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COMPLIMENTS OF THE AUTHOR.

THE TREATMENT
OF
CHRONIC TUBERCULAR CONSUMPTION,

AND THE IMPORTANCE OF THE

Recognition of Its Curability, and Early
Diagnosis, and Prompt, Diligent
Treatment, by Home Hygiene and
Drugs.



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Revised

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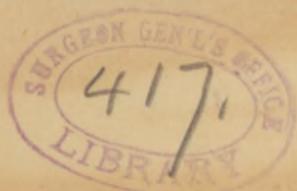
As we will limit our remarks to the form of Consumption above referred to, we will, in this paper, for brevity sake, simply call it *Phthisis*.

That phthisis is a curable disease, and in a certain proportion of cases, even self-limited, there remains no doubt. The late Prof. Austin Flint, in some of his later writings, recorded, that he felt safe in saying, that at least ten percent of all cases of phthisis, were self-limited, and result either in spontaneous cure, or more or less permanent cessation of active progress, without the assistance of any form of treatment whatever.

And further, that in a considerable proportion of these self-limited or spontaneously cured cases, there was more or less consolidation of a portion of the lung, and some cases spontaneously recovered even after lung cavities were unmistakably detectable. Grancher, tells us, that: "That which distinguishes the evolution and life history of tubercle from that of cancer, is the natural tendency of tubercle to become fibrous, and self-limited; this transformation being due to the inherent nature and character of the tubercular lesion, and not to fortuitous circumstances or changes."

Louis, said: "Few persons are born to necessarily die of phthisis."

The carefully kept records of the large private practice of Drs. Ephraim and John A. Cutter, show that they have cured, or more or less permanently arrested, and are still curing about thirty-five percent of the many cases of phthisis they have treated. And in quite a proportion of these cured or permanently arrested cases, the lungs had begun to break down and cavities form before treatment was undertaken.



Prof. Sée has recently given his opinion, that a large percent of cases of phthisis are curable, provided proper treatment be instituted during the primary or apyretic stage of the disease.

Prof. Jaccoud, recently said: "To sum up what we have to state, would say, phthisis is curable in all its stages. This is the prolific idea which presides over the whole history of the disease, and which should unceasingly inspire and direct all medical action. The incurability proclaimed by Laennec and his immediate successors is disproved by pathological anatomy and clinical observation. None should therefore allow themselves to be influenced by such condemnation. When the existence of tubercle in the lung is recognized, it should not be inferred from that moment that he who has them is doomed to death in consequence of their presence. Should it be found that the tubercles soften and a cavern forms, it should not be believed on this account that all is lost. For it has been shown that this is not the case, and the natural tendency which tubercle has to fibrous transformation, that is to recovery, should never be forgotten. For the curability of chronic tubercular pulmonary phthisis has now been established at every stage."

Prof. N. S. Davis says: "In the earlier stages there is a reasonable chance for the patient's more or less permanent recovery."

The late Prof. Brehmer,—whose clinical experience in the treatment of phthisis was immense,—recorded, in his latest writings on the treatment of phthisis, that he was able to cure quite a large per cent. of the cases that came under his care during the latent or apyretic state of the disease, and even a considerable per cent. of the cases that had progressed to still graver conditions before treatment was undertaken.

Prof. Brehmer's great work, recently issued, and that of Prof. Jaccoud, are the best now before the profession, on the treatment of phthisis.

Dr. J. F. Churchill, who has placed the world under immense and lasting obligation for his long lifetime persevering devotion to the study and investigation of the clinical aspects of tuberculosis, and the discovery of its successful treatment by the hypophosphites and inhalent remedies, has put on record—what later observers have repeatedly verified,—that he was able to cure a large majority of cases of phthisis that came under his care during the earlier stages of the disease, and a considerable proportion after cavities had formed in one lung; and even in a few cases of cavities in both lungs, he was able to more or less permanently arrest the disease.

We deem further citation of authority in reference to the *curability* of phthisis, unnecessary: for indeed, all that we have

stated on this point, and much more to the same effect, is within easy reach of every physician.

DIAGNOSIS.

Of the importance of an early correct diagnosis, it seems scarcely necessary to speak, as it is axiomatic, that correctness of diagnosis is not only the basis of therapeutic experience, but alone furnishes the true light directing intelligent treatment. And with peculiar force, in reference to this disease, does the principle apply, that imperfection of diagnosis, leads to an underestimate of the value of therapeutic agents.

And the therapeutic nihilism, so superciliously affected by many of those of large pretensions, but shallow attainments in therapeutic knowledge and skill, is one of the greatest obstacles to the advancement of clinical medicine of our time.

TREATMENT.

Routinism is pre-eminently the bane of consumption therapeutics.

The unfortunate patient's precious months of golden availability, are often criminally wasted by the dilly-dally do-nothing policy of his nominal medical attendant; the anxious patient often being pooh poohed out of the consultation room with only a perfunctory examination, or none at all, with the jocose assurance, that his lungs are perfectly sound.

It being a well-known and undisputed fact, that the pathological status necessary to constitute the disease or process known as chronic tubercular pulmonary consumption, vary greatly in different cases, hence it must follow, that the treatment, to be more or less successful, should be adapted to meet the several indications and conditions of each patient, and modified to suit the different stages and symptoms that may come to pass, or be manifest from time to time in any given case.

To be brief and definite as possible, we will suggest an illustrative case, such as more or less frequently occur, of a class of cases that are very often dismissed, by many reputable physicians, with a commonplace prescription (an opiate cough mixture perhaps) supposed to be sufficient to give relief from immediate suffering or inconvenience.

An individual—especially those from fifteen to thirty years of age—consults us for perhaps a recent cold, cough or sore throat; for usually phthisically disposed persons take cold easily, be they ever so robust and *apparently* sound. A careful history of such a case may develop the probability, that perhaps phthisis,

may be in its earlier stages, has been (and is) insidiously creeping upon the patient for at least several months.

Therefore, if permitted, we make a careful physical examination of the lungs and heart: and may be discover the peculiar signs that warrant us to suspect the presence of phthisis, though it may be in its early beginning.

However, as it is usually difficult, and often impossible, in this class of cases, to positively decide just what proportion of their observable signs are acute or recent, and what proportion chronic; hence we deem it proper to state plainly to such patients, the nature and import of their condition; prescribe to relieve the immediate demands of the case, and make special endeavor to impress the importance of a thorough *re-examination* in the *near* future, and dismiss the patient with a favorable prognosis, *provided* our instructions are strictly complied with.

'Tis often most difficult, or impossible, to bring this class of patients to realize the portentous importance of prompt diligent and decisive treatment in their case. For, may be with truth, they will tell us, that they have not been *sick* for years, always able to work more or less, never had hæmoptisis, hectic fever, or night sweats, little or no habitual cough, pulse and circulation ordinarily good, appetite and digestion usually fairly good, and have lost little or no weight.

Now many such patients, barring accidents and acute diseases, would live from two to five years, or possibly much longer, if left without treatment of any kind. Yet *this* is just the class of cases from which the great majority of recruits are constantly drawn to replenish the ever-rapidly thinning ranks of the vast host of irretrievable consumptives.

Now is the golden opportunity with this class of patients; and if the physician make haste to utilize available therapeutic resources, such patients, with little loss of time from their ordinary employments, and at no great expense, can usually be, within a year or two, put in such condition that, with a reasonable degree of prudence, they may live out an ordinary lifetime, or ultimately die of other disease than phthisis.

In this class of patients, the emunctories, especially the internal excretal gateways, are usually sluggish and clogged with effete matters, the secretions and excretions have long been diminished and vitiated, hence the normal processes of metamorphosis and disassimilation of the tissues and fluids of the body are more or less retarded; the gradually accumulated *debris* is too slowly eliminated, and its presence prevents the elaboration and appropriation of a good quality of new building up material.

Chronic constipation, in more or less degree, usually exists,—

the reverse obtains *rarely*,—and such persons do not usually assimilate well.

These vitiated, and worn-out excretive products, resulting from normal, or perverted, tissue change, gradually accumulate wherever the economy least resists their presence, and they by degenerative changes, become or produce a slowly-acting leucomanic or ptomainic poison, which gradually hampers and weakens the life-cell building power, until it becomes impossible for normal tissue-building material to be elaborated and utilized.

Hence, while the assimilative and excretive organs move in this vicious circle, the strength of the patient cannot be permanently built up, or his waning vitality restored: ply him as you may with so-called alcoholic stimulants, ferruginous tonics and cod liver oil.

And thus, by this hypothesis, the correctness of which has been abundantly proved by clinical demonstration, we are enabled to push our research one link further back in the mysterious pathological chain of primordial causation, of at least a larger proportion of cases of chronic tubercular phthisis pulmonalis, than has heretofore been recorded for us.

Jaccoud, in common with many other recent and earlier observers, tell us, that the *fons et origo* of this disease, is organic constitutional *debility*. And upon this idea, as a basis for his remarkably successful treatment, he in his latest words, "Proclaims more earnestly than ever, that chronic tubercular phthisis pulmonalis, is *curable*, in a certain proportion of cases, in all its stages; and that this encouraging idea presides over the whole history of the disease, and therefore the necessity, and probability of utility of persevering well directed plan of active treatment."

And while our limited clinical experience, especially in recent years, strongly inclines us to indorse the hopeful views of Professor Jaccoud, Sée, Grancher, Brehmer, Churchill, Davis, Flint, and many others, as to the *utility* of timely well directed persevering treatment of this disease; we think that the assigned predisposing causes or conditions—constitutional *debility* of Jaccoud; Cutters *vegetable spores* in the blood; the *bacillus* of Koch; the *want* of *phosphorus* in the system of Churchill; the malmeteorologia of Storer, and many others—alleged as being the primary, principal or sole predisposing cause that must obtain or act, in order that the pathological phenomena recognized as constituting phthisis, may or must evolute, are inadequate to elucidate the leading manifestations that usually come to pass during the progress of this disease.

Yet, a comprehensive understanding of each of these theories just referred to, will bring to the patient student much valuable light that no other window will let in. And when each and all of

these theories, together with the hypothesis we have advanced, with a clear philosophic idea of the value and bearings of each, are considered as a comprehensive whole, we will be enabled, as clinicians, to move one more sure step forward, in that most difficult road, the obstacles of which have so often baffled the ablest efforts of the greatest physicians of all ages and countries—the successful treatment of phthisis.

These retained poison-producing waste or effete products referred to act as an irritant, and tend to produce—and often do produce—a reactionary fever, usually called hectic, and which is the result of an effort of the conservative powers to rid the economy of such seriously disturbing poisonous *materes morbi*.

This persistent, auto-ptomainic toxemia, producing hectic fever, the cool stage of which often results in night sweats: the latter phenomena being plainly an effort of the conservative powers to rid the system of this subtle poison. Hence, some phthical patients, who are not extremely debilitated, feel better during the first few hours immediately following a profuse hectic sweat. This plausible and instructive—and we believe correct—hypothesis, is one of the chief corner stones upon which we predicate our system of curative treatment of early phthisis; the past success of which has already given us much reason to hope for still greater success in future.

And, as a rule, in any given case of early phthisis, if we are able to stop the auto-toxemia, the cause of the wasting hectic fever, its concomitant debilitating phenomena, will cease, and the patient will be enabled, by further judicious treatment (and some cases *without* further treatment) to make more or less permanent improvement. And our experience leads us to believe, that this desirable result can be most surely and speedily produced, in many cases, by the early eliminative and specific system of treatment which we advocate.

The majority of physicians are very skeptical in regard to the *curability* of any form or stage of phthisis. And this wide spread skepticism is the more deplorable, because its tendency leads such physicians to shut their unwilling eyes to portentous manifestations, paralyzes their energies, diminishes their already too small confidence in the value of remedial agents, and they blindly endeavor to hope for the best, and thus supinely fritter away golden days of available opportunity, the criminal waste of which will make, in many cases, all the momentous difference between a prolonged valuable and happy life, and an early sad lingering death.

As before intimated, it is quite fashionable, with a certain class of physicians, especially those affecting superior intelligence and higher education, to profess to have little or no *faith* in the healing powers of drugs, even in other diseases than

phthisis ; but with arrogant vehemence do many such scout the idea, that medicinal substances may be so administered to patients suffering from well defined pulmonary consumption, as to not only render temporary relief, but so as to be the principal means of causing a more or less permanent restoration of a fair degree of serviceable comfortable health.

And only recently, an eminent medical teacher, published : " It remains for phthisical subjects, then, to content themselves with caring for their health by means of the inhalation of relatively pure air, free from dust, by good, strengthening nourishment, and by strict attention to the hygiene of the body."

Of course, it would be a worse than useless waste of effort, to reason with this confirmed pessimistic class of therapeutic nihilists, who doggedly close the shutters to the light of later experience and progress, and declare the sun of increasing therapeutic light and success does not shine.

In the treatment of phthisis, in many cases, we should keep two somewhat distinct objects in view :

First, The correction of the general perversion of the functions of the tissue building powers and processes ; and,

Second, The palliative or curative treatment of the various local or special manifestations or complications,—such as cough, fever, sweats, pleuritic or other pain—acute, temporary or otherwise, as may come to pass during the progress of each individual case.

In our efforts to relieve or cure the second class of manifestations, we should beware of over-active, perturbative or depletive treatment.

But as before hinted, 'tis often the greatest difficulty encountered, in our efforts to timely and successfully treat phthisis, is the inability of the patient and his friends, to appreciate the portentous gravity of his threatened condition, and to realize the urgent necessity for the immediate persistent and diligent use of whatever remedial agents deemed necessary.

It seems difficult or impossible, for many such patients, to fully realize the momentous fact, that their chronic morbid constitutionality, which usually has been years in developing, and indeed is often inherited, cannot be eradicated or more or less permanently corrected, by the use of this or that remedy for a few days or weeks, or by a brief vacation from school or business.

And we are sorry to say that this dangerous lulling skepticism is often encouraged, if not originated, by many reputable—but inconsiderate or uninformed—physicians.

Hence it is, we see so few well devised and persistently executed plans of timely constitutional treatment adopted, for either preventing or curing this obstinate disease.

In the division or classification of remedial agents and meas-

ures to be employed in the home treatment of phthisis, we would place first, *hygiene* ; second, *foods* ; and third, *drugs*.

Of course, we refer to the treatment of those cases—the great *majority*—whose circumstances will not permit them to travel away from home, to secure the great advantages often to be derived from more or less prolonged judicious *climatic* treatment: which of itself, under *favorable circumstances*, with *ample means*, is often not only a most valuable auxiliary therapeutic resource, but the most powerful restorative agency or influence available.

OF HOME HYGIENE.

First. The patient should have, and regularly follow,—barring inclement weather and physical inability—some cheerful active out-door employment: even females should comply with this requirement as far as sex, strength and circumstances will allow.

For *idleness* consumeth the health as a devouring moth, and as a hungry leech it saps the strength and energies in the early morn, noontide and eve: and surely brings the wasting tortures of miserable introspective brooding gloom, that poisons the fountains of life, and often defies the restorative power of all healing agents and influences.

This outdoor active exercise, is largely shorn of its remedial value, if performed as a slavish task or a dreaded penance. 'Tis best that it come as an incidental accompaniment to some specific more or less serviceable purpose earnestly carried out.

The patient should be encouraged to resolutely take the world by the horns, and with determined spirit and energy bend its affairs to serve his laudable purposes.

For many persons die prematurely, simply because they have nothing else of interest to do.

And what is more: there is no bread so nutritious as that upon which open-air manual labor feeds, or viands so sweet as the trophies of the bronzed horny hand.

Horseback riding, especially at a rapid pace, on an easy-going horse, is well known to be one of the best forms of exercise; and if circumstances permit, should, in many cases be preferred to heavier manual labor.

But no form of labor or exercise, should be habitually taken to such an extent, as to cause the patient to be sore and wearied on rising the following morning: but the greatest amount that can be performed short of this sore-tired feeling, is not too much. Frequent short rests, through the day, preferably in the horizontal posture, and not over five to ten minutes at a time, are very beneficial.

And we should not forget or neglect the great value of regu-

lar, well-directed, home gymnastic exercises. This serves a most valuable purpose, that cannot be attained by any other means. And fortunately 'tis within the reach of all, even in the humblest circumstances: and is always available, even in the most inclement weather.

Blaikie's and Lofving's* small manuals, recently issued, give excellent practical teaching and valuable advice on the best modes and sanitary value of Home and School Gymnastics: and every Physician, and every School Teacher, and every phthisically inclined patient or person, and *all young* persons living in *cities*, should procure one or both these small monographs, and heed their valuable teachings.

In some cases of *early* phthisis, the fine dry crepitant rales, for which we so diligently seek—hoping we will not find them—and oftenest found at the apices of one or both lungs, may be made to disappear, in some cases more or less permanently, by the regular daily faithful intelligent use of respiratory gymnastics, carried out in accordance with the instructions Prof. Lofving has laid down in his manual of gymnastics. Thus showing unmistakably the great value of this form of treatment. Home gymnastics serve an invaluable remedial purpose, that no other remedy, or form of exercise or treatment, can afford: and is of especial value as a *preventive* of phthisis, and also a remedy of great *curative* value in the earlier stages of that dreadful disease, and is always available.

Nor should we forget or neglect *vocal music*, as a remedy of great value, in the prevention and early curative treatment of phthisis: for it furnishes a form of pulmonary strengthening exercise and gymnastics that cannot be supplied in any other way, or by any other means; and should be a part of the curriculum in all public and private schools.

FOOD.

In regard to what is proper food and feeding for phthisical patients or persons, we do not agree with the views so dogmatically laid down by some distinguished writers upon this subject: who seem to think, that perfection of nourishing and permanently building up phthisical patients, or phthisically inclined persons, consists in causing them to ingest the maximum amount possible of the richest concentrated nitrogenous and fatty foods—exclusive of other classes of foods—at regular stated periods every day.

For we are quite sure, that the *menu* some such writers have specially formulated for this class of patients, would overtax the

* J. B. Lippincott Co., 1890, 60 c.

digestive powers of even many sound robust persons in a short time. For the problem is plainly, *not* just how *much* condensed rich, nitrogenous, fatty, or other strong food, we can induce these patients to *ingest*, but what kinds, classes, and combinations of foods they can most easily and thoroughly *assimilate*, for more or less indefinitely prolonged periods of time. To do this to the best advantage, we must carefully study each individual case, with all available light, as an independent problem. For it is manifestly absurd to lay down cast-iron rules and rigid specifications, as to kind, class, and quality of foods, that *every* phthisical patient *shall* ingest within a given period of time. For physiological chemists have repeatedly demonstrated that a *variety* of food is necessary for even a fair degree of nutrition and continued health, in any given species of highly organized animals; and *man*, being the highest, and inherently omniverous, naturally requires the greatest *variety*.

Just here, we should not forget the important fact, of the indispensable value of certain fats, as not only being easily digested themselves, but their wonderful assisting power in aiding the digestion and assimilation of other classes of foods, notably starchy foods, and fresh herbaceous and leguminous vegetables. Physiological chemists tell us, that the assistance certain fats render the process of digestion is largely owing to their property of quick and ready combination with starchy foods and fresh herbaceous and leguminous vegetables, forming—by aid of the digestive juices—soluble albuminoid emulsions, which are the easiest forms of crude aliment from which the assimilative organs can draw supplies for new cell-building materials.

Thus, to illustrate: See how much easier the old English dish, "butter-bread," is digested, than our American hot biscuits, or worse still if the *butter* be left out entirely. Again, see how much more easily the fresh raw, or cooked herbaceous salads are digested, if seasoned with a little toothsome gravy—especially that from well-cured bacon—than when eaten without such seasoning.

Just here 'tis well to remember the powerful eliminative and health-restoring effects of good fresh herbaceous and leguminous vegetables, as so strikingly demonstrated in curing scorbutic sailors and soldiers.

All are familiar with the phenomenal success of Prof. B. W. Dudley, who fed his surgical patients on turnip greens,—cooked with bacon,—*plain* corn bread and buttermilk.

And this wonderful eliminative and health-restoring effect of fresh herbaceous vegetable diet, is most strikingly demonstrated every year, upon the Pacific coast Indians of Northern California.

These Indians are very subject to phthisis, and suffer most

during the months that they are deprived of fresh herbaceous vegetables. But as soon as the fresh green wild salads (especially the wild *clovers*) become plentiful, these Indians consume large quantities of it,—eating a large portion of it *raw*—eating, for several weeks, little other food. During this herbaceous vegetable eating period, the improvement in the health of their sickly people is most remarkable, especially those suffering from phthisis

Phthical patients should ingest, at regular intervals, a liberal supply of good soft water; but never colder than good cistern water, and only moderate quantities at a time. This health-producing fluid is not only a veritable medicine for many diseased conditions, but, owing to its superlative solvent powers, it is at once the prime reducing agent, and also the vehicle by which the tissues are cleansed and rejuvenated, and built up.

The ingestion of *mineral* waters, with few exceptions, is usually injurious, rather than beneficial, to most consumptives, especially drunk freely, or for long periods of time. Hippocrates wrote a volume urging and explaining the remedial value of good water; and physiological chemistry, and later clinical experience, have fully confirmed the correctness of his teachings.

As an illustration of the bad effects of over-ingestion of too rich food, see the healthy robust young peasant mother, called to wet-nurse a rich man's babe. Fresh from her rural cottage, with its *plain* food, fresh air, and plenty of physical exercise, her milk is of the best; but so soon as she enters the palace of wealth, do her employers begin to *cram* her stomach with large rations of concentrated, rich foods, and drinks of ale, porter, and beer, causing her milk to soon become surcharged with nitrogenous matters, so that the nurslings are soon made sick.

A knowledge of successful feeding, in health or disease, is necessarily largely empirical, both in general and special. We should adapt the feeding to the patient—not the reverse, as some would-be oracles command.

As to the diet list—presuming the patient to be in a condition warranting the hope of cure, or more or less permanent improvement—we usually direct, that the patient take little or no coffee or tea, no tobacco in any form, no alcoholic liquors in any form (unless prescribed)—as they, even in *moderate* quantities, diminish the power to assimilate fats—no rich pastries, sweet cakes, or sugared compounds.

Plain dishes, toothsome prepared, are preferable to rich compounds.

Phthical patients should take three good regular meals every day; a liberal part of at least one of which should be

good fresh butcher meat—beef or mutton, or other fresh and easily digested meat—prepared to suit the taste and digestion. Good well cured bacon, may be taken once or twice a week—best lightly boiled or raw—as a change.

A good hearty breakfast, a moderate dinner, and a light supper. The foods should be varied from day to day, as much as circumstances will allow, but not many kinds of food at any one meal.

Choice ripe fruits, cooked or raw, are valuable foods in this as in most other diseases, but should be taken as a part of the regular meals; not promiscuously through the day, especially in the afternoon.

All are familiar with the notable success of the “grape cure” of phthisis, during which the patient, for several weeks, takes little other food than fresh, ripe, sweet grapes, which are very rich in fruit sugar; yet, if of proper variety, well ripe and fresh, rarely disagree, though several pounds of them be eaten daily for long periods of time, provided they be taken only at regular meal times—three times a day—and the patient exercise freely in the open air. Just here 'tis instructive to observe, that those grapes found beneficial to phthysical patients, are not only rich in fruit-sugar, but also strongly charged with *astringency*, especially in their skins. Here we get a clew as to the best combination of tannic and pyrogallic acids, sometimes found so beneficial in the treatment of phthisis.

Fresh herbaceous and leguminous vegetables, properly cooked and seasoned to suit the taste, are also a valuable class of foods. Some herbaceous vegetables—as tender white cabbage, blanched celery, cresses, etc.—digest more easily, and are more nutritious and generally beneficial, when eaten raw; and these form a valuable class of foods for consumptives.

Eggs do not usually agree well with phthysical patients, unless eaten raw or slightly cooked. Choice milk—*fresh* rich sweet milk, or butter milk—and good fresh butter, with good light wheat, Graham, rye or oat bread, or good *plain* corn bread, are foods of indispensable value, which every phthysical patient should have.

To recapitulate: No food should be eaten that the patient does not digest comfortably. The forms and kinds of food should be varied frequently; for, “Variety is truly the spice of life.”

But only two or three kinds of food should be taken at any one meal.

Food should be taken at regular intervals, eaten slowly, and thoroughly masticated. To this end the *teeth* should be kept in good condition.

The circumstances of mealtime should be made as *pleasant* and *cheerful* as possible. When the appetite is *sharp* the patient should not eat quite as much as he wants.

SLEEP.

“ Nature's sweet restorer.”

A favorite theme of inspiration for the bards of all ages in every land :

All peoples have craved thy solace
Since earth from chaos woke.

As all know, the nervous system is divided, both as to organs and functions, into two grand divisions. And while these two divisions interfunctionate more or less in unison, as mutually assisting and complementing each other's duties, yet each division has its specific, and somewhat exclusive work to perform.

The cerebro-spinal system runs the machine during wakeful hours; while the sympathetic system is mainly engaged, during wakeful hours, in cleansing and lubricating the bearings, and otherwise preserving the machine from unnecessary injury during its outwardly active periods. And the cerebro-spinal system is not only the great executor of outward or productive labor, during wakeful hours, but is also the great *consumer* of organic force and new force-producing materials of the body.

On the other hand, the sympathetic system does its beautiful and indispensable work, which is mainly eliminative, renovative, reparative, and constructive, mostly during sleeping hours.

During sleep, the old worn-out effete products, the result of the previous day's activity and katabolic change, must be gathered from all the organs and tissues of the body, and conveyed out of the system; and new force-storing and reparative material, the result of anabolic change and elaboration, must be carried to all parts and organs of the economy, ready for the following day's outward activity.

So we see the indispensable necessity of a regular and plentiful supply of comfortable sleep. And eminent physiological investigators, have proven, in this connection, two great broad propositions, both of which are of momentous importance, just here :

First. That sleep, during the *dark* hours, is more recuperative and generally beneficial, than during the *light* hours.

Second. That *too much sleep*, is injurious to the genera well being of an individual—sick or well—especially to those whose respiratory capacity is diminished below normal.

Hence 'tis equally important that phthisical patients *rise early* as that they go to bed early; and here clinical observation substantiates physiological experiments.

And Prof. Draper's careful and repeated experiments conclusively show—what accords with common observation—that the excess of oxygen taken into the system during *too prolonged sleep*, does not serve any good purpose, unless there be in the body an excess of material the oxidation of which would either furnish increased force and vitality, or render such excess of oxidizable material less noxious or more easily removable from the economy.

And that too rapid or too great an oxidation in the body—as in the case of too much sleep—leads to physical feebleness and sluggish mentality, instead of increased power and vivacity—as is popularly believed.

The sleeping rooms of phthisical patients should be the largest and best ventilated of their homes; and the air thereof should not only be kept fresh and pure, but should also be kept at a *comfortable equable temperature day and night*, by the aid of artificial heat if necessary; an open fire place or grate being greatly preferable to a stove.

But such patients—nor no other person—should sleep in a *current* of air, however hot the weather, for such exposure not only frequently results in serious or fatal acute attacks, but is often the first perceptible beginning of phthisis.

No other person should sleep in the same room with phthisical patients.

If there be tendency to cold feet, they should be vigorously rubbed with coarse cloth or brush, in pleasantly cool water every night, then made *very dry and warm* before going to bed, and *kept warm all night*.

Thick soft *cotton* stockings will usually keep the feet warm better than woollen. The body underwear, for all the year round, should be made of soft wool or silk, thick or thin, to suit the season; and shirts should be made with long bodies and long sleeves, and to fit snugly round the neck: but the clothing should never be so close-fitting as to interfere with free full easy respiration, locomotion or circulation.

The bedding should be sunned and aired at least twice a week.

Once or twice a week, in a close, pleasant room, the patient's whole person should be thoroughly and *vigorously* rubbed and cleansed with a brush or coarse cloth, wet in weak warm soap suds; each region being rubbed thoroughly dry and covered before another is bared, exposing as little of the person at a time as possible. The ordinary modes of bathing or washing the body usually do more harm than good; hæmoptysis and other injurious results being often produced by such exposure and chilling of the surface.

A *weak*, continuous galvanic current, applied mobile over the body for half an hour, followed by a brisk dry brush shampoo

massage, just before going to bed, will produce much comfort and some real benefit in many cases, especially if the patient be nervous and suffers from insomnolency.

DRUGS.

In the language of the latest writings of the late Professor Austin Flint, in reference to this topic, we would say: "All remedies which improve appetite, digestion, assimilation and nutrition are in greater or less degree useful."

But, upon this subject, there are two points, both of which we deem of great importance, that stand out prominently in the writings—especially his latest, of this learned physician:

1st. His ideas of drug therapeutics, were seriously hampered by a theory—the bacillus theory—that even the latest lights do not enable us to successfully apply in the clinical curative treatment of this or other diseases.

2d. He failed to recognize the idea of the significant importance of the *elimination* from the system of the leucomanic or ptomainic poisons, generated by the perverted processes of disassimilation of the tissues of the body, and by the imperfect, or failure, of assimilation of ingesta, regardless of its kind, quality or quantity.

(Just here, it would be instructive to note, that *theories* and *theorists*, have done *far more* to *hinder* than help the advancement of clinical medicine.)

For it is well known, that even the normal katabolic changes and processes that daily occur, even in the bodies of the healthiest individuals, and when they take the best foods, produce a sufficient quantity of leucomanic poisons to seriously jeopardize the health, if not endanger the life, of the individual, were these autogenic poisonous products not eliminated, at least to a greater or less degree, by the various emunctories.

And so we find that in the treatment of all chronic constitutional diseases, we must direct our curative efforts to the *elimination* of those autogenic katabolic toxic materials, if we would secure any great degree of permanent improvement to the patient.

And, fortunately, there are various means and methods by which the so-called *vis medicatrix naturæ* may be impressed or assisted, in greater or less degree, in this eliminative, conservative process or action.

Just here, it will be profitable for us to remember that the *liver* is the chief of this class of conservative agents; for, with sleepless vigilance it stands at the great gateway of chylipoietic nutrition, and by virtue of its *sui generis* metamorphosing powers, it seizes upon poisonous substances passing the round of the

circulation—especially leucomanic, ptomainic, and other *organic* poisons—and if the toxic substances be not overwhelming in quantity or quality, it neutralizes them, in whole or in part, and the innocuous—or may be useful—product is allowed to pass on to fulfill its predestined purpose in the nutritive or reparative economy.

In some cases, especially if the toxic substance be *inorganic*, the liver holds such poisons under arrest, stored up in its lymphatic cellular substance for an indefinite more or less prolonged period of time; and in some cases relatively large quantities will thus accumulate before steatosis progresses to such a degree as to render longer effective functioning impossible.

Hence, medicinal substances, especially inorganic medicines, *e. g.*, mercury, arsenic, phosphorus, iron, etc., should not be administered *continuously* for *long* periods of time, but exchanged for vegetable remedies, or, better, all remedies be remitted from time to time.

So here we discover one of the great secrets of the why and how we may benefit our phthisical patients by the judicious use of drugs that increase hepatic functioning. And we also readily see how our syphlographers are enabled to increase the red blood corpuscles, and improve the blood-plasma by the use of minute doses of mercurials, in the treatment of constitutional syphilis.

And, again, we see how our remedies in the treatment of phthisis, especially if inorganic, as mercurials, phosphorus, arsenic, etc., may become—and sometimes do—*poisons*, if administered in too large doses, or *continuously* for too long periods.

The therapeutic indications being plainly to administer remedies, especially of this class, in small non-perturbating doses, and with, or just after meals, that the medicinal substance may be digested with the food-mass, and pass into the long round of chylopoietic nutritive circulation, thus becoming albuminoids, the form in which they may be most quickly and thoroughly appropriated by the assimilating organs and forces, and thereby render the greatest possible service toward renovating and building up the various tissues of the body.

And in this connection, we should refer to *alcohol*, as it is regarded by many, even of those of eminence, as one of the remedies in the treatment of phthisis.

Alcohol, being a narcotic sedative, and an anæsthetic, and strongly tending to retard reparative physiological tissue change, and by its paralyzing effects upon the excretive forces and organs, prevents the normal physiological disintegration and elimination of *effete* products, thereby directly tending both to cause tubercular deposits in the lungs, and at the same time to cripple the emunctory organs: hence its ingestion in any

quantity or combination, could not result otherwise than injuriously to phthisical patients—unless possibly, as an *anæsthetic* in some cases that were already *hopelessly near the grave*.

We speak thus strongly and positively, not upon mere theory or hypothesis, nor as following or opposing the bias of traditional influences or teachings.

But as the result of many years' close observation, and clinical experience: therefore we *know* whereof we speak. And it is scarcely necessary to state, that the foregoing opinion, coincides with the latest and best authority, as touching this subject. And just here, *en passant*, permit us to say, that the problem, of general and special therapeutic application, as to what hour of the day, in reference to meal-time, etc., is the best time to administer medicines, is a question of vital importance—but too much neglected—and well worthy of the profound attention of every physician. But it remains to the knowledge, judgment, and sagacity of the physician, to select the most appropriate means and methods, and to properly direct their use and application, in order to obtain the greatest possible curative results in any given case. For, indeed, herein lies the supreme consummation of therapeutic skill, and which has been truly termed, the *poetry* of medicine.

When we consider the *many* medicinal substances that have been found more or less useful in the treatment of phthisis, in its several stages and different types, and in individuals of dissimilar constitutionality temperament, age etc., the bare mention of their names might bewilder us, if we do not keep well before our minds some definite idea of their real or supposed *modus operandi*.

Probably the most numerous class of remedies referred to, are treated of in works of *materia medica*, under the general title of vegetable alteratives. The most palpable manifestations of the remedial value of this class of medicines, are to be observed either upon the cutaneous surface, or the respiratory and gastro-intestinal mucous membranes, or more directly upon the adenoid tissues of the body.

Another notable characteristic and valuable therapeutic property of *vegetable* alteratives, is, that they do not accumulate in the system, and thereby become poisons rather than medicines, as *mineral* alteratives are prone to do, especially if administered *continuously* for long periods of time, even in small medicinal doses.

Another important therapeutic peculiarity of vegetable alteratives, is their tendency to gradually lose their medicinal effect, if administered continuously for long periods of time; hence more or less frequent change of them is necessary to obtain their best remedial effects.

To be both brief and specific, we will simply name some of the drug-remedies we have found most useful in the general or special treatment of phthisis.

Beginning with the vegetable alteratives, we would note: Extracts, or active principles, of ipecac, wahoo, burdock and yellow dock root, stillingia, wafer ash, phylocoa, leptandrin, lupulin, collinsonia, chionanthus, sarsaparilla, golden seal, inulain, asclepias tuberosa, gelsemium, sanguinaria, senega, tag-alder ergot, nux vomica, buchu, red and black pepper, cubebs, and aloes.

The mineral acids—muriatic, nitric, and phosphoric—we find most useful for internal use; and lactic acid, in form of spray, for laryngeal phthisis. The balsamic remedies, as several of the refined turpentine: as oleum templinum, oleum pini sylvestris, light oil eucalyptus, oil cinnamon, oil cloves, sweet gum, oil camphor, oil sassafras, menthol, balsam Peru, oil sandalwood, and others of the same class. These oils and balsams are used, some for inhalation, some by the stomach, and some by both modes of administration, and are an invaluable class of remedies in the treatment of phthisis. Assafetida, in pill combination, and soluble balsam tolu, in fluid combination, are both useful remedies, in this disease.

Of the *specific* remedies, we would note, as most important, the alkaline *hypophosphites*, especially that of soda, as being most frequently applicable.

But to secure good results from the use of the hypophosphites, it is of *indispensable* importance, that they be of *pure quality*, and be given *judiciously*.

For several years, we have given the hypophosphites (in syrups), manufactured by R. W. Gardner, of New York, and believe them to be the best made in the United States, and equal to those manufactured by Swann, of Paris.

The *dose* of the hypophosphites, as directed in the U. S. Dispensatory, is *much too large*, and will more frequently prove injurious than beneficial. To adults, we usually administer the syrups of the hypophosphites (but *never mix* them,) teaspoonful (about two and one half grains) three times a day, just before meals.

Arsenic and the hypophosphites, should not be administered simultaneously: but vegetable alteratives, tonics, and laxatives—as indicated—should always be administered simultaneously with either or both.

The syrup of hydriodic acid, is often a useful remedy, especially in dry, asthmatic or feverish cases: whether the fever be purely hectic, or a more or less malarial complication. Just here, we should state: that the febrile exacerbations—which are often followed by profuse sweats—from which phthisical pa-

tients often suffer, are in many cases aggravated and prolonged by the administration of *quinine*: regardless of the fact, that these febrile exacerbations may or may not be complicated with more or less malarial poisoning.

In slow, dry asthmatic cases, where there is no fever, the hypophosphite of potassium, will often render valuable service; but its effects should be closely watched, for when given long or in too large doses, its pathological tendency is to cause a deliquescence of the tissues.

A small proportion of cases, especially babes and small children, and those with strong tendency to more or less rapid breaking down of the lungs, may be benefited by the judicious use of hypophosphite lime.

Bromide of arsenic, and mercurials—the cyanide, bichloride, and biniodide, of mercury, we most frequently use—all in *very small* doses, and intermitted from time to time, are valuable remedies in some cases.

Guaiacol, one to three drops, t. i. d., just after meals, in pleasant emulsion, is an *invaluable* remedy; and in cases of strong tendency to *fever*, will supersede the hypophosphites until the fever is subdued.

Myrtol, is also an invaluable inhalent remedy. A diligent, judicious, and persistent use of inhalent remedies, will usually not only preclude the necessity of cough mixtures—one of the greatest curses of pulmonary sufferers—but will, in many cases, also produce great generally beneficial results, that could not so well be secured by any other means. The inhalation of dilute aqueous spray of wine of ipecac, is also a valuable cough remedy.

In dry asthmatic, or eczematous cases of *early* phthisis, bisulphite soda, given in small doses in dilute solution, for several weeks, is often a valuable remedy.

If night sweats give trouble, oxide zinc with sulphate hydrastis, will usually soon stop them, though the timely and judicious use of vegetable alteratives and inhalent remedies, will usually prevent or cure night sweats.

As a rule, with *rare* exceptions, the hypophosphites should never be administered when there is fever, or the tongue foul or unnaturally red; nor given *continuously* for longer than one or two weeks.

Nor should the different hypophosphites ever be mixed, in any case, as they are therapeutically *incompatible*.

We usually give the syrup of the hypophosphite soda, teaspoonful three times a day, just before meals, for one or two weeks, then leave it off for one week, then—if not contra-indicated—resume its use, thus using it for two weeks out of every three weeks, for several months if no contra-indication inter-

venes—then alternate with some other remedy. In many cases, especially in non-febrile early phthisis, this invaluable remedy may be thus used; with proper intermissions and precautions, and in connection with vegetable alteratives and tonics, and other indicated remedies, for many months, or even for several years, with most beneficial results.

The syrup of lactophosphate lime, is often a valuable appetizing building up tonic remedy, especially for babes, young children and for advanced cases.

We have prescribed (and *taken* several gallons) large quantities of cod liver oil, plain and in various combinations, and of the best quality the markets of the world afforded, and in accordance with directions from the most distinguished authorities, but usually with discouraging results; hence, rarely prescribed it during the last few years. Professors Williams, father and son, of Brompton Hospital, have treated about 15,000 cases of consumption, mainly with cod liver oil, as the constitutional remedy, resulting in a mortality of about 99 per cent.

The malt extracts, if not too sweet, or charged with too much alcohol—as most all of them are—act well in some cases, as an appetizer and aid to digestion: large tablespoonful in half a glass of water, three times a day, with meals. Hoff's and Wyeth's malt extracts, are the best we have tried: but even these would be more valuable, and more frequently applicable, if they contained no alcohol.

In the curative treatment of phthisis, the bowels should be caused to move in a free, natural, comfortable manner, at least once every twenty-four hours; and during acute or feverish exacerbations it is usually best that the bowels move twice in twenty-four hours.

But in no case should drastic purgatives be used, or free purgation be induced.

During acute exacerbations, which are usually attended with circumscribed dry pleurisy, pain in upper chest, and fever, even in the earliest stages of phthisis, the patient should be kept quietly in bed; feet and limbs kept very warm, free—Croton oil—counter-irritation over the chest, and such other general or special remedies administered or applied as may be necessary, until all *acute* pain and inflammatory symptoms are relieved.

By a judicious use of vegetable alteratives, laxatives and tonics, proper food and exercise, we are usually able to keep the bowels in good condition without purgatives.

We usually give two to four vegetable alteratives, with one or two vegetable tonics, in coated pill form, simultaneously with some of the balsamic remedies, by inhalation or otherwise, and such special remedy as may be indicated.

But we make it a cardinal point that our medicines must be

given in small, non-perturbative doses, made pleasant to take, and never to disturb the stomach or hinder digestion ; and very rarely administer any remedy oftener than three times a day. Just here it may be well to note, that the *chinchona* salts are rarely beneficial in the treatment of any stage of phthisis, or any of its complications ; but they often produce injury, even in moderate doses, by increasing the tendency to nervousness, hectic fever and night-sweats.

The compound sulphur lozenges, serve a valuable purpose, as a cholagogue laxative in some cases, and may be (in hepatic derangements independent, of phthisis) given for several weeks or months, one to three lozenges three times a day. The following formula is a good one :

℞ Pure Sulphur, gr. 5.
Pure Cream of Tartar, gr. 2.
Ext. Ipecac., gr. 1-100.
Ext Capsicum, gr. 1-500.
Arsenious Acid, gr. 1-1000.
Bisulphite Calcium, gr. 1-8.
M. ft. lozenge.

Messrs. John Wyeth & Brother, manufacture them for us, by compression, and they are stable, elegant and pleasant to take.

Cases that are attended with hemoptysis in the early stages, especially if the bleedings are not large, are usually the most easily cured. For such cases, the extracts of ipecac, ergot, with sulphate hydrastis, extract viburnum prunifolium, and pyrogallic acid, given for long periods of time, are of special value.

For the *immediate* arrest of hemoptysis, give large doses of ipecac, well diluted.

Should the phthisical patient suffer with fistula in ano, it should be cured soon as possible : as the emunctorial capacity of fistula—if indeed they ever exercise any such powers—are far more than counterbalanced by the injury they do the victim, as a source of pain and irritation ; to say nothing of the far more serious danger incurred, of steatosis or amyloid degeneration of the kidneys, or metastatic hepatic abscess. While all must allow, that such means as the ulcerating surface of a fistulous tract—or any other ulcerating surface, regardless of its extent or locality—is a miserable lame (and often dangerous) way or means, to say the least of it, of eliminating peccant humors from the system, or purifying the fluids and tissues of the body.

Owing to their occupation, prostitutes are specially liable to hemoptysis, and some of them bleed from the lungs more or less frequently for several years or longer without developing

phthisis, or any apparent serious decline of health; and the first attack of hemoptysis, in other persons than prostitutes, often occurs during sexual intercourse, regardless of sex.

To recapitulate briefly, we would say:

That it is well established that chronic tubercular pulmonary consumption is, in a considerable proportion of cases, a curable disease: provided, proper treatment is undertaken and persistently, diligently and judiciously carried out, from the date that the earliest diagnosis of the disease can be made, (and in some cases, much later) until the disease is cured, which will usually require from one to three years, and in some cases longer.

That this treatment can often be carried out to successful issue without the patient making distant journeys, or expensive sojourns at this or that health resort, provided his home climate, employment, and environment be not specially unfavorable.

That a recognition of the correctness of the hypothesis we have advanced, as to one of the great predisposing causes of chronic tubercular pulmonary phthisis, brings us one link nearer to the primordial origin of at least many—if not most—cases of this disease, which, therefore, indicates a plan of treatment most likely to be successful.

Lastly: clinical experience and observation has confirmed the correctness of our herein expressed views in reference to the prognosis and treatment of this disease.

AUSTIN, Texas, October 1890.

