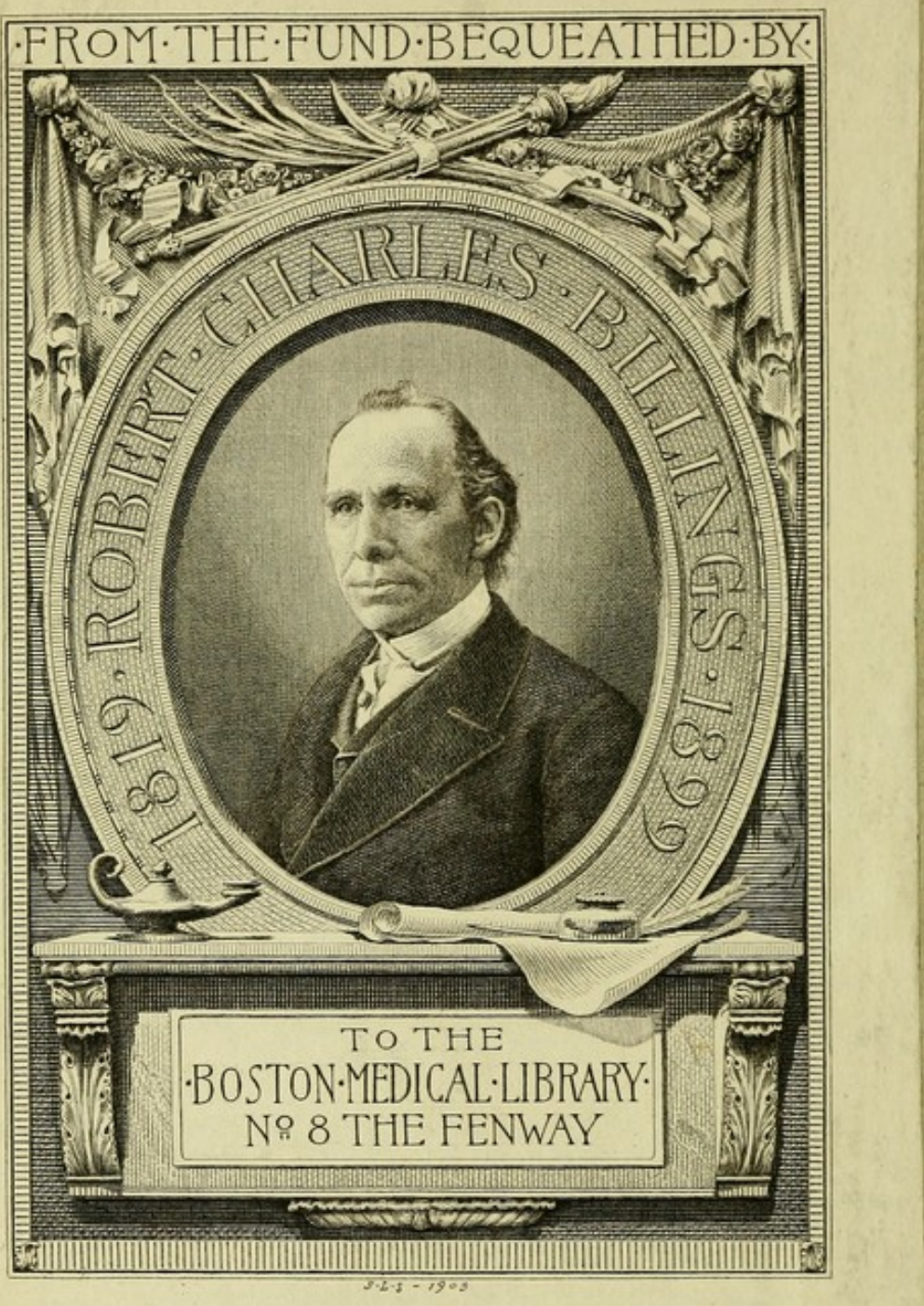
Remarks on the causes, prevention, & management of the present prevailing epidemic, commonly called typhous fever : for the use and benefit of the people / by W.O. Porter, M.D.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REMARKS

ON THE

Causes, Prevention, & Management

OF THE PRESENT

PREVAILING EPIDEMIC,

COMMONLY CALLED

TYPHOUS FEVER,

FOR THE

USE AND BENEFIT

OF THE

People.

BY

W. O. PORTER, M.D.

ONE OF THE PHYSICIANS TO THE BRISTOL DISPENSARY,
&c. &c. &c.

LONDON.

Printed by W. Thorne, Red Lion Court, Fleet Street;

AND

Published by Baldwin, Cradock, and Joy, Pater-Noster Row.

1819.

REMARKS

ON THE

PREVAILING EPIDEMIC,

OR

TYPHUS FEVER,

&c. &c. &c.

THE appearance of a Fever in many parts of England, and throughout Ireland, during the last two years, has excited great alarm in the minds of many individuals. To repress the fears of the timid, and to point out the means of security against the influence of the Seasons, and the *diffusion* of contagion, when generated by persons labouring under the existing *Fever*, are the main objects of this address.

"I have left Ireland," said a person of fortune to me the other day, "on account of the Typhous Fever, and intended proceeding to London; but I hear it is there:—I

would remain where I am, but I understand you have a great deal of it at Bristol ;—I would go into Wales, but they say it is as bad there as in Ireland ;—the villages of Gloucestershire and of Somersetshire are full of it; and Bath itself is not free from it. What am I to do ?" "What you please !" said I, "only attend to the following *Observations* and *Directions*."

This *Fever*, of which you are so much afraid, is (to use a figurative illustration) an Ass in a Lion's skin. In its own nature it is mild; although it has spread terror and dismay among the timid: it is a disease which, if properly treated at the commencement, may be either shortened in its duration, or made to run its course without danger to the patient, or attendants. It arises spontaneously in twenty instances for one, in which it is communicated by intercourse with the sick ; and that one instance in the twenty one, might be prevented by common prudence. Its chief cause is to be traced to atmospherical influence, or ex-

halations from the earth, which, however, are insufficient to induce the disease, without the co-operation of other causes. These I will endeavour both to lay open to your view, and teach you how to obviate.

But I am anxious, in the first place, to relieve your mind from all exaggerated apprehension. I would strip the prevalent *Fever* of the terrific name "*Typhus*;" to which it has no claim. It has been more properly designated "Mild Fever," by the late Physician to the Fever hospital of the metropolis. *Typhus* is the designation of a Malignant Fever, rarely seen of late years; and the former inmate of ships, jails, and hospitals, from whence it spread through towns and villages by the influence of its contagion. It is a disease with which the younger branches of the medical profession, of the present period, are nearly unacquainted. It is by associating in your mind the name given by the medical Practitioners of the day to the prevalent Fever, with that of former times, so terrible and destructive,

that you dread to take up your abode in any town or district where the disease has made its appearance. You should bear in mind that the prevailing Fever is not a malignant Fever in its own nature; and you may be assured that if it be judiciously treated at the onset, it never will become so. I would impress you with a conviction of the possibility of warding off an attack of the disease, by obviating or avoiding all such causes as may be required to co-operate with the influence of the Seasons in accomplishing its production; or should it take place, from inattention to preventive means, that recovery may confidently be expected by a timely attention to the proper means of cure. I would also give you assurance of safety in approaching the bedside of one afflicted with the disease, by attending to what I shall say hereafter; and I would put you in possession of such knowledge as will enable the family of the sick, under its guidance, to prevent the extension of the Fever; which only becomes conta-

gious from ignorance or negligence; the *former* I shall endeavour to dispel, and I hope the *latter* will awake to attention at the call of my admonition.

There is a peculiarity, in the atmospherical influence of some years, or of some seasons, which tends to the production of certain diseases rather than of others. It is the peculiarity of the present and past year to induce "Mild Fever," by the co-operation of causes which, in some other seasons, might give rise to sore-throat, or to Pleurisy, or to Rheumatism, or to Catarrh; but the disposition of the present season I repeat is to generate "*Fever;*" and whenever that is accomplished, although it arise spontaneously in one person; yet by neglect of cleanliness, and ventilation, a contagion will be generated that may communicate the disease to an incautious visitor or attendant.

Under this condition of the atmosphere it is the duty of every person to avoid all contingencies that might co-operate to the production of Fever. Fortunately for man-

kind, we are acquainted with the contingencies which operate as exciting causes in the production of the disease in question; and therefore can point them out. We know too, how these exciting causes induce that condition of the body which constitutes Fever; and therefore we are not only able to point to the causes to be avoided, but to the means by which the influence of such causes may be greatly lessened, where ignorance or inattention has permitted their co-operation to the actual production of Fever.

Strong and vigorous people almost completely resist the influence of the atmosphere, and may expose themselves to the action of exciting causes with comparative impunity. But delicate persons, of both sexes, and particularly those of tender years, who are yet at school, and have scarcely entered on their teens, seem liable to an attack of the "mild Epidemic Fever," on the slightest aberration of conduct in point of dress, diet, or exposure to cold. How

these deviations can produce the disease in question, I can easily explain; but to explain to the comprehension of the unprofessional reader may not be so easy as I apprehend; yet I must attempt it, because they who can see a reason for what is recommended, adopt the recommendation with the more confidence.

In delicate persons, and in the young of both sexes, there is a susceptibility to impressions of every kind, to which the more robust are nearly entire strangers. Some delicate persons can foretell the change of weather by their feelings. Young people are alive to every impression, mental and corporeal, in a manner peculiarly their own. See the face and bosom suffused by a rush of blood to the vessels of the skin in a moment, from the operation of a single word or thought. Observe the effects of moderate cold upon their feet and hands; they become red and crack into chill-blains. It is this susceptibility to impression that renders delicate or young people the peculiar vic-

tims of atmospherical influence; and among the former may be ranked the poor and the distressed, whose bodies have been extenuated by slender fare, and whose minds have been depressed by hopeless misery. Among these the atmospheric influence has exerted its chief power, having the co-agency of every cause that can contribute to the production of Fever; and among these Contagion has been generated, and the disease propagated far and wide, particularly in Ireland.

Of all the causes which contribute to the production of the existing Fever, none are so efficient as exposure to cold under particular circumstances. When the surface of the body generally is kept comfortably warm, the circulation of the blood is equally maintained in every organ essential to life; but when any considerable part of the surface becomes chilled and bloodless, from deficient cloathing, or long exposure to cold or damp, the blood that should be there is thrown in upon the in-

ternal parts, and in ordinary constitutions o the seasons, some inflammation would be the result, as a pleurisy, or the like; but at present, from a peculiar atmospherical influence, the human body is found to labour under a certain oppression that prevents, in most cases, those results; but induces a general derangement in the balance of sensorial power, and consequently of the circulating system, thereby instituting a Fever. From these considerations parents should be careful, at this season, to cloathe their children comfortably with flannel next to the skin; and to be particularly attentive to the warmth of their feet and legs. Those whose feet and legs are naturally cold should have them bathed with strong brine, night and morning, or at least, rubbed with a course towel dipped in the saturated solution of salt. By this expedient, a due proportion of the circulating fluid would be solicited effectually to the extremities, and chilblains, with other evils, prevented.—Young

people should not be permitted to sit on their benches at school until they are chilled —and the young ladies should wear flannel drawers, and spencers with long sleeves, from the 1st of November to the 1st of May.

Persons of delicate health should attend to the adaptation of their clothing to the increasing coldness of the season; and they should know that there are many things to be avoided, which render the body highly susceptible to the impression of cold or damp. These are, sleeping with many bed-clothes; sitting in warm or crowded rooms; fatigue of body; fatigue of mind; and the indulgence in warm drinks. Should inattention to any of these circumstances be committed by a person exposed to cold, and obnoxious to the present peculiarity of the seasons, a Fever may be expected as the consequence. But why should delicate persons expose themselves to these occasional causes of the Fever? causes which it is in

the power of every one to avoid, if we except the children of misfortune, whose cloathing is as scanty as their fare.

When the body is under the influence of the atmospheric cause, errors in diet, and inattention to the state of the bowels, may induce the Fever; I will not enter upon the manner in which these causes co-operate in the production of the disease; such a disquisition would be too intricate for the comprehension of an unprofessional person. But that they do co-operate, there is sufficient evidence in our daily practice to convince us. If the stomach become loaded with an undigested and indigestible mass; if the bowels become constipated from fæcal accumulations, the irritation occasioned thereby, under the present condition of the vital powers incident to the influence of the atmospheric cause, will induce a case of the present Mild Fever, not inferior in smartness of attack to one occasioned by exposure to cold or to contagion. Hence great care

should be taken in the regulation of food and occasional administration of medicine to persons who are, or who may suspect themselves to be, peculiarly liable to the prevailing epidemic.

Nothing is more pernicious than to eat without reference to the state of the digestion. We should reflect that it is what we can *digest*, not what we can *eat* that ought to regulate our choice in point of food; and that whatever we eat, which cannot be digested, whether on account of its quality, nature, or quantity, becomes a source of irritation, and ultimately of disease.

No more should be eaten by any one than can be digested; and they who have not a daily evacuation from the bowels naturally, should procure it artificially. Peculiarities of constitution present themselves in every individual, so that there are few remedies applicable to all, even as aperients; in each individual case therefore the family physician should be consulted, or he who may act in that capacity; to the end that

the digestive organs may be kept in a healthy condition. Very few can be attacked by the Fever from the influence of the asmospheric cause alone: it must be assisted by one or more of the causes already noticed, and which it is in the power of every one in comfortable pecuniary circumstances to avoid. Where then are the grounds of alarm which fill your minds with dread? Go where you will, you cannot escape exposure to the influence of the seasons; but as it is in your power to disarm that influence of efficient force, suffer your mind to repose in the confidence of security, under the guidance of these premonitions.

Strong and healthy people, who are not readily elated by joy, or easily depressed by the sight of sorrow; whose nerves do not vibrate to any light breeze that passes over them, like the mournful murmurings of an Æolian lyre, in sympathetic feeling, are endued with a constitution calculated to resist all atmospherical influence, to a degree almost amounting to immunity. But this

welcome truth to the healthy and the strong must not be received implicitly. There are circumstances of a temporary nature which may arise, and for a time place their nerves in a condition that shall put them on a par with the delicate and the young, in point of atmospheric susceptibility. Long watching by night—great and unusual fatigue of body or mind—a debauch in wine:—Either of these causes may render the strongest man or the most healthy woman obnoxious to the influence from without, and a case of Fever may be the result.

Early hours cannot be too much recommended to all descriptions of people: one hour's sleep before midnight restores the exhausted powers of body and mind more effectually than two hours after that period. We have on record many instances of longevity; but we cannot discover any thing in which these long-lived folks all agree but that of going to bed soon and rising early. Every one is disposed to be more or less feverish towards midnight; sleep tends to

obviate this condition of the body, so wearing to the constitution. In the morning a tendency to perspiration commences, which if encouraged by continuing in bed, will ruin the already weakly constitution of the delicate, and render the healthy and the strong lazy and relaxed. Having said something of the nature of the exciting causes, you no doubt will expect some information respecting the nature of the general cause referred to atmospheric influence: of which mention has so frequently been made in this address.—There are many things in Nature not cognizable by the senses, having neither perceptible bulk, nor hardness, nor flavour, nor odour, nor resistance, so that they cannot be seen, nor felt, nor tasted, nor smelt, nor heard; and their existence can be known only by their effects. Such are the magnetic fluid, contagious effluvia, marsh miasmata, and that wonderful principle attraction, by the operation of which the great machinery of the universe performs its revolutionary movements. Chemists have never

yet been able to bring oxygen under the cognizance of the senses, yet they are confident of the existence of a peculiar substance to which they have given that name, because of certain effects or changes produced by it in natural bodies, under particular circumstances. But we can all observe the ebbing and flowing of the tides; and knowing that every movement in Nature must have some immediate cause, we are taught to refer these phenomena to lunar and solar influence. And there is reason to believe that the cause assigned is the true cause, seeing the position of those celestial bodies at spring and neap tides. With respect to the precise nature of these occult causes of phenomena, we have no knowledge; for we do not know them in any other relation than of cause to an effect. If we could recognize them as an effect of some preceding phenomenon, then indeed could we give some information respecting their nature. There are persons however who disbelieve all things not tangible; and

require the evidence of St. Thomas to convince them. For such, I have an argument in reserve; let them make a voyage to Naples, and extend themselves on the floor of the *Grotto del Cane* for half an hour, where nothing particular is to be seen, felt, heard, smelt, or tasted; and when they return I will undertake to convince them of the existence of things invisible.

But to be more particular. The atmospheric influence of which I speak, is to be distinguished from cold or humidity; these are conditions of the atmosphere, different in kind from that imperceptible agent to which I refer as the main occasion of the present existing Fever. Yet these conditions of the atmosphere may contribute efficiently to the developement of the disease, as has been explained in a preceding section.

Whatever be the essence of the morbific state of the seasons, to which I refer the existing fever, we may congratulate ourselves that its influence at present is very weak, and I trust upon the decline; for the cases

appear at considerable distances from each other, and thinly scattered through town and country; unless where propagated and extended by contagion, the necessary product of filth and mismanagement. If the morbific influence of the atmosphere were strong, the Fever would be epidemic, even without the aid of contagion; it would appear like the influenza in every street, and perhaps in every family; not sparing the strong and the healthy; unlike the mild disease about which so much unnecessary alarm has been created.

But we must now suppose a Case where the individual, from a combination of causes, is attacked by the Fever. It is not my intention to supersede the necessity of medical advice and attendance, by the information I am about to communicate to the unlearned in Physic. I am inclined rather to induce the patient to lose no time in sending for the medical attendant; and I would smooth the way to a cheerful and confident acquiescence in that practice which alone

can secure the life and restore the health of one labouring under idiopathic fever, without placing, either at the hazard of miscarriage by an obstinate adherence on the part of nurses and friends, to old exploded practices and doctrines.

Miss A. has complained of a confused state of her head during some days; her appetite has fallen off; she has a disinclination to food; she is chilly at intervals; there is some pain felt in the limbs, and particularly in the small of the back; she feels weak, and has lost her spirits; her tongue is rather white; her bowels perhaps are constipated; her skin is not yet hot; the pulse, if frequent, is feeble; and the countenance exhibits an expression of anxiety. This is the first stage of the ordinary mild Fever, at this time so prevalent; and I hope the picture is sufficiently correct and striking to enable you to recognize it when you see it. This is the period of the disease in which art can interpose with complete success; and it is of the highest importance to the

patient that the medical practitioner be now called in; for in this state of the fever all the foundations of its future character are laid. Until the present time, this most interesting period in Fever was overlooked; the disease was not recognized until the throbbing temple, the decided head-ache, the burning skin, the bounding or rapid pulse, and the parched tongue declared the name and nature of the malady. The world is indebted to Dr. Armstrong, now of the London Fever Hospital, for this momentous observation, and I should be deficient in candour, and in justice to the feelings I cherish for that illustrious physician, were I to withhold this acknowledgment from the Public.

But to return to my Case. Send for the medical attendant — and if there should be delay in his coming, exhibit a brisk purge; three or four grains of calomel with ten or twelve grains of jalap, if they can be procured, and repeat this dose every four hours, until it operate briskly. After the bowels have been copiously evacuated,

put the patient into a tepid bath at 96 or 97 deg. of temperature, for 15 or 20 minutes; let her be then dried, and put to bed, with a moderate quantity of bed-cloaths, rather inclining to few than many, but not so few as to induce a sense of chilliness, and more than will be required in the succeeding stage of the disease. The time has now arrived, or in a few hours will arrive, that she should loose more or less blood; of this no abstract estimate can be made; the quantity must be determined by the gentleman in attendance; but I must remark, and the remark is of great importance, that the blood-letting is to be performed with reference to symptoms not yet developed, and therefore the question is not what her present state seems to require, but that state and stage of the Fever which is about to open upon you. I am no advocate for large or promiscuous bleeding; it is the practice of ignorance catching at the improvements of the day, without knowledge to apply them. But I am desirous in every

case of Fever that a sufficient quantity of blood be drawn, before the stage of excitement completely developes itself, that will enable the blood vessels of every part to allow the hurried current to pass freely through them without obstruction. It is evident that in some individuals, little will be required to accomplish this end; in others of a full habit, two or more bleedings may be necessary. Do not oppose the Medical attendant, by an erroneous notion of the patient's weakness; a notion, whose practical influence has murdered thousands. It is a notion replete with danger, because, on a superficial view of the patient's condition, it seems to carry with it the sanction of truth. All her movements shew signs of debility; every feeling bears testimony of the oppression under which she labours. Common sense is up in arms against the abstraction of blood, and the clamour of old nurses, and physicians who flourished under the intoxicating and murderous system of bark and wine, not unfrequently paralyses the hand

about to be exerted for the safety of the patient. Do not prevent the abstraction of blood at this period. The blood is accumulated in the head and along the spine; the sources of vital power are oppressed; and the weakness of the patient is that of a drunken man who can neither think nor walk. Nature does not permit the condition of the circulation to remain long in this state; re-action is soon instituted, and all the more obvious symptoms of Fever developed. And now the mischief will commence, according to the quantity of blood circulating in the vessels, and the obstruction it meets with in any of the organs important to life. But if any one think he can subdue the Fever merely by the repeated abstraction of large quantities of blood, he will find himself fatally mistaken, by the loss of his patient in the third stage of the disease. Let enough be taken away, at the onset, to give fair play to the constitution, and no more; and if congestion or inflammation of any particular organ should

occur in the progress of the fever, remove it by the application of leeches, by calomel, and by purging.

During the first stage of the Fever, the symptoms of which have been sketched above, the patient's drink should not be cold; but when the second stage arrives, in which there is unusual heat of skin, with determined headache and thirst, the drink should then be cold, and the surface of the body may frequently be sponged with cold or with tepid water. The attempt to excite perspiration in this stage of the disease is folly, if not madness; it cannot be accomplished, either by antimonials, or by warm diluents, or by any other means compatible with the patient's safety. The most likely means are cooling drinks, and cooling ablutions, for it is a fact that too much heat on the skin as well as the chilling absence of it, is equally inimical to perspiration. Sweat is another thing, easily obtained, but always attended by bad consequences. The object to be kept in view during the stage of excite-

ment, is to lessen the action of the heart and arteries; and this is best accomplished, by cool air, few bed-cloths, cooling drinks, aperient medicine. If sufficient blood have been taken away, and the bowels well purged at the onset, this stage of excitement will subside in about a week or ten days from its commencement, and a state of convalescence kindly succeed. Among the popular errors in the management of Fever, that of endeavouring to strengthen the patient stands foremost in menacing her life. Fortunately Nature more wise, has, in a great measure, rendered this design impracticable, by depriving the patient of appetite for food.—"Doctor, we must give her nourishment," says one;—"it is impossible she can recover without sustenance," says another:—"What do you say to a little port wine?"—"Do you not think a bark draught every four hours would be very proper now?" "Doctor Cinchona, *gave my dear husband, God rest his soul!* five dozen of them in a fortnight; they strengthened

him mainly, but he died on the one-and-twentieth day of the Fever." No! no! we will have no bark draughts, good nurse; no port wine, and the less sustenence and nourishment the better: nothing but toast-water, barley-water, lemonade, tamarind-water, apple-water, mint or balm tea, and a little gruel, until the convalescence be completely marked; and even then, we must proceed cautiously—more relapses have been occasioned by too much nourishment after the close of a Fever than by any other cause whatever. In general, the appetite becomes too good, sometimes voracious; and it must then be restrained in its indulgence, lest the digestion should not keep pace with it, and disorder, and relapse ensue. But it generally occurs that the Fever, as it now prevails, observes a languid insidious kind of course; the head is bewildered, but does not ache; the appetite is lost; wandering pains are felt every where, but the back of the neck especially is stiff and painful; the tongue is white, and the

pulse is frequent and small, and oppressed; the patient sighs frequently, and does not care to move. With little variation, the disease, in this way, pursues its course for fourteen days, and then passes gradually into convalescence, leaving the patient weak and much emaciated. This form of the disease is sometimes to be met with in boarding schools, but more frequently among female servants and paupers. We cannot err by taking away a few ounces of blood in this case after the exhibition of a brisk purge and the use of the tepid bath. A blister on the nape of the neck afterwards removes the confused state of the brain; and nothing further is necessary during the course of the Fever, but the daily exhibition of a dose of purgative medicine until convalescence becomes apparent by a returning desire for food.

By neglect, however, the prevailing Fever, so mild in its tendency, may, in particular individuals, become a formidable and fatal disease. Men especially, are apt to

despise every precautionary means of safety, as derogatory to their courage, and young persons, who never have been ill, think they never can suffer in their health from any imprudence whatever. The same feelings which expose such persons more than others to the occasional causes of Fever, prompt them obstinately to resist the proper means of cure in the early stage of the disease. If the stage of excitement, which is that stage of Fever that exhibits the disease in its maturity, be allowed fully to form without previous evacuations, it may be difficult to prognosticate the result; some important organ, as the brain, the lungs, or liver, may take on an inflammatory action, and terminate fatally, in spite of the most active and judicious measures. Let this observation stimulate people to the careful observance of the various precautions contained in this address; and should individuals manifest the symptoms which have been set down as constituting the first stage of the Fever, let no time be lost in sending for the family

medical attendant, whose prompt and judicious measures may disarm the disease of its fatal power. Do not allow the hour of opportunity to be lost by postponing medical advice until the disease has taken possession of the strong holds of the constitution, from which, perhaps, all the address of management, and all the powers of the most active remedies, under the direction of the most able physician, shall not be able to dislodge it.

My object in exhibiting these pictures of the Fever is not with a view of holding out plans of treatment to be pursued under the various shades which it presents, but to break down existing prejudices that offer so many obstacles and stumbling blocks to the progress of recovery under the most judicious and experienced physician. The Brunonian doctrine, whose very life was wine, has expired in the arms of its dearest friends among the medical profession. But ere it expired, it took deep root throughout the other classes of society, with whose erro-

neous prejudices it accorded ; and it will require time and steady perseverance on the part of the enlightened physicians of the present day to eradicate those seeds of error, so widely disseminated by a man whose genius was a misfortune to the age in which he lived.

"*Support the system*," was the favourite maxim of the Brunonian physicians. The exhibition of wine, and cordials, and nourishment is too much the favourite object of friends and nurses of the present day. Fortunately for our patients, we have learned to distinguish *oppression* from *debility*, and it will be happy for all parties when the unlearned in physic also can be taught the distinction.

I would not be understood that wine and nourishment are, under all circumstances, injurious.—When the Fever has completed its course, and the appetite, with a healthy discrimination of the tastes of solid bodies, has returned, nourishment will then restore health and vigour, and a little weak

wine and water may be used by the convalescent with advantage, or at least without danger; but, even in this approach to recovery, nothing is more common than relapses induced by unrestrained indulgence,—this event I frequently have prevented by a well-timed emetic; but surely the success of this remedy, at such a time, only serves as an additional proof of the necessity for government and restraint in our culinary indulgences, even after the Fever has entirely disappeared.

When I sat down to write this address, it formed no part of my plan to have touched upon the treatment of the prevailing Fever. I hope, however, that what I have said may do some good; and, that so far from the knowledge I have imparted encouraging any unprofessional person to undertake the treatment of the disease, it will just afford light enough to shew him the necessity of instant application to medical men. We have every day occasion to lament the loss of the opportunity of

strangling the disease in its infancy, which these admonitions are calculated to afford the physician: And if by them an impression should be made on the public mind favourable to the timely employment of efficient remedies by professional men, there will be much occasion to rejoice on all sides.

But I now come to speak of Contagion.—That every person labouring under this, or any other Fever, *may* generate a contagion capable of communicating a Typhous disease, is a fact in medicine now clearly established; and, that every person labouring under this or any other Fever, may be so managed as *not* to generate a contagion capable of communicating a typhoid disease, is equally true. Under this view of the subject, our minds are actually directed, first to the management whereby the generation of contagion may be prevented; and next to the mode of avoiding its action, where it is present, or of destroying it in the strong holds of its formation.

Before I enter on the distinct consideration of these two points, it will be necessary to their elucidation, to give a general idea of contagion in the abstract; its origin, and mode of existence, as far as it is connected with the production of Fever.

He who bore off the palm in the celebrated Yellow Fever controversy, which lasted longer than the Revolution in France, and who is now gone to Jamaica to watch the movements of the enemy, supposes *Contagions* to have been created at the beginning, and to possess a procreative nature and existence of their own.—If this be true, a fine opportunity is afforded to the natural philosopher of the present day, to draw up the history of their microscopic appearances, and sexual habits for the Philosophical Transactions! To suppose that contagions have a co-existence with the creation, or that they possess a procreative faculty, is a stretch of imagination too boundless for an ordinary man, and not consistent with the goodness of the

Almighty. We may as well suppose leaven, and meal, and the putrid effluvia of decomposing organic matter, to have been created at the beginning, with all other combinations of elementary substances that can be obtained by art, or observed by Nature. If this be true, Pandora's box is not a fable. But this wild notion respecting the origin of contagion is but one of those exuberant shoots that are too frequently found sprouting from the tree of genius; the tree on which it grows is honorable to the men whose work it is; and while we are exhibiting the spurious nature of the scion, let us not withhold an honourable approval of the parent stock.

What then is Contagion?—It is an invisible substance generated by the human body when confined long under the same cloathing, in an unventilated place. It is sometimes generated by persons in health; but most commonly by persons labouring under Fever. When generated, it will be retained in silk or woolen cloathing, for

many months, or years, without losing its Fever-exciting property. And as it is exhaled from the body of the person generating it, it will hover round him in a concentrated state sufficiently strong to induce Fever in a person coming within its range. That it is sometimes generated by persons in health, has been proved by what happened at Oxford many years ago; some fellows, in filthy cloaths, in which, perhaps, they had slept for weeks, were brought to the bar; *they* were in health, but a vast many persons in court became infected by the contagion these fellows had generated, and fell victims to the Fever. The fact I have just cited, not only proves that contagion may be generated by persons in health, but I think it proves that the contagion may be retained in their cloaths. However, as an historical fact more in point presents itself to my memory, we will pass on to it. Some years previous to the peace of 1763, a French squadron lay in Chebucto bay, now Halifax. *Typhus Fever*

raged among the seamen and troops to such a degree, that it became necessary to remove the sick, and to pitch tents for them on shore. While this establishment yet continued, intelligence of the approach of an English squadron induced the French Admiral to embark his sick and convalescents in such haste, that many things were left behind, especially the bedding. After the embarkation of the sick, and the sailing of the squadron, some Indians came to the spot where the establishment had been formed : they eagerly seized the booty, and sold the blankets and other things among their tribe. A malignant Fever soon made its appearance, and we are told, by this disease Nova Scotia lost 30,000 of its India population, which went nearly to the extermination of the whole race.

In still later times, the retreat of Sir John Moore's army presented unequivocal evidence of the *generation* of a contagion, among people crowded in transports, whether in health or disease. After the battle of

Corunna, the soldiers, with scarce a stitch of garment on their backs, and consequently without any thing to harbour previously-generated contagion, were crowded, pell-mell, into such transports as first presented themselves; and as misfortune seemed determined to pursue this wretched army, both by sea and land, they experienced the most tempestuous and protracted voyage across the Bay of Biscay, during which a fever broke out, which not only carried off a vast number of the ill-fated soldiers themselves, but spread from them far and wide, among the inhabitants of the English sea-ports where they landed. At Plymouth and Portsmouth, their medical attendants and nurses suffered severely, and Dr. Johnson relates an instance of a whole family being cut off, in Portsea, from having purchased a blanket that had come home in one of these transports. In fine, the most respectable medical testimonies *agree* on this point, that filth, accumulation, and want of free air, may, and often do, add a

character of contagion to the most mild and common fevers.

That contagion is exhaled from the body, must be admitted, if we admit the body to be the source of its existence; and that it hovers round that body, is the necessary consequence of its being in a state of exhalation. Now it is clear, that the nearer you approach that body the more concentrated the contagion must be; and experience has taught us that in ordinary cases the distance is not very great at which the contagious effluvium becomes so diluted with atmospheric air as to render it harmless. Yet there is a circle of contagion round the patient which cannot be entered by a healthy person without some danger; and I think its range may be extended from three to six feet. The distance, however, at which contagion may act upon a visitor must vary, in different circumstances. Thus, if a door and a window be opposite to each other in a room, and the bed with the patient between these, then, on opening

the door, a stream of air may pass in at the window, and carry the contagious effluvia to some yards from the bed in an opposite direction. Whenever, therefore, a visitor or medical man comes into a close chamber of this kind, and throws open a window or other aperture, he ought to stand between this aperture and the bed. A physician to a public Institution in London lost his life by not observing this precaution.

Let us now consider how a patient labouring under Fever is to be managed, to prevent the generation of active contagion. It fortunately happens, that the very means which are employed for the cure of Fever, under the enlightened practice of the present day, tend to prevent the generation and concentration of contagious effluvia. The use of the tepid bath at the commencement, the frequent cooling ablutions during the stage of excitement, the open window, and the undrawn curtains; the frequent changes of linen, the disuse of sweating

medicines, and the employment of opening medicines, all tend to prevent the generation of contagion.

In addition to these salutary measures, I recommend the curtains of the bed to be taken down, the sheets and pillow cases to be changed twice a week, and the patient's linen every day. The hair to be cut short, if the attack threaten severity, so that the head, with the face and hands, may be daily washed during the progress of the disease. The windows to be open all day, and now and then by night, until the period of convalescence; a little fire to be kept in the room, rather to give circulation to the air, than warmth to the apartment. The motions to be removed into another place for the inspection of the Physician, which it is his duty not to neglect; and all towels, and pocket-handkerchiefs, and dressings taken off blisters, and all other things embued with the excretions of the patients to be submitted to a boiling heat, without loss of time. By due attention to these instruc-

tions, there will be little or no danger to the attendants in the worst forms of the existing Fever.

But let us suppose ourselves in the hovels of the poor, where contagion already exists. What is to be done? The sprinkling of vinegar, or the burning of brown paper, only covers the smell of filthiness; they do not alter the contagious property of the air of the apartment. Camphire is of no greater use; when hung round the neck, it may serve as an amulet to the wearer, and give him courage, under the shield of its supposed virtue; but it does not possess any anti-contagious property. The admission of fresh air will prevent the concentration of the effluvia in the place, but it will not destroy the contagious fomites already in possession of the bed-clothes, and other things near to the patient. The only sure mode of destroying this accumulated source of disease is to plunge the articles embued with it in boiling water, and to wash the walls and cieling of the apartment with boiling

white-wash. But as all this cannot be done, while the patient is stretched on the bed of sickness, midst all his filth and foulness, as much must be done as may be practicable; and the process instituted for which Dr. Carmichael Smyth obtained a parliamentary reward of £. 5000: surely a remedy for which £. 5000 were paid should be worth something. And however it may be the fashion of the present day to decry it, I believe it to be efficacious in destroying the contagious property of fomites; I used it twenty years ago in the public service, when our practice required some sweeping remedy against its contagion-breeding tendency, and I was then satisfied of its utility. Happily now, such means are seldom called for in ships or hospitals, and never in private practice; but still the efficacy of the means remain the same, and I am not one of those who sneer at Dr. Smyth's remedy, or laugh at Parliament for granting him the reward.—Take half an ounce of powdered nitre, and throw it into a tea-cup contain-

ing half an ounce of sulphuric acid; stir them about with a bit of glass, and allow the vapour to rise in different parts of the room from several cups containing the mixture: this is his form of fumigation. The French have endeavoured to improve upon it, by employing common salt instead of nitre; I believe the muriatic acid vapour evolved from common salt by the action of the sulphuric acid, may be more active in destroying the contagious property of the fomites; but then, as it is not respirable, like the nitrous gas evolved from Dr. Smyth's mixture, it cannot be used while the patient remains near the things to be submitted to the action of the vapour. And for this reason the original application is the best.

In approaching the bed side of Fever, we should not forget the precaution of Bonaparte, who in visiting the Plague Hospital in Egypt, always took care to get on the side between the patient and the window. And if Mr. Semple's observation be true, that a yard's distance carries you be-

yond the pestilential atmosphere of one afflicted with the plague, we may approach near enough to a person confined by the worst Fever to do all that is requisite without incurring danger.—There is no necessity for hanging over the breath of the patients, neither can there be any reason for relations caressing them, or laying down to rest upon the same bed. Imprudence in such matters forfeits all claim to the protection which precaution may afford. And while a few may be found who, in defiance to the admonitions contained in this address, will invite the disease, yet I hope there are many, very many, to whom the truths contained in these pages shall not be offered in vain. Enough has been exhibited to strike the eye of any one who has a wish to see; sufficient has been explained to impress the mind of every one who has capacity to understand. To say more would only be to obscure perception and confuse reflection; I will therefore close this address by referring you to the sixth chapter of the Book of

Solomon, and the twenty-fifth verse—and so farewell!

No 29, Portland Square, Bristol,
January 1st, 1819.

P. S.—In order to present a concentrated or recapitulatory view of the means of arresting the progress of Typhus Fever, the following little code will, I trust, be found highly useful. A somewhat similar code was circulated several years ago by the Society for Bettering the condition of the Poor, principally extracted from a manuscript in the hand-writing of the late Dr. Haygarth.

RULES OF SAFETY FROM CONTAGION.

Intended to enable Medical and Clerical Visitors of the Sick to perform their important Duties with Safety to themselves.

It may be proper previously to observe, that an infectious Fever in a small, close, and dirty room, is caught by a very great proporion of mankind; not less than 22 out

of 23, or a still higher proportion; but in a large, airy, clean apartment, even putrid Fevers are seldom or never infectious. When this poisonous vapour is much diluted with fresh air, it is not noxious. From a large collection, and an attentive consideration of facts relative to this distemper, have been formed the following Rules:

1. As safety from danger entirely depends on cleanliness and fresh air, the room door of a patient ill of an infectious Fever, especially in the habitations of the poor, should never be shut; a window in it during the day ought to be frequently opened. In bad cases, a current of air between a window and door, both wide open, may be proper: if the air be very cold or damp, the curtains of the patient's bed may be drawn close during this ventilation, should peculiar circumstances require such caution. These regulations would be highly useful, both to the patient and nurses, but are particularly important previous to the arrival of any visitor.

2. The bed curtains should never be close drawn round the patient; but only on the side next the light, so as to shade the face; except while there is a current of air between a window and door.

3. Dirty clothes, utensils, &c. should be frequently changed, immediately immersed in water, and washed clean.

4. All discharges from the patient should be instantly removed. The floor near the patient's bed should be rubbed clean every day with a wet mop or cloth.

5. The air in a sick room has, at the same time, a more infectious quality in some parts than in others. Visitors and attendants should avoid the current of the patient's breath—the air which ascends from his body especially if the bed curtains be closed—and the vapour arising from all evacuations. When medical or other duties require a visitor to be placed in these situations of danger, infection may be frequently prevented by a temporary suspension of respiration.

6. Visitors should not go into an infec-

tious chamber with an empty stomach; and, in doubtful circumstances, on coming out, they should blow from the nose, and spit from the mouth, any infectious poison which may have been drawn in by the breath, and may adhere to those passages.

HEADS OF A PLAN FOR THE EXTERMINATION OF INFECTIOUS FEVERS.

Infectious Fevers occasion much misery and mortality among mankind; they produce the greatest wretchedness in poor families; but persons in all ranks of life are in some degree exposed to the danger. This fatal pestilence is most destructive in large towns, but it often spreads in country villages for months and even years together. The intelligent and benevolent inhabitants of any place, may, however, with ease and certainty, preserve their poor neighbours and themselves from infectious Fevers and all their calamitous consequences, by forming themselves into a Society, and by providing a commodious house, or wards for the

reception of such patients, and by carrying into effect the following regulations:—

1. Let a reward of one shilling be given to the person who brings the first information to the Society that an infectious Fever has attacked any family; let this reward be increased to two shillings, if the intelligence be given within three days after the Fever first began in the family.

2. Let the patient ill of the Fever be removed to the Hospital on the day when such information is given. He must be carried in a sedan chair of a peculiar colour, to be employed solely for this purpose, with a moveable linen lining, which is always to be taken out and shaken in the fresh air after it has been used, and to be frequently washed; let the sedan be constructed in such a manner as to lean backward in various degrees, so that the patients may lie in a recumbent, or half recumbent posture, as may best suit their strength. A main purpose of the Society will be to remove from the house

the first patient who is attacked, and as soon as possible.

3. The house, whence the patient is removed to the Fever-ward, must be immediately cleansed; and all the dirty clothes, utensils, &c. must be immersed in cold water. When the clothes are wrung out of it they must be exchanged for a time, with clean second-hand clothes, as a shirt for a shirt, a sheet for a sheet, &c. to be supplied by the charitable Society. Every box, drawer, &c. in the infectious house must be emptied and cleaned; the floor must be swept clean, and then rubbed with a wet cloth or mop; fresh air must be admitted so as to pass through the chamber between a door and a window; the walls must be washed clean where bedaubed with contagious dirt.

4. The clothes received from these poor people, wrung out of water, must be again washed in soap and warm water; that when patched and cleaned, they may be again employed.

5. A medical inspector should be appointed to see these *regulations* executed, at a competent salary; together with certain rewards according to the success of his measures; he should be entitled to a reward of —— for each family, which has been preserved from infection by his attention, when one in it had been attacked by the fever.

6. Each poor family, whose house has been cleansed, as here directed, (according to a *certificate* from the *inspector*, which is to specify *every* circumstance above-mentioned in the 3d regulation) shall be entitled to a reward of ——: and, if the remainder of the family continue uninfected for six weeks after the first Fever patient has been removed to the hospital, the said family must be entitled to a farther reward of ——. The inspector shall give the family a promissory note, or a certificate, for this purpose.

7. The inspector must keep a register of infectious Fevers, upon the plan as was

executed with success, for six years, by the inspector of the Small Pox Society at Chester; in which is entered, in separate columns of a table, 1st, the patient's name; 2d, street; 3d, occupation; 4th, when the Fever began; 5th, number ill of Fever in each family; 6th, date of information; 7th, date of removal; 8th, whence infected; 9th, when washed and aired; 10th, family infected, or preserved; 11th, regulations observed or transgressed.

8. Let a copy of these Regulations be printed upon one page, and be placed in every house infected by a fever, and in every house in the neighbourhood, which is in danger of receiving the infection. By such instructions, poor people will be enabled to give timely notice to the Society, so as to avert the dreadful calamities which they would otherwise suffer.

"The benefit of these Regulations to preserve poor families from all the variety of wretchedness occasioned by infectious fevers, will be exactly in proportion to the

spirit and punctuality with which they are executed.

The zealous, judicious, and successful exertions of the Board of Health at Manchester, in 1796, afforded the fullest confirmation of the principles and the practical conclusions which Dr. Haygarth has detailed in his letter, addressed to Dr. Percival, on the Prevention of Infectious Fevers, p. 108, 109, 110. The facts there stated prove, beyond all controversy, that the regulations above recommended, if faithfully executed, will suppress infectious Fevers in a most wonderful manner. But it is manifest that fever-wards, for the reception of poor people, unaided by measures to purify their habitations, will answer this purpose in a very imperfect manner.

FINIS.

W. Thorne, Printer,
Red Lion, Court, Fleet Street.