and symptoms. I must, however, leave the hazard of such a remedy to others who are bolder than myself,

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bath to his foot, whenever he felt an attack of the gout, and that he frequently sat at dinner with his foot immersed in a pail of cold water. I only know the sequel — in a few years afterwards, I heard of his sudden death, to me certainly not a matter of surprise, although he was a man of most extraordinary constitutional vigour.

and whose practice is founded on a different principle.

REGIMEN.

That this is a subject of no trifling difficulty is best proved by a statement of the ordinary conditions under which we have to prescribe.

It is thus drawn by a masterly hand: — "The patient is not only reduced to a helpless condition, but, to complete his misery, his mind during the fit sympathises with his body, so that it is not easy to determine which of the two is most afflicted; for every paroxysm may be as justly denominated *a fit of anger*, as a fit of the gout — the rational faculties being so enervated by the weakness of the body, as to be disordered upon every trifling occasion; whence the patient becomes as troublesome to others as he is to himself." *

In the first, or inflammatory stage, no solids

* SYDENHAM's *Treatise on the Gout*, sect. 13. — I trust it is not necessary to offer any apology for my frequent reference to the venerable and respected authority of Sydenham;

——— "juvat integros accedere fonteis
Atque haurire." LUCRET. i. 926.

whatever should be given. There should also be a total abstinence from spirits, and other stimulants. The best thing is a delicate broth, made of veal and Scotch barley. It forms one of the most nutritious, unstimulating articles of diet, and is an excellent vehicle for insuring the full action of the medicines. In the more convalescent stage, light farinaceous puddings, fish, fowl, game (wild fowl and hare always excepted), and, last of all, meat. Even when recovery has advanced considerably, meat should seldom be taken three days successively, so apt is the stomach to be overloaded or overtasked in the power of digestion. Indeed, we should seldom fail to remember, that we have to contend with

> "A sick man's appetite, who desires most that
> Which would increase his evil." *

Weak and tepid brandy and water is the best diluent; commencing at a teaspoonful, and not exceeding a tablespoonful of brandy in half a pint of water, which is a sufficient quantity for a meal. For general rules to arrive at a robust

* Coriolanus, act i. sc. 1.

state of health, we refer to the former part of our little work; and fearing that we have already exceeded the limits we at first proposed to ourselves in this sketch, we shall conclude with a hope that if we have not succeeded in wholly unveiling the mystery of gout, and reconciling conflicting opinions as to its nature and treatment, we have at least placed it on such a footing of simplicity that daily experience will soon set aside or confirm the view we have taken.

Truth is often best tested by a converse position of facts; and with all our efforts to arrive at it by that and every other means, we have failed to come to an understanding of the phenomena of gout upon any other than the basis we have assumed, viz. that it is a disease essentially dependent on an inflammatory affection of the mucous membrane of the stomach, and that its degrees of severity are also dependent upon the extent to which that vital organ is affected.

THE END.

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Notice of the First Edition in "The Times" of 22d October, 1841.

Discourse on the enlarged and pendulous Stomach, &c. By Richard Frankum. Longman and Co.

The pressure of other matters has hitherto prevented us from noticing this little treatise; and it may be that its modest size has left it to be overshadowed by more ponderous volumes of less practical utility. If Mr. Frankum's were a mere medical discourse we should have considered it beyond our province as reviewers; but as he has addressed himself to the general reader, and has entered on the subject in a popular rather than a professional manner, we have thought it entitled to a passing notice in our columns. It will, perhaps, surprise many when we state that the subject treated of is one which has been left hitherto untouched by medical writers, or, if alluded to, has been hastily dismissed, as if merely consequent on a robust state of health and repletion, rather than a source of insidious evil undermining the constitution, and but too frequently and rapidly shortening the existence of those who are so afflicted. An unnatural enlargement of the stomach is, as the author observes, "ordinarily of so slow a growth, that it attracts but little attention up to a certain point, when of itself it proves the means of adding daily to its own increase, and, in an aggravated degree, is attended with many serious consequences and inconveniences."

In entering upon a history of this disease, Mr. Frankum says: —

"It is chiefly manifest about the middle period of life; it comes creeping stealthily on at or about 35 or 40 years of age. There is at that period no diminution of physical power; that

is, the muscular system is in as strong a state of development, and as capable of action, as at probably any other earlier period of life; fatigue and a deprivation of sleep can be, for the most part, better sustained. There is one thing, however, which is clearly established: the nervous system seems to have acquired a state of repose; there is less excitability in the constitution, and the stream of life flows with a smooth and equable current; the mind becomes sedate, and is not so readily influenced by inciting causes; the dreams and anticipations of youth have passed into the realities of life, and man at that period of his existence seems best to understand its value, and to endeavour to make the most of it. The sensual appetites are strong, but they are more readily subdued by reason. The gratifications of the palate are, where the means afford, the most frequently indulged, and with indolent habits, or an abridgement of exercise in proportion to the quantity of food conveyed into the system, the foundation, or groundwork, of the pendulous stomach is often to be found."

We have not space to follow the author's footsteps as he lucidly proceeds to trace the operation of the complaint, and its gradual effects upon the whole system; nor can we enter on his judicious advice or treatment under four points of consideration, — food, sleep, exercise, and physic. Suffice it to say, that his views, which indicate an enlarged and practical humanity, are conveyed in such clear and persuasive language as can scarcely fail to influence the individuals, the amelioration of whose infirmities is peculiarly the subject of his interesting treatise.

"One of the most valuable contributions that has ever been made to the cause of general knowledge and national education."—STANDARD.

AN

ANALYTICAL CATALOGUE

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