Consumption and its Treatment

By W. G. Poole

A knowledge of the deviations (from the natural healthy state of the body can be best derived from its Anatomical and Physiological examination - in health and in disease; yet as regards the extent of the remedial means to be employed, such information can be best - if not altogether - derived from experience in the use of the means: - hence it is worth while to examine into the experience of past generations as to the preservative, curative, or as least alleviative means, employed, to check the progress of that most mournful and intractible disease termed Phthisis or Pulmonary Consumption.

A most careful examination of the Medical Works of Ancient ages, whether the production
Debility

the

cause and consequence

of

Pulmonary Consumption.

with remarks on its

prevention and treatment

by

William Foster Rooke.
of Mabie, Cress, or Roman writers, do not supply that information which may be readily available for practical purposes in the treatment of this disease. The principle of most ancient Practitioners in the healing art were chiefly those of Rational Empiricism, for although particular attention was paid to the Phenomena of Nature, yet Theories were not always formed from a priori reasoning, but rather such conclusions were deduced as these Phenomena would justify; nevertheless the inquiry will not be altogether fruitless, for if one single fact be elicited from the annals of those distant days, which modern researches are unable to invalidate, surely it will tend to strengthen our confidence in that Theory which may be put forth as it were anew to explain the origin and treatment of Phthisis, when reminded that that Theory and treatment are in some agree sanctioned by the most Reputable Medical Authors through every period of historic time.

A brief outline, however, of the
Can be given of facts and observations connected with this complaint, extracted from a cumbrous mass of useless observations which unfortunately disfigure the writings of nearly every Ancient Author.
Hippocrates. This author was the most celebrated member of a family renowned in the practice of Medicine for near three hundred years. He had many opportunities for acquiring a knowledge of a profession, which before the time of his forefathers, was principally confined to the Priesthood and followed only by Philosophers as a subordinate pursuit — regarded as secondary to other occupations presumed to be of more exalted importance.

There are divers Medical Treatises extant attributed to Hippocrates, some of them doubtless being the production of his ancestors, but let this be as it may, we find in them mention of several varieties of pulmonary Complaints, the consequence of different exciting causes; and in noticing their symptoms in his first and second books on Diseases, as also in the book of Internal Affections, he designates them by the names of Phthisis, Phthise, and Emphysema; and in the disorders mentioned in the third book of the Epidemics, Consumptions are frequently alluded to. It is then remarked that persons most liable to that disease were those with smooth, fair, and sandy skins, blue eyes, and shoulders projecting like wings. In the fifth book the latter peculiarity of form is said to be derived from weakness.
of the Constitution. In the symptoms of Consumptive affections, Hippocrates enumerates the short dry cough, the expectoration, pain in the chest, falling off of the hair, bending of the nails, and diarrhea; and although he alludes to profluse sweating and night fever as symptoms of Phthisia, yet does not very clearly define the periodical hectic heats in the extremities, and the night perspirations, as though he had not observed, or disregarded those prominent symptoms so much noticed by all modern authors on Consumption.

The treatment principally recommended is the use of strong Carricks, the judicious use of Carricks and emetics, with divers vegetable productions, accompanied, or not according to the symptoms, by the milk of various Animals, particularly that of Asses and Mares. He appears to have observed the beneficial influence of walking exercises, as it was directed to be taken daily, if possible, to the extent of several miles, although the extremes of heat and cold seemed to be cautiously guarded against.

In the following symptoms the prognostications as to the final results of Phthisis were founded. The easy expectoration of white matter was a favourable sign; whilst in the Carol Prognostic, and the
Most easily Communicated, in which the breath is agitated: and then refers to the pestilence as an example, when those who breathe the air affected by it, acquire the same disease.

Dioscorides. - After the death of Aristotle very little information is recorded respecting the treatment of Consumption for the next four hundred years, except that it was regarded by the Roman physicians as a very fatal disease, and for which honey and aletrum were the principal remedies employed. Ovid I. iii. 11.

Plautus, Merc. I. ii.

In the reign of Nero, flourished the Greek physician Dioscorides, whose life seems to have been one long study of plants; and in the pursuit of that study he travelled into distant regions to collect, and make himself acquainted with their properties; hence it need not excite surprise that his works on Materia Medica should be referred to for one sixteen Centuries, as the highest authority on all matters connected with Botany and the virtues of plants. In the fifth chapter, Pulchrum is said to be good in coughs and Consumption, either used as a fumigation, or taken mixed with Eggs.
Aretæus—The Cappadocian. It is now believed that no date can be fixed to the period when this justly renowned man lived, although from the style of his writings it is probable he was contemporary with the learned men who flourished in the latter part of the first century. The mind of Aretæus did not become influenced by the predominant theoretical schools of his day. His writings bear no traces of compilation; and although they contain information peculiar to the period, yet bear ample evidence that they were composed by one who relied upon his own personal experience, and thought for himself.

The pathological descriptions which Aretæus has given of diseases are universally acknowledged to be accurate delineations, and distinguished by a peculiar elegance of diction. In describing chronic pulmonary diseases (v. 10, 12) he observes that, from lent expectation, a tubercle of the lung, chronic cough, or hemoptysis, is termed Phthisis; but uses the term Phthise, when ulceration of the lung existed, as denoting the most genuine form of consumption.

Aretæus, then, as though he were only yesterday, describes the symptoms and progres
of Consumption, and remarks that the disease most commonly attacks persons of a slender and compressed form, with thin chests and a fair complexion. In the treatment of Pulmonary Consumption recorded in the book of Chronic Diseases, sea voyages are much recommended; and, as if in anticipation of the external application of air in our day, Astaeus advises the liberal use of treatment! Milk was directed to be taken freely, as being not only nutritious, but natural to the constitutions and habits of our race; affording a cooler balm to the ulcerated parts, and altogether more friendly to the system than any other fluid. Indeed the most nourishing articles of diet were ordered to be used—consistent with the state of the stomach; and in the general treatment of this as well as other diseases, Astaeus regarded experience as the best guide, and he repeatedly refers to the necessity of following the hints which nature gives to the physician.

Celsius. This well known author, after alluding to Astaeus and Cachery (iii 22/1) recommends in Phthisis, the symptoms of which he describes, diverse palliatives,
for the crops, too. - juice of Horsham mixed with honey, which is aptly enough considered a good medicine; also honey, vinegar of glycerine, honey and eggs &c.; but the principal treatment was evidently of a debilitating and restorative character; such as temperance, equitable diet, Carriage exercise, strolling on the sea, change of climate, &c. providing the strength admitted of it.

Pliney. In the books of the elder Pliny no definite plan of treating Phthisis is found; on the contrary, the mind becomes dull whilst dwelling on a vast variety of specifics for the cure of that disease recommended with a desperate superstitions credulity, such as a Wolf's liver infused in wine; the heart of a lean sow; fed on vegetables; the embers of dried cow dung; and the ends of Baclesse's horn burnt and powdered, and mixed with honey &c. &c.

Salen. It is difficult to compass into a few words the prolific observations on Phthisis, by this very extraordinary man, his diœcesis are his disbursements hereon. He appears to have adopted the opinion of Aristotle
with respect to the contagious nature of Consumption. In the first book on "Distinctions of Fevers" it is remarked that, "it is dangerous to pass the whole day with the Consumption, and in general with all those persons, whose disease emits putrid effluvia, so as to make the house in which they live offensive."

In the fifth book on "The Method of Healing," the treatment of Pneumonia is fully considered; and although he professes to value nothing so much as truth and science, yet his observations are not founded on principles which science even in his day would have afforded him; on the contrary, his practice was based on Pneumatic theories, not even yet wholly abandoned in every place.

"Weeks of the lungs require powerful remedies" with he "because they are out of the reach of their immediate application." Among the more judicious articles ordered is the "milch of Cows, Sheep, and Goats," which was to be taken warm from the animals. Many of the remedies enumerated were copied from Asclepiades, Heron, Menesocrates, Aenarchus, and others.

These remedies commonly contained Quills, Liquorice, Myrrha, Terebenth, and Similar articles
Combined with honey. Sulph Ammoniacae was observed
to be a powerful medicine; and when the expec-
toration was excessive, opium and the juice of
Hyoscyami were ordered. Although Salern directed
some of his patients to Stabiae—a moderately
sited hill three miles from the Bay of Naples,
where the air is dry and the pastures healthy, yet
we find very little of that constitutional treatment
recorded in his works which the very nature of Phthis,
its imperatively requires.

Oribasius. For many generations after the time of
Salern the works of the Greek and Arabian phys-
icians, principally consisted in extracts and abridge-
ments from the writings of that author. Oribasius
was so famous in his profession as to become the
intimate friend of Julian, and accompanied that
Emperor into Gaul as his physician, in A.D. 355.

With all the advantages however of exalted station,
a long life, and good education—having been the
pupil of [here an able physician at Cyrene], he
Marily observes at the end of a brief extract from
Salern's treatment of Phthisis, that a milk diet is
of more importance than all the other Remedies put
AbiChares. The writings of this physician, who flourished in the ninth century, and was an illustrious member of the Arabian school of medicine, show him to have been well versed in science and in auscultatory research, but not little more than an enumeration of Galen's doctrines. He recommended milk in phthisis, and also a Jonction composed of Myrrh, Strozy, and other gums.

AbiChennis. This celebrated philosopher and physician flourished about the latter part of the tenth and beginning of the eleventh centuries. He rose to the highest celebrity in his native country Botharas to as to be deemed superior even to Galen; and his work the "Kanun" or "Canon Medicine" acquired the greatest reputation, and was regarded in the Arabian and European Medical Schools for many hundred years as a standard authority in medical science, principally valued for its judicious arrangement and comprehensive view of the doctrines of the early Greek physicians, at an age when the knowledge of the Greek language was very scanty.

AbiChennis thought (contrary to modern
(ever since) that Consumption prevails most in cold countries, and as it comments a dry air and milk diet for its cure. He thought the sugar of roses had great virtues, and in general his treatment closely resembled that of Salernum, from which the medical authors of the next century did not deviate.

Philippus Aureolus Theophrastus, better known as Paracelsus, the astrologer and physician, was a very remarkable man in the healing art, was born - as he himself says - in the year 1494, near Zurich in Switzerland. His works on Alchemy, Astrology, and Medicine, appear to be both unintelligible in style and substance, yet bear ample testimony of his industry, and - perhaps his integrity of purpose. Although his name has long been associated with Charlatans, yet some day it may be acknowledged that he was more of an enthusiast than an impostor, and not so rude and unhallowed as is generally imagined. At any rate he cannot be accused of servile imitation, although he agrees with the Ancients in supposing Conjunctions to arise from want of moisture. For its cure, diet was considered of the
greatest consequence, but most sadly in directing it to consist principally of vegetables. He prescribed an ointment to be rubbed on the whole surface of the body. Altogether Paracelsus treatment of Phthisis was more that to be desired from a man of his requirements.

In the year 1542, Fugelone, or as the Germans called it Figesthood, was first described by Fuchsius as found beneficial in healing ulcers, imagining that as it was bitter, it had analogous powers to other bitters, of removing pus from the body. (Fuchsius de historia Stephani. Bale, 1542, p. 872)

In the works of Fernelius, Nicolas Pise, Rolamander, Forrestus, and Schentci, who flourished in the eighteenth Century, we find little more recorded respecting the treatment of Phthisis, than in the compilations from earlier authors, and an adherence to the practice of Hippocrates and Salern.

With due respect to those eminent men—our contemporaries of the present age, who entertain the opinion that Phthisis cannot be cured, it may be replied that it is a principle in our nature not to be extinguished till hope is seen. To account the cases of that disease said to have been treated successfully, is as natural as it is for a
Charming man scratch at a straw; and although the writings of those physicians just mentioned, and others published about the same period, remain untouched  
garded only as the obsolete archives of former days,  
get they contain that which will repay the en-  
quirer after facts connected with a disease at which  
ience and art so frequently stand appalled.  

Nicolas Pisse, mentions the recovery  
of a woman, in consequence of a long attendance on a  
akehouse. — Forestus, who was distinguished by an ac-  
urate description of cases — founded on very ex-  
tensive practical observation; records in his fif-  
teenth book the recovery of a person from Phthisis  
ceeding Haemoptysis by means of bleac's and swat's  
ure.  

In the works of Helmont are found  
notations industriously copied from authors — whose  
writing are no longer regarded. We find in his Cur-  
ious Compendium that: — "Placentinus mentions the  
Case of a Consumptive Cough of eighteen years dura-  
tion, cured by Sugar of Roses — with a little Manna and  
Rhubarb." — "Practicae relates that two cases of Con-  
firmed Consumption were cured by a concoction of gua- 
calum." — "Avenhorn succeeded in curing Phthisis with
oil of olives." "Meece, Cato, and Varro, attribute
the same use and effects to sugar of roses." "Rubens recom-
mends sulphuric acid."

In the list of the admirers of Paracel- 
sus, is found the respected name of Paracel-
sus, who like his prototype, employed many powerful
chemical remedies and kept their preparation secret.
He mentions a case of Phthisis, attended with diarrhoea
and loss of hair which, after the ordinary modes of
treatment had failed, was cured by taking three draughts
of an emulsion of sulphur every morning mixed with syrup
followed by his Anti-Tetetic in the evening. The Anti-
tetetic was long a favourite medicine, and it seems
not yet entirely discarded. It was composed of
two parts of wine, combined with one part of Antimony
and dated by Paracel-
sus.

The of the earliest writers who re-
gles to the diagnosis and cultivation in Phthisis is
Bennet an English physician who lived in the
seventeenth century. He observes that a sound in-
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the ancients supposed, but was ascended by the arteries
of the Lung, since it may often be observed when there is no Calamine. Bennett's treatment of Phthisis depended upon a dry air. Tamatives given at night to operate two or three times in the morning. Detegent expectorants of resin and turpentine. Balsamie fumigations—consisting of Frankincense, turpentine, storax, with coltsfoot and other vegetables—made into a powder and burnt on coals. Whirling the vapours of divers herbs immersed in hot water. The diet to consist of milk, medicated whey, animal food &c. &c.: and the drink to be a decoction of Jarsa or poppy—other words. By these means, combined with frictions and fomentations of the extremities; many successful cases in confirmed cases were said to be effected.

Piovenius. There is not much interest attached to the observations on Phthisis by Zaccius Piovenus, who lived in the Sixteenth Century, and was Councillor as well as physician to the King of France. His name was long celebrated by that class of Practitioners who combined the study of medicine with judicial astrology and the occult sciences, such as Cole, Saluson, Culpepper, and others, whose writings, notwithstanding the dissemination of inductive Science, have a wide
spread influence. Riverius observes, and his statement is worthy of attention, that, however Cured Consumptions by a diet of bread and olive oil. Another case of incipient Consumption was cured by a dose of Suraicum. He recommends the tepid bath and fumigations.

Willis. (B 1621–D 1675). One of the most eminent medical philosophers of his age was Dr. Thomas Willis; and as might be expected of an ascetic admiring the Chemical anatomies of Medicine, he highly extols in no very measured terms the use of Sulphur, which he prescribed in all possible forms, and tells of its wonderful success in Consumptions, even Lung Piles, on account of their sulphurous smell. Some parts both of England and Holland (from the Disease, Warm air and warm bathing, he said, were beneficial in incipient Consumption, producing a determination of the fluids to the skin rather than the Lungs. The case is mentioned where the patient was relieved from violent coughing by taking only a generous wine. Consumption it is observed, is not derived from the head but from a morbid humour, ending from the
minute vessels of the Trachea, the whole mass of Blood contributing to overwhelm the lungs with its excess parts: when the dischaged humour putrefies it forms ulcers.

Seldenham. (1624-1688.) The works of this physician, of whom England - and the whole Medical Profession at large - may be justly proud, in some measure resemble those of Hippocrates, in containing the most accurate detail of facts, connected with those essential points which tended to illustrate the nature of the morbid changes in disease. As regards Phthisis it is to be regretted that Seldenham did not live to complete a sketch of this disease which he left unfinished at the time of his death, and which was afterwards published at the end of his Processus integri in 1696.

Phthisis was considered by this Author to be derived from cold caught in the winter. The lungs being incapable of assimilating the proper aliment, are overwhelmed by a crude phlegm, and scatter the miasmata over the whole body: hence arises a pestilid fever, the paroxysms of which are terminated by sweating; afterwards a diaphresia arises from the accumulation of humours, combined with
The loss of tone of the viscera. A portion of the linens or mucous membrane does not pass off by either the skin or the bowels, but is retained in the lungs; while another part is secreted by the salivary glands, and descending the trachea are eliminated by coughing. The hectic fever, says Bydenham, is to be checked by refrigerants, such as asses' milk, emulsions, and opiates. Opobalsamum was said to be beneficial in healing the ulcers.

As regards treatment of Phthisis, efficient may be gathered from Bydenham's letter to Cole, to them that he regarded constitutional means, as those most likely to be attended with a beneficial result. "Horse exercise," he writes, "is no less useful to the consumptive, than to the healthy diere: in several instances, some of my own relations have been restored to health by taking long journeys on horseback, at my recommendation when medicines had been of no avail; and not in slight cases only, but when night sweats, and diarrhoea had supervened, as usually happen in the last stage. In short, notwithstanding the acknowledged fatality of this disease, which carries off two thirds of those who die of chronic affections, I do
not hesitate solemnly to affirm, that neither mercu-
ry in syphilis, nor blood in intermittents, is more
effectual, than riding in consumption, providing that
the patient takes care to have his linen well aired, and
to continue his journey long enough; the longer as
he is more advanced in life; and this I have learn-
ed by multiplying experience, which I have ever feared
by bound to fail." For the prevention of consumption
when that disease was threatened, the patient was
advised to take 10 ounces of Peruvian Balsam three
times a day, and after it a decoction of bitter plants;
but riding is the principal remedy.

Milton. This once popular physician, and of
whose works living practitioners need not be ashamed,
was also a strenuous advocate for the tonic plan
of treating Phthisis. His Phthisiologia is generally
considered as the ground work of the modern practice
in this disease; to that opinion it is necessary here
to adhere, as it may be observed that Milton no-
when recommends the ows prevalent plants adopting
this thing — and everything — rather than aiming at
restoring the system by suitable Constitutional treat-
ment. He rightly enough divides consumptions into
Aphrodis and Pulmonary. The former, which he
also desquamates, takes, or decline, the former is unattended by fever or cough, and is either seen, as in the case of persons whose constitutions have been injured by a residence in Bored Climes, or derived from invalidism, as hemorrhage, nausea, dysentery, diabetes, exhaustion, or excessive sweating.

After describing pulmonary consumption, the author observes that the duration of the disease may extend to twenty or thirty years, the tubercles not completely disappearing; but the pulse being frequent, the appetite unequal, with frequent expectoration, and occasional hemoptysis. In the first or second stage, before ulceration takes place, consumption is as curable as any other disease; but it is generally neglected or misunderstood in the beginning.

In the early stage of Pulmonary Malignant admits of bleeding, but in the later stages he says it is unusual. Medicines are directed for checking the cough when attended by hectic fever, and also for relieving the constitutional affection; but considers it dangerous, and may be fatal, to check a constitutional by purgation by such means. Stomachic pills, containing of Aloes, Myrrh, Mastic, Cinnamon, Cloves,
and other aromatics, are frequently prescribed. Emetics
to be always succeeded by opiates, the days will often
check on Consumption in the early stages; but back
he considers, as the great and general remedy in Con-
dumptions. For preventing the disease Chalybeate
waters are highly recommended; but for its pre-
bvention after Haemoptysis, balsam is the great rem-
edy. Patients were ordered to live in dry thin air,
as marshy situations were—contrary to modern
ly perience—considered as unfavourable.

After the publication of Morton's
Pathiesopia, there arose ever and anon, practi-
tioners who were opposed to the tonic treatment of Ha-
emoptysis therein recommended; and among those
who entertained strong objections to the propriety
of the plan, was John Conrad—Baron de Brunner,
better known as Brunner, a Swiss physician and
Anatomist, (B 1653, D 1727) till he found by ex-
perience that it succeeded, when everything else
had failed. (I. C. Brunner de planulis anodemi. v.
page 107.)

Hoffmann (B 1663, D 1742). This author contributed,
in common with others of that period, to consider-
ably advance our knowledge of the Animal Economy.
His works are very profus and occupy many folio volumes, but a good abridgement was published in 1783, translated by Dr. Lewis and Duncan. It is from this translation that Hoffman's views of Phthisis are here briefly stated. He observes that the symptoms of pulmonary Consumption may sometimes be occasioned by an inflammation of matter from the mesentery or the kidneys, without any actual disease of the lungs. Tall persons, with long necks, are the most subject to Consumption, and the disease, he considers, as in some ages contagious.

As to the treatment, Hoffman observes that a simple hectic fever, the result of indigestion, may often be relieved by an injection of Ype caenham, followed by a dose of Akes; but in all heticies, milk was considered the principal remedy, with Manna, or conserve of Roses. Aqueatics would some times afford relief to the chest, as milk or whey, with parsley or celery seeds. Warm baths were often found beneficial, and so were issues in the neck and between the shoulders. A tonic elixir, containing Myrrh, Japon, Mytele, and buckbeau, was ordered the taken at meals, with a diet of milk or broth. The hectic sweat must be checked with
Small doses of Nitre and Opium. Sulphur and diaphoretic were supposed very useful in the tubercular stage; whilst for cleansing the pulmonary ulcers in the advanced cases, vulnerary balsonus, such as, Copalacta, the watery extract of Myrrh, honey, wax, Ephemerata, &c. were considered useful, but they were apt to promote a phlegm action. Hoffmann strongly enforces the virtues of Milk in Phthisis, and relates cases which were restored for several years by its use. If the management of consumptive cases by Hoffmann be fairly considered, it will be evident that his treatment had generally a twofold object in view: to subdue inflammatory action, and purify the system by restorative measures.

Salmon. (D 1707.) This physician, astrologer, and voluminous compiler of books, is mentioned here, the rather that the it was who first recommended in his "Universal Herbal" a syrup of the flowers of digitalis as a valuable medicine in pulmonary diseases; and although it has been continued in use for above 150 years, by certain families who still cling to the old remedies of their fathers, it is worthy of more attention.
by medical men, as a convenient form for giving this active article, than what they seem disposed to bestow on it.

Van Swieten (1700-1772) The works of this author entitled "Commentaries on the Aphorisms of Hippocrates," contain a great body of facts clearly stated, and exhibit many original observations on Phthisis, the frequency of which in England he attributes to the more frequent use of animal food in that nation than elsewhere. Among other causes he enumerates the too arbitrarily checking hemorrhoidal affections; thus confirming the aphorism of Hippocrates in which Phthisis is attributed as a consequence of such a practice.

Van Swieten's opinions on this disease altogether partake of the chemical theory of disease action. He refers the sweat and diarrhea to great putridity: hence concludes that all antiseptics, such as myrrh, bark, camphor, sugar of roses, &c. must be beneficial. The author testifies to the value of bath in a case succeeded by hæmoptysis. Balsams are considered useful; and the vapours of benzoin in exciting a cough are deemed an abscess, but the best of all remedies are said to be air and exercise. Several sailors and fishermen were cured of consumption after the coming
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coachmen. For relieving the diarrhea, he employed an enema composed of a drachm of没提药, well ground with the yolk of an egg, to which was added four ounces of milk. Of the latter article he had the most favourable opinion and never failed to recommend it.

De Haen (1776.) Albert this very learned man is known to the collectors of mystic memorials as the author of an occult treatise termed De Magia, in which he attempts to prove the reality of incantations and other supernatural arts: subject, it may be observed, which are reviving again in our day, although under another type. Like other admirers of the peculiar arts of old times, De Haen was a genuine conservative in medical science, having an inveterate dislike to both new remedies and improvements. He may nevertheless be justly characterized as a man of just requirements and practical skill, who materially contributed by his talents as a physician to the University of Vienna. In alluding to the formation of a fever, De Haen supposes this substance to be contained in the blood as a poisonous humour, though perhaps not precisely in the state of fever, any more than the phlebitic crust is circulatory in the blood as such in
cases are mentioned where an abundant
purulent exudation existed when no disease was
found in the lungs after death: in such cases the
pus having been blotted immediately (from the blood)
a fact of particular importance. It is then argued
by analogy that as a wound dressed too often does
not produce healthy pus, so in the same manner
the lungs, when too much agitated by coughing, or
otherwise, afford a thin clavies, and that in such cases
the pus is improved after sleep.
Decline, the author observes, is sometimes curable
by purgation and issues, with milk diet, soap, and Anti-
febrile plants. The symptoms of Phthisis are some-
times occasioned by an effusion, when there has been
no reason to suspect the thorax. Elixir of Vitriol,
water, and a milk diet were the principal remedies
used by De Haen in this disease.

Cullen. (B. 1712. D. 1790.) In the works of this distinguished
ornament of the Medical profession, the Student of
Phthisis will find, as might be anticipated, some
original matter therein, worthy of close attention.
Cullen defines the disease as an ex-purulentoration of pur-
ulent matter, attended with - -
more or less - - - -ness.
He observes that the latter never attaches a Calomel, and
Hence when present may be considered as a symptom of suppuration. The author questions Dr. Bacons opinion as to pus being an immediate ejection from the blood, and supposes that in the cases mentioned by him, the pus was formed on the membranes of the bronchiae, and not carried about in the blood vessels. Cataract is not considered by Dr. Cullen to be the cause of consumption in persons not predisposed to the disease, although it ought not to be neglected. Dyspnoeic Asthma not uncommonly terminates in Phthisis. He presumed there is some noxious emanation in the purulent matter, and would not assert that the disease is never contagious, but had not seen an instance in which it had been decidedly communicated. Hemoptysis, it was said, is not always followed by ulceration, nor is ulceration always attended by hectic. Hemorrhage in general being unnatural, can never be necessary, unless occasioned by a bad habit; and that bleeding, in order to rectify plethora, tends ultimately to increase it. Respect to treatment, Dr. Cullen considered that the antiphlogistic regimen must be adopted; milk being the principal remedy, and whilst allowing of pale-dine exercise, cautions against that which is violent.
Vegetable acids were found sincere as antiseptics and refrigerants, and whilst opiates are necessary for allaying the cough, they only check its progression for a little time, and finally tend to increase the hectic sweat. All purgatives were considered dangerous, and the diarrhea required acting enuls and mucilages.

Salvadore, an Italian physician of the 18th Century, aimed at a bold and energetic plan of treating Consumption, which is detailed in his work, Del morbo tubere, compiled he says, from the works of Hippocrates, Bennet, and Bydenham. He advised the use of medicines and ordered his patients to climb up as quickly as possible, early in the morning, some high eminence, till they were out of breath and bathed in sweat, and then to be placed near a large fire to increase the perspiration. Afterwards the linen was changed, partially to withdraw from the fire, and top another (fully of salted meat and wine. This plan, somewhat modified, was adopted by Dr. Frank, who in his Ratio Institutio Clinici Vicenniae (Vienna, 1797), professes to be an advocate for the tonic and nutritious mode of treating Phthisis, believing that the hectic, when present, only arises from the body.
produced by the air change. That palliated the inflammatory symptoms by opium, and relieved the disability byEau de Lücker, milk, wine, exercise, nutritious food, and a mild climate.

Rush (1745-1813) in the "Medical inquiries and observations" (published in 1789) this once popular physician has left to posterity many original observations on Phthisis, which he considers originates from debility, and agrees that it is not essentially a disease of the lungs, but a primary affection of the system, since it often alternates with other complaints, as rheumatism, jaundice, pyrexia, diarrhoea etc., and is relieved by pregnancy. In warm climates he considers the disease as decidedly contagious. The author divides Phthisis into three species or varieties rather than stages—namely, the inflammatory, the hectic, and the typhoid, which must be carefully distinguished by the state of the pulse, as the species do not always succeed each other in regular order. In the early stage bleeding was expensive by adopted to relieve inflammatory action, but while there existed objections to bleeding, walking was in some cases considered as a substitute, as well
emetics also. A milk diet was ordered in this variety of the disease. If early attention be paid to the first symptoms of phthisis, infinite benefit would accrue to the public and proportionate loss to the physician, mainly but partly enough—observes Dr. Rush—and accordingly on the first indication of the disease, the patient were ordered to abandon forthwith all sedentary employments, and if loss of blood was not deemed necessary, to have recourse to a more active life, with bathing, bath, and steel.

In the hectic variety the symptoms could only be relieved by tonics, as bleeding is no longer applicable.

In the lymphous stage, balsamic medicines were employed by Dr. Rush, such as Copaiba, balsam of tolu, turpentine, tar; also tonics as hound, and bark; whilst the diet was directed to be stimulating and nourishing; and followed up with exercise as the greatest strengthener. An occasional hemorrhage was checked, he said, from time to time for 24 years, by a course of bark, and exercise in the country air. Dr. Rush continued, to the time of his death, an advocate for the tonic
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treatment of Phthisis, which had succeeded in many instances.

Many other authors on Phthisis might have been quoted, whose works would have afforded additional information to those inclined to behold the treatment of the disease by numerous practitioners in this and other nations, of men celebrated alike for eminent talents and diligent observation; but space can only here be afforded to observe, that in the "Commentaries" of Herberden (1710-1801) it is remarked that the symptoms of Phthisis decline so much resemble those of pulmonary consumption, that the prevalent expectation is sometimes the only criterion of the difference. The author is undecided as to the disease being contagious, although during the 4th period of his very long life he had seen several fatal cases, when no other cause could be assigned for the complaint, than the patient having been constantly with other consumptive persons. Heberden ordered asses' milk to allay the fever, opium to quiet the cough, and a decoction of bark and sulphuric acid to relieve the sweats.

It is an interesting thing to take a retrospective
The opinions and practice of bygone medical practitioners, who were eminent among departed generations. Some of the works mentioned on the foregoing pages confer an unfailing reputation on their authors, and it may well be considered honorable to belong to the same order of intellect with the minds which composed them; yet the inquirer is somewhat saddened by the contemplation of so much that is diverse in the pathology of Phthisis. The theories of the disease have indeed been as inconstant as the trees, and as there is a perpetual change occurring among material things, so it has been in the opinions which have from time to time held sway on the nature of Phthisis, and such it will ever continue, as long as opinions be not founded on the tangible evidences which demonstrative science can alone afford. Although the authors before quoted held different views as to the origin of the disease, yet it is pleasing to perceive that, though basion, means were employed in its treatment, yet one common identity of purpose seemed to be always held in view, by invariably aiming at removing the inflammatory symptoms by
Pathology of Pulmonary Consumption.

It is evident from what has been already observed, that no disease has been involved in greater obscurity than pulmonary consumption, or in that fatal complaint indicated by wasting of the lungs, and attended by general emaciation, loss of strength, and hectic fever. Among the various diseases peculiar to our race, there is not one so mercilessly destructive, or fraught with such mournful consequences as this. Through more than twenty centuries we have been told it has pursued the noiseless tenor of its way, and like a benediction the night it has entered the dwelling places of man, unseen and unespied. Its ruthless attacks have been generally made on those who were adorned with all the furniture of promise, and who were planning sanguine schemes of achievements to be accomplished on the stage of life. This pitiless invader of domestic sanctity still continues to spare neither...
ranks a station, but enters also the palaces of opulence as well as the abodes of equality. As to its prevalence there is no country on the face of the Earth secure from its ravages; and certain it is that there is scarcely a family in the British Isles whose history does not record one or more afflicting instances of relatives and friends taken away in the opening moon, or moon day of life, by pulmonary consumption.

A few months since we observed the terror and alarm which pervaded all classes of people in our country by the appearance of an Eastern Epidemic. Families fled hither and thither, and every description of Sanitary means were devised to check its career; but with the exception of some two or three institutions exclusively devoted to its treatment, consumption is allowed to go unheeded, although its victims have been annually as numerous as the leaves under an Autumn tree!

Dr. Abercrombie remarks in the Edinburgh Medical and Surgical Journal, Vol. XVII, 1821, that "Deaths from consumption, in the British Islands, have been calculated, on the most moderate computation, at one-fifth of the whole mortality, and
That there is much reason to fear that the evil is in increasing. According to the best data, supplied by the annual reports of the Registrar General, we find that the number of deaths from consumption is 20 per cent. of the total number of deaths, thus accurately confirming Sir Abercrombie's statement that one-fifth part of all deaths are the consequence of this fearful malady. The extraordinary apathy then of the public, as to the vast mortality from this disease, can only be accounted for on the well-recognized principle that, a continual repetition of events—however disastrous their nature, produces disregard of their causes.

It would seem from the unchecked causes of pulmonary consumption, by the aid of art, and the conflicting views which have prevailed respecting its pathology, that that most important branch of Medical Science had not been adequately cultivated, or deemed but of secondary consequence; yet it must appear obvious that effects can never be rightly assigned to their real causes, unless those causes be well understood. Moreover, it must be equally apparent that he who makes not himself acquainted with the nature of
The morbid changes which the body undergoes in this case, can only follow at best but a random experimental treatment by adopting such remedies and means as he has been taught to believe are useful.

In a very great majority of post-mortem examinations of persons who died of pulmonary consumption, it has been observed that certain appearances, termed tubercles, pervade a portion of the lungs, and which are found with equal certainty in all parts of the cellular texture, but more abundantly at the upper and posterior parts. Tubercles are composed of a peculiar morbid unorganizable matter, forced out by the extreme vessels, and is deposited in the various tissues and organs of the body, as well as the lungs. The most conflicting views have been held by pathologists as to how this morbid matter is generated; mens minds have roamed be-wildered amid the regions of fancy and conjecture, in order to devise complex and intricate theories which have not stood the test of practical observation. One of the most popular authors on pulmonary consumption, Sir James Clark, has the following in explanation of it. He observes that
This "manner has for its result or predisposing cause a cachecetic state of the general system, and for its immediate production some abnormal action of the vessels of the part in which it is deposited, but with the nature of which action we are not acquainted." (Creaton on Pulmonary Consumption, Ed. 1877, p. 255.) This is a deep and important confession by a celebrated physician, as it is plainly informing us that we know nothing about the origin of consumption. Sir James has, however, gone on to tell us further, that "in whatever light we may regard tuberculous cachexia, we shall find that its phenomena are applicable only by admitting that it depends on a general modification of the whole animal economy; and that the notion of its being the morbid degeneration of any organ or tissue, or of any particular system, or the morbid modification of any single fluid, is founded on limited views of its nature and laws." In other words, the unorganizable tuberculous matter is not the result of any morbid change in the structure of any organ or tissue, or the degeneration of any fluid. Then from what source does the tuberculous matter arise? Sir James says that, "The deposition of..."
of this matter in any of the tissues or organs of the body, is the result of a peculiar physical condition of the patient:—a condition not distinct from mere debility, and therefore inexplicable on the idea of a difference of force or tone of the system. Let it be inquired then, how is that the cachectic or tuberculous constitution is so generally accompanied with a feeble organization? It may perhaps be considered as an intimation of something akin to presumption. When a young person sees, or believes he sees, cogent reasons for his inability to entertain analogical views with a man of Sir James Clarke's acknowledged medical attainments, and on whose way of life the shadows now denser than ever. The edition of his work, just stated from, was published as before stated, in 1837; and although twenty years have not elapsed since then, yet there have been many rapid advances in the pathological and physiological sciences, in some measure attributable to the vastly extended cultivation of organic chemistry, combined with microscopic improvements. It may therefore not be deemed extraordinary that new views should be offered to the
important, and, to the medical profession, ever
encroaching subject of pulmonary consumption; but
if in these few pages the least advance be made
in the knowledge of its pathology, which may
tend to improved treatment, their Author may be
excused — and even justified — in venturing on an
arena already occupied by so many other dis-
tinguished pathologists besides the Author men-
tioned.
It will be readily acknowledged, that the digestive
process whereby new matter is produced to supply
the expenditure continually going on from the cell
to the solution, is a most important function
in Animal Life; hence the necessity of having
the apparatus, whereby the new matter is manu-
factured, in good working condition, must be
equally apparent: hence also the utmost cir-
stances resulting from the disordered ma-
chinery will be equally evident. Primary attention
must therefore be directed to the digestive func-
tion, as from its impairment arises most of the
other symptoms peculiar to the tuberculous consti-
tution.
After alluding to the various symptoms and disordered
functions which indicate The tuberculous cachexy. Sir J. Clark, further observes, "but of all these
disordered functions, that which claims our prin-
cipal attention, because it is the primary one, and
from it arise most of the others, is the disorder of
the digestive organs. The dyspepsia of this tuber-
culous constitution has peculiar characters by which
it may be generally known. These have been fully
and accurately described by Dr. Todd under the
name of Strumous Dyspepsia, a condition of
the digestive organs which is not only present in
the head in any Strumous Constitution, but is capa-
bile, I believe, of creating this Constitution, and of
leading ultimately to tuberculous cachexy in." “Strumous
Dyspepsia” write Dr. Todd in the second vol. of The
Encyclopaedia of Practical Medicine, "presents a more
characteristic feature of this habit of body than any
physiognomical portrait which has yet been
drawn of it. In this respect it is more the depen-
ded on than either the fair skin, the clear delicate
complexion, the light hair, large blue eyes, and dull
fidelicity of one variety, or the foul, dull, swarthy-
colored skin, the sallow complexion and swollen en-
tenance, the dark hair and turned lip of the other.
It betokens, indeed, little familiarity with St. Erasmus to connect it with any particular temperament, for it belongs to all temperaments— to the sanguine as well as the phlegmatic, to the nervous as well as to the melancholic, and to all their varieties and combinations. But upon whatever temperament the disordered habit which we call Nervus may in itself, we venture today that this form of dyspepsia will also there be found; and, therefore, being constantly present with it, preceding and accompanying the various symptoms which issue from it, it would be contrary to all reason to refuse to it an important share in the development of this disordered habit, and in the production of the local affections which have hitherto too much engrossed the attention, to the exclusion of a proper consideration of the constitutional disease. In this opinion, Dr. J. Clark observes, "I have great pleasure and satisfaction in citing Mr. Zoff's observations, because they are in accordance with my own, and because they cannot, in my opinion, be too strongly pressed upon the consideration of the profession; as much importance as I attach to this disordered state of the alimentary organs as a
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1 2
a source of tuberculous disease.

It must be inferred from the observations here cited, that dyspepsia—i.e., the effect of nervous and muscular depression—is the most important functional derangement taken in connection with the presence of tuberculous matter in the system; but the authors clearly stop at the very threshold of the principal fact to be elucidated, namely, informing us how the tuberculous cachexia should unavoidably result from the disorder of the digestive organs. Is it not reasonable to infer that the unorganizable matter is taken up with the chyle by the lacteals, conveyed into the circulation, and ultimately deposited in the lungs, and various other tissues and organs of the body? This matter is not susceptible of organization, as the air in the lungs can effect no change on it; hence it remains wherever deposited as a foreign product. The irritation whence, when deposited in the lungs, leads to all the deleterious effects—termed symptoms of pulmonary consumption.

Various experiments have tended to show the angry events so often occasioned by the presence of unorganizable matter in the lungs. In the Philosophical Transactions
for 1694, Mr. Clayton relates an account of some experiments, which he made in order to illustrate the operation of poisons: he found that crude mercury, injected into the vein of a dog, occasioned a consumption, which was fatal in 16 weeks; and when the lungs were examined, a globule of mercury was discovered in the centre of each of the suppurations. Dr. Saunders observes, in his treatise on the liver (published in 1793), that he repeated the same experiment, and with the same result. He injected two drachms of crude mercury into the central vein of a dog, which produced fever, difficulty of breathing, which increased till the animal died; the lungs were found tubercular, many of the tubercles had suppurated, and each was found to contain a globule of mercury.

It may here be objected that the lacteals have an instantaneous power of absorbing between very available and very available matter, and that they absorb only that which is susceptible of nutrition. To this it may be observed, that a great portion of the contents of the alimentary canal consists of matter which is totally unorganizable, and no experiments have yet shown that the lacteals do not absorb this matter.
When they are in an abnormal condition. On the contrary very many experiments have been instituted on the subject of absorption, in order to ascertain whether the lacteals take up any substance beside chyle. The grave has shown that they do absorb unorganizable matter; and, Haller, Hunter, and others, have given similar evidence. Indeed there need be no difficulty in showing the frequent existence of this matter in the lacteals, with the almost certain proof that it comes from the alimentary canal.

In a work on Diabetis by Dr. Rolle, (put in 1798,) it is remarked that in the case of a child, who died of hydrocephalus at the age of 7 months, the mesenteric glands were enlarged, and the lungs filled with tubercle, which had the appearance of curdled milk. Indeed, what is the disease found in the mesenteric glands of children, other than a deposition of unorganizable matter absorbed by the lacteals from the duodenum?

In Dr. Carsewell's excellent work on Pathological and Anatomical, (1838) the author remarks in a note on planation of Figure 1, plate 3, representing tuberculous disease, that the lacteals are observed dilated, and filled with
tuberculous matter, passing from the intestine into, and out of, the mesenteric glands, many of which are enlarged. All of them contain a greater or less quantity of tubercular matter; one of them is completely filled with it. The lacteals are represented, arising from the ulcerated follicular gland. One of the branches was injected with mercury, the progress of which was soon arrested by the tubercular matter accumulating in front of the metal.”

Mayendo, and Dupuytren, have endeavored to prove by experiment that the lacteals, under all circumstances, reject unorganizable matter, but their experiments are opposed by those of Hunter, C. C. and others. The frequency indeed of tuberculous matter in the lacteals and mesenteric glands, as compared with other parts, clearly points them out as the original channel through which it reaches the blood, and it has been observed by Meckel, that the mesenteric glands are the parts most subject to tubercular degeneration. Dr. Williams in “Pathology and Diagnosis of Diseases of the Chest,” page 132, observes that, “tuberculous matter is sometimes found in the blood itself, and also in fibrinous concretions within the vessels.” It is astounding to learn the inference he draws from
The fact, when he observes that, "This blood is taken to be formed by the fibrous portion of the blood, and the fibrous portion is liable to be converted into tubercles." There is another profuse and profuse use of a modern pathologist, which cannot be substantiated by experiment. Foreign matter does certainly appear to be generated from the blood, as in various tumours, and the Calculous Conditions occasionally formed in the placenta, and lungs, consisting of phosphates of lime and animal matter, but in these instances, it cannot be shown that it was not taken up by the caecals from the alimentary canal. Dr. Williams cannot defend this statement of tuberculous matter originating from the fibrous portion of the blood, by any arguments deduced from physiology or organic chemistry: this assumption by that popular physician is altogether unjustifyable on any experience derived from modern observation. There is exhibited on the third plate in Dr. Cawdewell's work (before mentioned), a section of the spleen, showing the tuberculous matter in the blood, as contained in the cells of that organ, on which the Author observes that, "The tubercular matter separates from the albumen, fibrin, and coloring matter, and is distinguished from them by its peculiar..."
physiological character."

It may be as well in this place to briefly examine another pathological view of accounting for the origin of tuberculous matter, namely, as ending in inflammation, which is, unfortunately, a favourite notion of many medical practitioners, although Mr. Bayle has satisfactorily proved that tuberculosis cannot be regarded, either as a termination or consequence of inflammation. Mr. Bayle's opinions and experiments ought to be entitled to respect, as it is said in France, that he has done more towards establishing an accurate knowledge of diseases of the lungs, than had been effected in other countries in two thousand years. Brodie says that the tubercular matter is the result of a caseous secretion from inflamed lymphatics. Laennec has, however, proved by various facts, that the growth of tubercles in the lungs generally takes place without any previous inflammation, and that, when inflammation is found coexisting with them, it is generally posterior in its origin. "The real cause," observes Laennec, "is probably beyond our reach." 1)

There is no fact, perhaps, better illustrated than that, inflammation is not at all necessary for
The formation of tubercles. Dr. Carrell remarks that: "It is well known to every practical pathologist, whose mind is not biased by preconceived views, that inflammation, whatever may have been its degree, extent, or duration—whatever may have been the tissue or organ affected with it, is not necessarily followed by the formation of tuberculous matter, or any other product of a similar kind, inasmuch as in such cases we often meet with no trace of this particular product in the affected organ after death, and, on the contrary, the formation of tuberculous matter is found to take place in organs, the functions of which were never observed to have been deranged, and in which, after death, none of these lesions could be detected which are known to follow the presence of inflammation. Under such circumstances it would be absurd to ascribe the origin of tuberculous matter to inflammation."

But to return. In Rousson's work on the lymphatics, the author thinks that even if inorganic matter enter the absorptions, it would be stopped by their glands, like other offending substances, whilst on the contrary, in MacCormac's splendid work on the absorptions, was once lymphaticomus histologicum.
Sienn, 1769. p. 112 note 3. The author asserts that the bronchial bodies have been brought by the lymphatics and arrested in the lungs, in order to be prepared for assimilation with the blood. He certainly as far as unorganizable matter is frequently mechanically arrested both in the mesenteric and lymphatic glands, which produce the diseases termed tabes mesenterica and senfa. Dr. Cullen observes that this obstruction will frequently prevent the transit of every healthy nutrition. Boerhewey, Baeker, and others deny his opinion of Dr. Cullen, as they had frequently passed injections through some of these glands, after death, which contained unorganizable matter, and found them rarely imperious. It seems that these celebrated anatomists made no distinction between the state of the glands during life and after death. In the former state, the irritation existing in them, as a consequence of the presence of tuberculosis matter, prevents the admission of the chyle, as it is a circumstance occurring every day, that an unplumbed or irritable passage will resist, partially or totally, the admission of any matter; whereas after death this inflammation or irritation ceases.
and an injection will then pass. The great force
Moreover, of a mechanical injection, compared
with the vital force – must also be considered.
It may be replied to Newson's objection, that unor-
organisable matter does as undoubtedly pass through
the absorptive glands, as it does through the vessels
in the pulmonary tissue, during the natural cir-
culation of the blood in the lung. In febrile or
persons, there is no arrestment of unorganisable
Matter in the lung, and were the pulmonary press
so small as not to allow a free passage to it, our
febrile or patient would also be affected with
pulmonary consumption. On the contrary if the
unorganisable matter taken up by the lactic aids
was invariably arrested altogether in the lymph.
atic glands, the disease termed pulmonary Con-
sumption according to the pathological views then
advances could not take place.
Pulmonary consumption may be both hereditary, or
acquired. Individuals may be born with the disease in
an advanced stage, or it may terminate a long and
previously healthy life. Sir J. Clark observes, “That
pulmonary consumption is an hereditary disease,
or in other words, that the tuberculous constitution
being transmitted from parent to child, is a fact not to be controverted; indeed, I regard it as one of the best established points in the etiology of the disease. It may now be asked, under what conditions as the lacteal vessels lose their discriminating power, and take up unorganizable matter, both before and after birth, so as to lead to disease of the lungs in such a great number of instances?

Many analogous facts may be adduced to render the subject obvious. The inherent power possessed by the billi, of absorbing extremities of the lacteals, of selecting healthy, from unhealthy, nutrition, is as peculiar to them as is vision to the eye, or hearing to the ear; and as all organs perform their allotted functions by nervous influence, it follows that if the nerves of the eye or ear be deprived of their energy—defect in the senses of these organs will be the unavoidable result. In the manner if the billi be in any measure deprived of nervous power, their function will be impaired, so that these vessels will be rendered disqualified from discriminating between organizable and unorganizable matter, thus predisposing to pulmonary consumption.
Again: the analogous inference may be further illustrated. Enlargement or thickening of the tissue in which a nerve is imbedded, will produce deficient nervous action, as is frequently observed in the eye and ear; their nerves may be perfectly developed, yet, from some morbid condition of the surrounding parts, become incapable of exercising their function to the required extent; and it is extremely probable that this circumstance will sometimes occasion a deficiency of power in the nerves of the will.

With regard to the hereditary transmission of pulmonary consumption, we know that a similar circumstance occurs in many other complaints. In some families there is observed for several successive generations, a defect in the powers of vision, whilst in others there exist for the same indefinite period, a defect in hearing: in both cases arising from an hereditary peculiarity in the eye or ear. Hence it may be fairly inferred that the laterial extremities may, in common with other organs, frequently possess some peculiar hereditary development, leading to the particular loss of that sense, whereby these vessels are disabled to perform aught their function.
of distinguishing between familiar and incurable matter.

Under whatever conditions the function of the lacteal vessels becomes impaired, it is evident that the impairment can only result from expectation nervous power, thus occasioning the absorption of that tubercular matter, which ultimately ends in pulmonary disease. The certain result of that disease being to impair the pulmonary function, and therefore to increase the already existing debility; hence debility becomes both the cause and consequence of pulmonary disease.

The pathological view of pulmonary consumption which I have ventured briefly to express — a view which will perhaps be deemed hypothetical for want of further illustration, which lack of opportunity alone prevents me from giving, yet it will be acknowledged that, if this theory, founded as it is on Anatomy, Physiology, and Observation, be finally conceded, it must tend to an improved treatment of this intractable disease.
Causes of Pulmonary Consumption

The original or remote causes of pulmonary consumption comprise everything calculated to excite the activity of the nervous system, and lessen its vigour. The causes may be divided into predisposing, exciting, physical, and mental.

In the predisposing causes may be enumerated, hereditary tendency, or that peculiar internal organization, whereby liabilities to the disease are established. A frequent predisposing cause of that debility which often terminates in Consumption, is the practice which prevails among the poorer classes, of nursing their children for a longer period than their strength will admit, and without that support which lactation renders necessary.

Exciting or mechanical causes.—Inhaling the air of an atmosphere charged with irritating substances in a state of minute division, as occurs among stone cutters, brass and steel-polishers, miners, and labourers, is a frequent cause of pulmonary disease. Unorganized substances taken direct into the lungs, gradually destroy the pulmonary functions, and thus be come a powerful cause of Constitutional Debility: hence the
Frequency of Consumption, from this Cause, among the dry printers of Sheffield. In such cases the disease arises solely from mechanical imitation of the pulmonary tissue, in the same manner as produced by the injection of crude mercury in the experiments before related.

Physical Causes. — These causes may be divided into direct and indirect. The direct causes consist in the continued or oft-repeated influence of unnatural matter, from which little or no chyle has been separated, coming in contact with the external extremities, such as improper diet, abuse of spirituous liquors, and the calcarious matter in hard water. These things tend not only to destroy the discerning faculty of the billi, but in some measure their absorbing power also. Moreover it may reasonably be supposed that by frequently stimulating these vessels with matter foreign to their nature, they will be come irritable and inflamed; hence incapable of discriminating between organized and ruining unorganized matter.

The indirect causes of the absorption of tubercular matter are, whatever circumstances may impair the process of digestion, and thereby debilitate the body.
such as enfeebling exertion, want of proper nourishment, impure air, variable climate or temperature, deficient exercise, excessive toil, imperfect clothing, excessive bleeding, misuse of mercury, etc. It is unnecessary to make any remarks on these familiar causes.

Mental Causes. — These include, excessive study, depressing passions — as anxiety and sorrow, disappointment of long cherished hopes, melancholy. The influence of the mind on the body as a powerful cause of disease, has been observed by mankind in every age, and is still a problem overshadowed by clouds and darkness. The difficulties surrounding the philosopher whilst investigating the ordinary material sciences seem as if they were of minor consequence when contrasted with researches into the operations of mind on matter. Here we have none of the aids which art has brought to bear on other subjects of human inquiry; the microscope — that small but mighty instrument of modern investigation — affords no assistance in showing how the mind is connected with organized matter; chemical analysis affords no help as to the essence of the mind itself; the electric telegraph, which sets at defiance both time and
distance, affords streetly an analogy to the mind's activity in the production of disease. We know that its operations are carried on in the body through the nervous system; hence it is that depressing mental emotions by depriving the various organs of nervous energy, their functions become imperfectly performed, and thus they tend to diminish the powers of the system generally, and prove effectual determining causes of pulmonary consumption.

Symptoms of Pulmonary Consumption. The premonitory symptoms are often very insidious, extremely variable and uncertain, so that the disease has not unfrequently been silently stealing onwards, altogether unheeded, perhaps, for weeks months or years. The slight cough is attributed to some slight cold, and is regarded as also are the slight expectoration, pain in the chest, and difficulty of breathing: symptoms which may happen in various diseases usually unaccompanied with much danger, and hence still neglected. By and bye other symptoms become manifest, such as augmented temperature of the body on the approach of evening, or rather early morning expectoration at times the appearance
of pus, and becomes tinged with blood.—Men is the pa-
tient perhaps made aware of the desperate brink on
which he is standing, and sees that a few more dis-
garded steps will plunge him beyond, perhaps-
human aid.


As the disease advances, the breathing becomes more
and more difficult, the emaciation and weakness
go on increasing; a pain arises in one or both sides,
which is increased by coughing, and sometimes it
becomes so acute as to prevent the patient from
lying on the affected side. The pulse increases in
quickness; the urine is highly colored, and deposits
a branny sediment; the palms of the hands and
soles of the feet are affected with burning heat. The
fingers are shrunk, especially at the joints, which
become prominent; the nails of a livid color, and
much dilated; the cheeks are often flushed
with red, and the eyes sunken. Indeed the symp-
toms, which are daily displayed are of the most
formidable kind to the agonized friends. The crimson
flush on the cheeks, the vermilion line on the lips,
and the evening fever are followed by cold collo-
porative sweats, hollow, pale, languid countenance,
prominent cheeks, any mented by expectoration, and
progressive emaciation. The eyes assume a peculiar glossy luster, as if they borrowed their brightness from some higher spiritual world. The temper of the patient becomes softened to an angel tone, preparing itself as it were, in anticipation of the change it is so soon to assume—in that region where sickness and death are no more known. It is a peculiarity attending the disease, that the poor wasting being is continually forming the consoling idea of hope, and perhaps planning heavenly schemes of earthly happiness.

The last stage is mournful and distressing to behold. The patient is troubled with severe diarrhoea or loose

ness—The hair falls off—The voice becomes hoarse,

The feet and legs swell—and very often dyspepsia in

various forms makes its appearance. In some cases

Delirium occurs, and continues until life is extinguished; but in many patients the senses remain entire.

At length, the eyes dim—swallowing becomes difficult,

The feet and legs now cold—and death closes the heart

wound &c.

The symptoms vary greatly in different cases, both as

regards the time of their appearance, the order of their succession, and the degree of their severity. Indeed there is scarcely one, as Dr Clark observes, of the leading
Symptoms, which may not be absent; but, as he further remarks, there will at least be found enough, even in the most obscure cases, to excite the suspicions of the observing practitioners; and when these are once aroused, the physical signs, which diseases of the lungs always afford, will soon satisfy him respecting the real nature of the malady.

Prevention of Tuberculous Disease.

From the preceding view of the pathology of pulmonary consumption, it will be perceived that one great aim and object must be to inquire, whether anything can be done to diminish the liability to the disease in those families in which, from defective organization, either natural or acquired, there exists a greater tendency than ordinary to tubercular deposits. Whatever pathological views may be entertained on the disease, there cannot be two opinions as to the fact of its hereditary transmission. It will therefore be obvious that parents should protect themselves from the influence of those unfavourable circumstances, which may be capable of developing the tubercular predisposition. Sir J. Clark remarks, "We parents in general convinced..."
That the health of their children depended chiefly upon the integrity of their own health, a beneficial effect might be produced upon society at large, and especially on the members of stramous families. This really appears the best a plain common sense sort of a suggestion, that it deserves no need, one would think, requiring pointing out to the attention of even the most ignorant. Every person may see the beneficial result attending good management of the different classes of domestic animals; and early people ought not to require warning to remove such causes as may be capable of inducing a predisposition to disease in their children.

Every individual has observed, or may have observed, that the children of people dyspeptic people generally become the subjects of stomach complaints in an increased degree, and more frequently at an earlier age than their parents; furthermore it may have been repeatedly seen, that if such dyspeptic persons marry into families of a sthumous constitution, their children are frequently observed to degenerate also, and to die of consumption.

It is quite useless to adduce examples of this insign.
truth, a truth which every person will acknowledge, and likewise know how the evil may be obviated. Surely people who are predisposed to consumption need not form matrimonial alliances with others in the same condition; more especially by intermarrying with their near relatives, unless they wish to utterly extinguish their degenerated race. Dr. Mason Good remarks, "There can be no question that intermarriages among the collateral branches of the same family, tend more than anything else to fix and multiply, and aggravate hereditary predisposition."

If parents have received a predisposition to consumption at birth, they ought not only to avoid the causes which may favour it, but use every sanatory means in endeavouring either to stifle it in their own generation, or at least diminish it to such an extent as to prevent its transmission to the succeeding generation.

With regard to the offspring of consumptive parents, it can hardly be deemed necessary in order to prevent the development of the acquired predisposition that, every means likely to be effective in they healing the constitution ought to be enforced, by placing such children in the most favourable circumstances
possible, as regards those agents which exert a continual influence on our health, namely, food, clothing, personal ablutions, air, exercise, and medical management.

After being consulted by a healthy nurse, the food, in a more advanced age, ought to be plain and nourishing, with a sedulous avoidance of confectionary and other such articles. The clothing should be that which is suited for the climate and the season of the year. Calculated for ease as well as to protect the whole body from cold. It is a mistaken notion and leads frequently to pernicious consequences, to believe that children can be hardened and strengthened by exposing them to the cold air in a half-covered state. Such a custom cannot be sufficiently condemned.

Sparking with—or bathing in—cold water, followed by friction with flannel, are practices when regularly and properly managed under suitable constitutional conditions, likely to be attended with beneficial results, and cannot be too much recommended. Not only with the view of promoting healthy action of the cutaneous system, but to clave and strengthen. Pure air is inimical to health at all
periods of life, but is particularly injurious in childhood and youth, when the bodily powers are gradually unfolding. wholesome air is equally as essential to luminous children, as wholesome food, and is necessary under all circumstances to the development of the human constitution. Hence it is that crowding children together in close, ill-ventilated apartments, as is frequently done in Boarding-Schools, gaming-rooms, and workhouses, is extremely injurious, and becomes a powerful exciting cause of tuberculous disease to those so predisposed. The apartments of children should always be light and well ventilated.

Dwelling in narrow, damp lanes in crowded cities, and particularly under ground, deprived of the kindly influence of the sun's rays, favours the development of consumption, in the predisposed at any period of life; but in infancy and childhood, may actually originate that delicate condition of the system which tends to its production. In those deep dark valleys of the Alps, where the sun never shines, where the inhabitants constantly live in their damp dismal dwellings, living on unwholesome food, and drinking bad water, pulmonary consumption and
Vertebrae are very common diseases. Indeed, unaired dark and damp abodes, always favour the production of this disease. It cannot but be familiar to every person that, plants deprived of pure air and light, soon sickly, slender, decay, and die. Impure air and darkness have the same effects upon animal life; if man be obliged to live in dark valleys, or dark lanes, and dark rooms in great cities, he too—will his children—sicken, decay, and die.

Exercise in childhood is absolutely requisite to ensure the full and equal development of the animal frame. It also implants to the animal tissue a firmness, density, and bloom, the contrary of that pale, soft, and delicate condition if it is commonly associated with a consumptive predisposition; and must, therefore, tend in some measure to diminish such a tendency where it exists. As soon as children have acquired sufficient strength to take active exercise, they ought to run, and dance, and play on the green sward under the airy Canopy of Heaven; indeed, they can scarcely be too much in a pure open air; for the more they become accustomed to it, the more capable they will be of bearing the vicissitudes of the climate.
Nothing of significance

Hardening into metal or
as my mother always said
In the medical management all functional arrangements ought to be removed as they occur, and the digestive organs be maintained in a state of healthy integrity; so that when accompanied with good food, suitable clothing, cleanliness, pure air, and exercise, the constitution may be so far improved as to enable it to overcome the hereditary predisposition.

The same preventative means still further carried out, with others of an analogous character, are applicable in the more advanced age of youth and manhood.

**Treatment:**

As tubercular matter is of itself unorganizable and possesses no vital power, there is therefore no medicine or other agency whatever can cure pulmonary consumption in the tubercular stage. It is only after the tubercular matter is eliminated and ulceration taken place that a cure can be expected. And tubercles tend essentially to increase in size, and to become soft. Nature and Art, it is well observed by Professor Cooper, may retard, or even arrest their progress, but neither can reverse it. But while Laennec admits the incurability of consumption...
in the early stages, he is convinced, from a great number of facts, that, in some cases, the disease is curable in the latter stages, that is, after the softening of the tubercles, and the formation of an ulcerous exudation. (Laennec on Diseases of the Chest. 2nd Edit. p. 299). As well, in his "Illustrations of the Elementary Forms of Disease," states some very interesting facts, confirming Laennec's views on this subject; as he has traced the several stages of the curative process in the bronchial glands in individuals who had recovered from tuberculosis and phosphoria, but ultimately died of the diseases.

Notwithstanding the multitude of works on pulmonary consumption published in our language, advocating countless views, and countless intentions, it seems borne that the treatment of the disease both in the tubercular and ulcerated stages, is a simple, plain-sailing matter, and it is a marvellous thing that so many contrary opinions have prevailed. The treatment in both stages resulting from the pathological view before advanced comprises two objects:—First.—To impede the digestion and irritate the system, so as to prevent a further absorption of ur
organizable matter which can be best affected by nutritious diet. Various medicines of which iron and borax are perhaps the best accompanied by suitable exercises, sea voyages, and change of climate.

Second. To remove any acute or subacute inflammation, complication, or hemorrhage both acute and chronic, and to relieve pain, cough, irritability, and diarrhea.

It is commonly received, but most erroneous opinion, that those who exhibit symptoms of consumption, should be confined to a diet principally vegetable or farinaceous. The blood in this disease being deficient in vitality, the food should be of such a quality, and taken in such a quantity, as to compensate for this deficiency. This end is most readily attained by the lighter and more digestible kinds of animal nutriment; while the drink should be moderately stimulating, so as to afford some assistance to the stomach during the process of digestion. Milk, of which that of the cow is the best, is an excellent fluid article of diet.

Cod Liver Oil may be taken as a nutritive article, about one hour after meals—plotted on water
I am sure this must have been...

X

...also.
containing a little diluted Phosphoric Acid; but the doses must be regulated according to the symptoms, constitution, and other conditions of the patient. The same remark is applicable to the times of exercise, whether walking or riding, sailing, change of climate, etc.

The inflammatory symptoms, pain, and cough, may be relieved by Counter-irritants, small doses of opium combined with extract of hyoscyamus and laetcea. If cough and hectic perspirations be accompanied with inflammation, they will be relieved with the mixture of opium combined with diluted sulphuric acid. Bleeding even in small quantities can scarcely be deemed advisable in a disease attended with too much debility. It will relieve inflammation in the first stage, but will be productive of much more mischief in the last stage; and under any circumstances it is not wise to purchase present good at the expense of future ill.

Ipecacuanha combined with opium will seldom disappoint expectation in relieving the coryza.

In a few words, The treatment of pulmonary...
Consumption resolves itself into removing the urgent symptoms by counter-irritants, and sedatives; and restoring the infected system by strong toning measures, and it is immaterial as far as medicines are concerned what are used, so long as the desired object is gained.

William Foster Brooke
March 1855