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EPILEPSY, HYSTERIA, AND NEURASTHENIA

[iii]

THEIR CAUSES, SYMPTOMS, & TREATMENT

BY

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**TO
ALBERT E. WOODRUFF
OF STOKE PRIOR
NR. BROMSGROVE
MY OLD
SCHOOLMASTER**

[vii]

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PREFACE

I hope this book will meet a real need, for when one considers how prevalent epilepsy, hysteria and neurasthenia are, among all ranks and ages of both sexes, it seems remarkable some such popular book was not written long ago.

I add nothing to our knowledge of these ills, my object being to put what we know into simple words, and to insist on the necessity for personal discipline being allied to expert aid. The book aims at helping, not ousting, the doctor, who may find it of use in getting his patient to see—and to act on—the obvious.

"Nervous Disease", as here used, includes only the three diseases treated of; "Neuropath"—victims of them.

"Advice" to a neuropath is usually a very depressing decalogue of "Thou Shalt Nots!" If it be made clear *why* he must *not* do so-and-so, the patient endeavours to obey; peremptorily ordered to obey, he rebels. Much sound advice is wasted for lack of an interesting, convincing, "Reason Why!" which would ensure the hearty and very helpful co-operation of a patient who had been taught that writing prescriptions is not the limit of a doctor's activities.

Many folk, with touching belief in his own claims, regard the quack as a hoary-headed sage, who from disinterested motives devotes his life to curing ailments, by methods of which he alone has the secret, at low fees. To fight this dangerous idea I have tried to show in an interesting way how science deals with nerve ills, and to prove that qualified aid is needed. Suggestions and criticisms will be welcomed.

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I. G. BRIGGS
THE UNIVERSITY,
BIRMINGHAM,
June, 1921

"Lette than clerkes enditen in Latin, for they have the propertie of science, and the knowing in that facultie: and lette Frenchmen in their Frenche also enditen their queinte termes, for it is kyndely to their mouthes; and let us showe our fantasies in soche wordes as we lerneden of our dames tongue."

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—Chaucer.

[pg 1]

EPILEPSY, HYSTERIA, AND NEURASTHENIA

CHAPTER I

MAJOR AND MINOR EPILEPSY

(Grand and Petit Mal)

"My son is sore vexed, for oftentimes he falleth into the fire, and oftentimes into the water."—Matthew xvii, 15.

"Oft, too, some wretch before our startled sight,
Struck as with lightning with some keen disease,
Drops sudden: By the dread attack o'erpowered

He foams, he groans, he trembles, and he faints;
Now rigid, now convuls'd, his labouring lungs
Heave quick, and quivers each exhausted limb.

* * * * *

"He raves, since Soul and Spirit are alike
Disturbed throughout, and severed each from each
As urged above, distracted by the bane;
But when at length the morbid cause declines,
And the fermenting humours from the heart
Flow back—with staggering foot first treads
Led gradual on to intellect and strength."—Lucretius.

Epilepsy, or "Falling Sickness", is a chronic abnormality of the nervous system, evinced by attacks of *alteration of consciousness*, usually accompanied by convulsions.

It attacks men of every race, as well as domesticated animals, and has been known since the earliest times, the ancients imputing it to demons, the anger of the gods, or a blow from a star.

It often attacks men in crowds, when excited by oratory or sport, hence the Roman name: *morbus comitalis* (crowd sickness). [pg 2]

In mediæval times, sufferers were regarded with awe, as being possessed by a spirit. Witch doctors among savages, and founders and expounders of differing creeds among more civilized peoples, have taken advantage of this infirmity to claim divine inspiration, and the power of "seeing visions" and prophesying.

Epilepsy has always interested medical men because of its frequency, the difficulty of tracing its cause, and its obstinacy to treatment, while it has appealed to popular imagination by the appalling picture of bodily overthrow it presents, so that many gross superstitions have grown up around it.

The description in Mark ix. 17-29, is interesting:

"Master, I have brought Thee my son, which hath a dumb spirit. And wheresoever he taketh him, he teareth him: and he foameth, and gnasheth with his teeth, and pineth away: ... straightway the spirit tare him; and he fell on the ground, and wallowed foaming.

"And He asked his father, How long is it ago since this came unto him? And he said, Of a child. And oftentimes it hath cast him into the fire, and into the waters, to destroy him.

"And he said unto them, This kind can come forth by nothing, but by prayer and fasting."

Up to the present, epilepsy can be ascribed to no specific disease of the brain, the symptoms being due to some morbid disturbance in its action. Epilepsy is a "functional" disease.

GRAND MAL ("*Great Evil*")

An unusual feeling called an *aura* (Latin—vapour), sometimes warns a patient of an impending fit, commonly lasting long enough to permit him to sit or lie down. This is followed by giddiness, a roaring in the ears, or some unusual sensation, and merciful unconsciousness. In many cases this stage is instantaneous; in others it lasts some seconds—but an eternity to the sufferer. This stage is all that victims can recall (and this only after painful effort) of an attack. [pg 3]

As unconsciousness supervenes, the patient becomes pale, and gives a cry, which varies from a low moan to a loud, inhuman shriek. The head and eyes turn to one side, or up or down, the pupils of the eyes enlarge and become fixed in a set stare, and the patient drops as if shot, making no effort to guard his fall, being often slightly and sometimes severely injured.

The whole body then becomes stiff. The hands are clenched, with thumbs inside the palms, the legs are extended, the arms stiffly bent, and the head thrown back, or twisted to one side. The muscles of the chest and heart are impeded in their action, breathing ceases, the heart is slowed, and the face becomes pale, and then a livid, dusky blue.

The skin is cold and clammy, the eyebrows knit; the tongue may be protruded, and bitten between the teeth. The eyeballs seem starting from their sockets, the eyes are fixed or turned up, so that only the sclerotic ("whites") can be seen, and they may be touched or pressed without causing blinking. The stomach, bladder, and bowels may involuntarily be emptied.

This *tonic* stage only lasts a few seconds, and is followed by convulsions. The head turns from side to side, the jaws snap, the eyes roll, saliva and blood mingle as foam on the lips, the face is contorted in frightful grimaces, the arms and legs are twisted and jerked about, the breathing is deep and irregular, the whole body writhes violently, and is bathed in sweat.

The spasms become gradually less severe, and finally cease. Deep breathing continues for some seconds; then the victim becomes semi-conscious, looks around bewildered, and sinks into coma or deep sleep. [pg 4]

"...As one that falls,
He knows not how, by force demoniac dragg'd
To earth, and through obstruction fettering up
In chains invisible the powers of Man;
Who, risen from his trance, gazeth around
Bewilder'd with the monstrous agony
He hath indured, and, wildly staring, sighs:
..."

In a few hours he wakes, with headache and mental confusion, not knowing he has been ill until told, and having no recollection of events just preceding the seizure, until reminded of them when they are slowly, and with painful effort, brought to mind. He is exhausted, and often vomits. In severe cases he may be deaf, dumb, blind, or paralysed for some hours, while purple spots (the result of internal hemorrhage) may appear on the head and neck. Victims often pass large quantities of colourless urine after an attack, and, as a rule, are quite well again within twenty-four hours.

This is the usual type, but seizures vary in different patients, and in the same sufferer at different times. The cry and the biting of the tongue may be absent, the first spasm brief, and the convulsions mild. Epilepsy of all kinds is characterized by an *alteration* (not necessarily a *loss*) of consciousness, followed by loss of memory for events that occurred during the time that alteration of consciousness lasted.

Attacks may occur by day only, by day and by night, or by night only, though in so-called nocturnal epilepsy, it is *sleep* and not night that induces the fit, for night-workers have fits when they go to sleep during the day.

Victims of nocturnal epilepsy may not be awakened by the seizure, but pass into deeper sleep. Intermittent wetting of the bed, occasional temporary mental stupor in the morning, irritability, temporary but well-marked lapses of memory, sleep-walking, and causeless outbursts of ungovernable temper all suggest nocturnal epilepsy. [pg 5]

Such a victim awakes confused, but imputes his mental sluggishness to a hearty supper or "a bad night". A swollen tongue, blood-stained pillow, and urinated bed arouse suspicion as to the real cause, suspicion which is confirmed by a seizure during the day. He is more fortunate (if such a term can rightly be used of any sufferer from this malady) than his fellow victim whose attacks occur during the day, often under circumstances which, to a sensitive nature, are very mortifying.

Epileptic attacks are of every degree of violence, varying from a moment's unconsciousness, from which the patient recovers so quickly that he cannot be convinced he has been ill, to that awful state which terrifies every beholder, and seems to menace the hapless victim with instant death. Every degree of frequency, too, is known, from one attack in a lifetime, down through one in a year, a month, a week, or a day; several in the same periods, to *hundreds* in four-and-twenty hours.

PETIT MAL ("*Little Evil*")

This is incomplete *grand mal*, the starting stages only of a fit, recovery occurring before convulsions.

Petit mal often occurs in people who do not suffer from *grand mal*, the symptoms consisting of a loss of consciousness for a *few seconds*, the seizure being so brief that the victim never realizes he has been unconscious. He suddenly stops what he is doing, turns pale, and his eyes become fixed in a glassy stare. He may give a slight jerk, sway, and make some slight sound, smack his lips, try to speak, or moan. He recovers with a start, and is confused, the attack usually being over ere he has had time to fall. [pg 6]

If talking when attacked, he hesitates, stares in an absent-minded manner, and then completes his interrupted sentence, unaware that he has acted strangely. Whatever act he is engaged in is interrupted for a second or two, and then resumed.

A mild type of *petit mal* consists of a temporary *blurring* of consciousness, with muscular weakness. The victim drops what he is holding, and is conscious of a strange, extremely unpleasant sensation, a sensation which he is usually quite unable to describe to anyone else. The view in front is clear, he understands what it is—a house here, a tree there, and so on—yet he does not *grasp* the vista as usual. Other victims have short spells of giddiness, while some are unable to realize "where they are" for a few moments.

Frequent *petit mal* impairs the intellect more than *grand mal*, for convulsions calm the patient as a good cry calms hysterical people. After a number of attacks of *petit mal*, *grand mal* usually supervenes, and most epileptics suffer from attacks of both types. Some precocious, perverse children are victims of unrecognized *petit mal*, and when pushed at school run grave risks of developing symptoms of true epilepsy. The "Little Evil" is a serious complaint.

If it be true that: "One half the world does not know how the other half lives", how true also is it that one half the world does not know, and does not care, what the other half suffers.

Epilepsy shows every gradation, from symptoms which cannot be described in language, to severe *grand mal*. Gowers says: "The elements of an epileptic attack may be extended, and thereby be made less intense, though not less distressing. If we conceive a minor attack that is extended, and its elements protracted, with no loss of consciousness, it would be so different that its epileptic nature would not be suspected. Swiftness is an essential element of ordinary epilepsy, but this does not prevent the possibility of deliberation."

In **Serial Epilepsy**, a number of attacks of *grand mal* follow one another, with but very brief intervals between. Serial epilepsy often ends in

Status Epilepticus, in which a series of *grand mal* attacks follow one another with no conscious interval. The temperature rises slowly, the pulse becomes rapid and feeble, the breathing rapid, shallow and irregular, and death usually occurs from exhaustion or heart-failure. Though not invariably fatal, the condition is so very grave that a doctor must instantly be summoned. Nearly all victims of severe, confirmed epilepsy (25 per cent of all epileptics) die in *status epilepticus*.

Jacksonian Epilepsy, named after Hughlings Jackson, who in 1861 traced its symptoms to their cause, is not a true epilepsy, being due to a local irritation of the cortex (the outermost layer) of the brain.

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There is usually an *aura* before the attack, often a tingling or stabbing pain. The chief symptoms are convulsions of certain limbs or areas of the body, which, save in very severe cases, are confined to one side, and are not attended by loss of consciousness.

The irritation spreads to adjacent areas, as wavelets spread from a stone thrown into a pond, with the result that convulsions of other limbs follow in sequence, all confined to one side.

As every part of the brain is connected to every other part by "association fibres", in very violent attacks of Jacksonian epilepsy the irritation spreads to the other side of the brain also, consciousness is lost, the convulsions become general and bilateral, and the patient presents exactly the same picture as if the attack were due to *grand mal*.

All degrees of violence are seen. The convulsions may consist only of a rapid trembling, or the limb or limbs may be flung about like a flail.

Jackson said: "The convulsion is a brutal development of a man's own movements, a sudden and excessive contention of many of the patient's familiar motions, like winking, speaking, singing, moving, etc." These acts are learned after many attempts, and leave a memory in certain groups of brain cells; irritate those cells, and the memorized acts are performed with convulsive violence.

The convulsions are followed by temporary paralysis of the involved muscles, but power finally returns. As we should expect, this paralysis lasts longest in the muscles first involved, and is slightest in the muscles whose brain-centres were irritated by the nearly exhausted waves. If the disease be untreated, the muscles in time may become totally paralysed, wasted, and useless.

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Friends should very carefully note exactly where and how the attack begins, the exact part first involved, and the precise order in which the spasms appear, as this is the only way the doctor can localize the brain injury. The importance of this cannot be overrated.

The consulting surgeon will say if operation is, or is not, advisable, but *operation is the sole remedy for Jacksonian epilepsy*, for the causes that underly its symptoms cannot be reached by medicines.

Patients must consult a good surgeon; other courses are *useless*.

Psychic or Mental Epilepsy is a trance-state often occurring after attacks of *grand* or *petit mal*, in which the patient performs unusual acts. The epileptic feature is the patient's inability to recall these actions. The complaint is fortunately rare.

The face is usually pale, the eyes staring, and there may be a "dream state". Without warning, the victim performs certain actions.

These may be automatic, and not seriously embarrassing—he may tug his beard, scratch his head, hide things, enter into engagements, find the presence of others annoying and hide himself, or take a long journey. Such a journey is often reported in the papers as a "mysterious disappearance". Yet, had he committed a crime during this time, he would probably have been held "fully responsible" and sentenced.

The actions may be more embarrassing: breaking something, causing pain, exhibiting the sexual organs; the patient may be transported by violent rage, and abuse relatives, friends or even perfect strangers; he may spit carelessly, or undress himself—possibly with a vague idea that he is unwell, and would be better in bed.

Finally the acts may be criminal: sexual or other assault, murder, arson, theft, or suicide.

[pg 10]

In this state, the patient is dazed, and though he appreciates to some extent his surroundings,

and may be able to answer questions more or less rationally, he is really in a profound reverie. The attack soon ends with exhaustion; the victim falls asleep, and a few moments later wakes, ignorant of having done or said anything peculiar.

We usually think of our *mind* as the aggregate of the various emotions of which we are actually *conscious*, when, in reality, consciousness forms but a small portion of our mentality, the *subconscious*—which is composed of all our past experiences filed away below consciousness—directing every thought and act. Inconceivably delicate and intricate mind-machinery directs us, and our idlest fancy arises, *not by chance* as most people surmise, but through endless associations of subconscious mental processes, which can often be laid bare by skilful psycho-analysis.

Our subconscious mind does not let the past jar with the present, for life would be made bitter by the eternal vivid recollection of incidents best forgotten. Every set of ideas, as it is done with, is locked up separately in the dungeons of subconsciousness, and these imprisoned ideas form the basis of memory. *Nothing is ever forgotten*, though we may never again "remember" it this side the grave.

In a few cases we can unlock the cell-door and release the prisoner—we "remember"; in some, we mislay the key for awhile; in many, the wards of the lock have rusted, and we cannot open the door although we have the key—we "forget"; finally, our prisoner may pick the lock, and make us attend to him whether we wish to or not—something "strikes us".

Normally, only one set of ideas (a complex) can hold the stage of consciousness at any one time. When two sets get on the boards together, double-consciousness occurs, but even then they cannot try to shout each other down; one set plays "leading lady", the other set the "chorus belle" and so life is rendered bearable. [pg 11]

This "dissociation of consciousness" occurs in all of us. A skilled pianist plays a piece "automatically" while talking to a friend; we often read a book and think of other things at the same time: our full attention is devoted to neither action; neither is done perfectly, yet both are done sufficiently well to escape comment.

Day-dreaming is dissociation carried further. "Leading lady" and "chorus belle" change places for a while—imaginary success keeps us from worrying about real failure. Dissociation, day-dreaming, and mental epilepsy are but few of the many milestones on a road, the end of which is insanity, or complete and permanent dissociation, instead of the partial and fleeting dissociation from which we all suffer. The lunatic never "comes to", but in a world of dreams dissociates himself forever from realities he is not mentally strong enough to face.

The writing of "spirits" through a "medium" is an example of dissociation, and though shown at its best in neuropaths, is common enough in normal men, as can be proved by anyone with a planchette and some patience.

If the experimenter puts his hands on the toy, and a friend talks to him, while another whispers questions, he may write more or less coherent answers, though all the time he goes on talking, and does not know what his hand is writing. His mind is split into two smaller minds, each ignorant of the other, each busily liberating memory-prisoners from its own block of cells in the gaol of the subconscious. The writing often refers to long-forgotten incidents, the experiment sometimes being of real use in cases of lost memory. [pg 12]

Dreams are dissociations in sleep, while the scenes conjured up by crystal-gazing are only waking dreams, in which the dissociation is caused by gazing at a bright surface and so tiring the brain centres, whereupon impressions of past life emerge from the subconscious, to surprise, not only the onlookers to whom they are related, but also the gazer herself, who has long "forgotten them".

It is childish to attach supernatural significance to either dreams or crystal-gazing, both of which mirror, not the future, but only the past, the subject's own past.

It is noteworthy that women dream more frequently and vividly than men. When a dreamer has few worries, he usually dreams but forgets his dream on waking; when greatly worried, he often carries his problems to bed with him, and recent "representative dreams" are merely unprofitable overtime work done by the brain. Occasionally, dreams have a purely physical basis as when palpitation becomes transformed in a dream into a scene wherein a horse is struggling violently, or where an uncovered foot originates a dream of polar-exploration; in this latter type the dream is protective, in that it is an effort to side-track some irritation without breaking sleep.

Since Freud has traced a sex-basis in all our dreams, many worthy people have been much worried about the things they see or do in dreams. Let them remember that virtue is not an inability to conceive of misconduct, so much as the determination to refrain from it, and it may well be that the centres which so determinedly inhibit sexual or unsocial thoughts in the day, are tired by the very vigour of their resistance, and so in sleep allow the thoughts they have so stoutly opposed when waking to slip by. The man who is long-suffering and slow to wrath when awake, may surely be excused if he murders a few of his tormentors during sleep. [pg 13]

Epileptiform Seizures are convulsions due to causes other than epilepsy, and only a doctor can tell if an attack be epileptic or not and prescribe appropriate treatment. To give "patent" medicines for "fits", to a man who may be suffering from lead poisoning or heart disease, is

criminal.

Convulsions in Children often occur before or after some other ailment. Such children need careful training, but less than 10 per cent of children who have convulsions become epileptic. Epilepsy should only be suspected if the first attack occurs in a previously healthy child of over two years of age. There are many possible causes for infantile convulsions, and but one treatment; call in a doctor *at once*, and, while waiting for him, put the child in a warm bath (not over 100° F.) in a quiet, darkened room, and hold a sponge wrung out of hot water to the throat at intervals of five minutes. Never give "soothing syrups" or "teething powders".

The "soothing" portion of such preparations is some essential oil, like aniseed, caraway or dill, and there are often present strong drugs unsuitable for children. According to the analyses made by the British Medical Association, the following are the *essential* ingredients of some well-known preparations for children:

Mrs. Winslow's Soothing Syrup.	Potassium Bromide, Aniseed, and Syrup (sugar and water).
Woodward's Gripe Water.	Sodium Bicarbonate, Caraway, and Syrup.
Atkinson and Barker's Royal Infant Preservative.	Pot. and Magnesium Bicarbonate, several Oils, and Syrup.
Mrs. Johnson's American Soothing Syrup.	Spirits of Salt, Common Salt, and Honey.

Convulsions During Pregnancy. Send for a doctor instantly.

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Feigned Epilepsy is an all-too-common "ailment". The false fit, as a rule, is very much overdone. The face is red from exertion instead of livid from heart and lung embarrassment, the spasms are too vigorous but not jerky enough, the skin is hot and dry instead of hot and clammy, the hands may be clenched, but the thumb will be *outside* instead of *inside* the palm, foam comes in volumes but is unmixed with blood, and the whole thing is kept up far too long. Almost before a crowd can gather an epileptic seizure is over, whereas the sham sufferer does not begin seriously to exhibit his questionable talents until a crowd has appeared.

Pressure on the eye, which will blink while the "sufferer" will swear; bending back the thumb and pressing in the end of the nail, when the hand will be withdrawn in feigned but not in true epilepsy; blowing snuff up the nose, which induces sneezing in the sham fit alone, or using a cold douche will all expose the miserable trick.

It is, unfortunately, far easier to suggest than to apply these tests, for anyone foolish enough to try experiments within reach of the wildly-waving arms will probably get such a buffet as will damp his ardour for amateur diagnosis for some time.

CHAPTER III

[pg 15]

GENERAL REMARKS

"Do not muse at me, my most worthy friends;
I have a strange infirmity, which is nothing
To those that know me."
"Macbeth," Act III.

Starr's table shows that combinations of all types of epilepsy are possible, and that mental epilepsy is rare:

Grand mal	1150
Grand and petit mal	589
Petit mal	179
Jacksonian	37
Mental	16
Grand mal and Jacksonian	10
Grand mal, petit mal and Jacksonian	8
Grand mal and mental	3
Grand mal, petit mal and mental	6
Petit mal and mental	2
Fits by day only	660
Fits day and night	880
Fits by night only	380

The majority of victims have attacks both by day and by night. Of 115,000 seizures tabulated by

Clark, 55,000 occurred during the day (6 a.m. to 6 p.m.) and 60,000 by night.

The *usual course* of a case of epilepsy is somewhat as follows: the disease begins in childhood, the first convulsion, about the age of three, being followed some twelve months later by a second, and this again by a third within a few months. Then attacks occur more frequently until a regular periodicity—from one a day to one a year—is reached after about five years, and this frequently persists throughout life.

The effect of epilepsy on the general health is not serious, but it has a more serious effect on the mind, for epileptic children cannot go to school (though special schools are now doing something towards removing this serious disability), and grow up with an imperfect mental training. They become moody, fretful, ill-tempered, unmanageable, and at puberty fall victims to self-abuse, which helps to lead to neurasthenia. Then they may drift slowly into a state of mental weakness, and often require as much care as imbeciles. If the fits are severe from an early age, arrest of mental development and imbecility follow. If the disease be very mild in character, and especially if it be *petit mal*, the victim may be very precocious, get "pushed" at school, and later become eccentric or insane.

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Adult victims necessarily lead a semi-invalid life, often cut off from wholesome work and from the pleasures of life, and become hypersensitive, timid, impulsive, forgetful, irritable, incapable of concentration, suspicious, show evidences of a weakened mind, have few interests, and are difficult to manage.

About 10 per cent—the very severe cases—go on to insanity; either temporary attacks of mania, calling for restraint, or permanent epileptic dementia with progressive loss of mind. Some victims are accidentally killed in, or die as a result of a fit; about 25 per cent—severe cases again—die in *status epilepticus*, but the majority after being sufferers throughout life are finally carried off by some other disease.

There are many exceptions to this general course. Some patients have attacks very infrequently, and are possessed of brilliant talent, though apt to be eccentric. Others may have a number of seizures in youth, and then "outgrow" the complaint.

A few victims are attacked only after excessive alcoholic or sexual indulgence, some women only during their menses, while other women are free from attacks during pregnancy, which state, however (contrary to popular belief), commonly aggravates the trouble. Victims may be free from attacks during the duration of, and for some time after, an infectious disease; while Spratling says that a consumptive epileptic may have no fits for months, or even years.

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Some epileptics are normal in appearance, but many show signs of degeneration. This is common in the insane, but less frequent and pronounced in neurasthenics. An abnormal shape of the head or curvature of the skull, a high, arched palate, peculiarly-shaped ears, unusually large hands and feet, irregular teeth from narrow jaws, a small mouth, unequal length and size of the limbs, a projecting occiput, and poor physical development may be noted.

These are most pronounced in intractable cases, in whom mental peculiarities are most frequently seen—either dullness, stupidity and ungovernable temper, or very marked talent in one direction with as marked an incapacity in others. In all epileptics, the pupils of the eye are larger than normal, and, after contracting to bright light soon enlarge again.

The facial expression of most epileptics indicates abnormal mentality. When the seizures have been so frequent and severe as to cause mental decay, the actions are awkward, and the gait slouching and irregular. Progressive poor memory is one of the first signs of intellectual damage consequent upon severe epilepsy.

Though the disease may occur at any age, most cases occur before the age of twenty, there being good reason to look for other causes (often syphilis) in cases which occur after that age. Of 1,450 of Gowers' cases, 30 per cent commenced before the age of ten; 75 per cent before twenty. In Starr's 2,000 cases, 68 per cent commenced before the patient was twenty-one.

According to Turner, the first epoch is from birth to the age of six, during which 25 per cent of all cases commence, usually associated with mental backwardness, and some due to organic brain trouble. The second epoch is ten to twenty-two, the time of puberty and adolescence, during which time no less than 54 per cent of all cases commence. This is, *par excellence*, the age of onset of genuine epilepsy, the mean age of maximum onset being fourteen in men and sixteen in women. The remaining 21 per cent of cases occur after the age of twenty-two.

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In 430 cases of epilepsy in children, Osler found that 230 were attacked before they reached the age of five, 100 between five and ten, and 100 between ten and fifteen.

Epilepsy, then, is a disease of early youth, coming on when the development and growth of the nervous and reproductive systems is taking place. During this period, causes, insignificant for stable people, may light up the disease in those of unstable, nervous constitution, a fact which explains the importance of training the child.

Both sexes are attacked. If we consider only cases of true idiopathic epilepsy female patients are probably in excess, but in epilepsy in adults, from all causes, males predominate. In females, the menopause may arrest the disease.

In days gone by, epilepsy more rarely commenced after the age of twenty, but in these days of

nerve stress it commences more frequently than formerly in people of mature age. A victim who has a fit for the first time after the age of twenty, however, should consult a nerve specialist immediately.

In its early stages there are no changes of the brain due to, or the cause of, epilepsy, but in long-standing, severe cases, well-marked, morbid changes may be found. These are the effects, not the cause, of the disease, and they vary in intensity according to the manner of death and the length and severity of the malady. They probably cause the mental decay and slouching gait mentioned before.

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Fits may suddenly cease for a long time, but they usually recur, and most patients have them more or less regularly through life.

The fact that recovery is rare should not be hidden from patients and friends. Perhaps 8 per cent of all classes recover—and "recovery" may only be a long interval—but 4 per cent of these are Jacksonian, syphilitic or accident cases. Only one victim in every thirty recovers from true epilepsy; and these are very mild cases, in which the fits are infrequent, there is no mental impairment, and bromides are well borne. The earlier the onset, the more severe and frequent the attacks, the deeper the coma, and the worse the mental decay, the poorer the outlook.

Cure is exceptional, but by vigorous treatment the severity of the malady may be much abated. *Petit mal* is no more hopeful than *grand mal*; less so in cases with severe giddiness; in all cases, the better the physical condition and digestive powers of the patient, the brighter the outlook.

To sum up, epilepsy is a chronic abnormality of the higher nervous system, characterized by periodic attacks of alteration of consciousness, often accompanied by spasms of varying violence, affecting primarily the brain and secondarily the body, based on an abnormal readiness for action of the motor cells, occurring in persons with congenital nerve weakness, and leading to mental decay of various types and degrees of severity.

CHAPTER IV

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CAUSES OF EPILEPSY

"Find out the cause of this effect,
Or rather say, the cause of this defect,
For this effect defective comes by cause."
"Hamlet," Act II.

THE MECHANISM OF THE FIT

The brain consists of cells of *grey matter*, grouped together to form centres for thought, action or sensation, and *white matter*, consisting of nerve strands, which act as lines of communication between different parts of brain and body. The wrinkled surface (*cortex*) of the brain, is covered with grey matter, which dips into the fissures. There are also islands of grey matter embedded in the white.

The front part of the brain is supposed, with some probability, to be the seat of intelligence, while a ribbon three inches wide stretched over the head from ear to ear would roughly cover the Rolandic area, in which are contained the *motor cells* through which impulse is translated to action. These motor cells are controlled by *inhibitory cells*, which act as brakes and release nerve energy in a gentle stream; otherwise our movements would be convulsive in their violence, and life would be impossible through inability usefully to direct our energy.

That is how inhibition acts physically; mentally it is the power to restrain impulses until reason has suggested the wisest course.

Irritation of the cortex, especially the motor area, causes convulsions, and experiment has shown that epilepsy may be due to a disease or instability of certain inhibitory cells of the cortex. The motor cells of epileptics are restrained, with some difficulty, by these cells in normal times. When irritation from any cause throws additional strain on the motor cells, the defective brakes fail, and the uncontrolled energy, instead of flowing in a gentle stream through the usual channels, bursts forth in a tidal wave through other areas of the brain, causes unconsciousness, and exhausts itself in those violent convulsions of the limbs which we term a fit.

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The Primary Cause of epilepsy is an inherent instability of the nervous system.

Secondary Causes are factors which cause the first fit in a person with predisposing nervous instability; later, the brain gets the *fit habit*, and attacks recur independently of the secondary cause. In most cases no secondary causes can be discovered, and the disease is then termed *idiopathic*, for want of an explanation.

Injuries to the brain may cause epilepsy, and many cases date from birth, a difficult labour having caused a minute injury to the brain.

Some accident is often wrongly alleged as the cause of fits, for most victims come of a bad stock, and when the first fit occurs, their relatives recollect an injury or a fright in the past, which is said to be the cause.

Great fright may cause epilepsy, as in the case of a nervous girl whose brother entered her room, covered with a sheet, as a "ghost", a "joke" that was followed by a fit within an hour.

Sunstroke may cause fits, and a few cases follow infectious diseases.

Alcoholism is a strong secondary factor, fits often occurring during a drinking-bout and in toppers, but in many cases, drunkenness, instead of being the cause, is only the result of a lack of self-control following epilepsy. [pg 22]

Pregnancy may be a secondary cause of the malady: it may lead to more frequent and severe seizures in women who are already victims; bring on a recurrence of the malady after it has apparently been cured; or, very rarely, induce a temporary or permanent cure.

Epilepsy may be due to abortives. These drugs wreck the constitution of the undesired children, who contract epilepsy from causes which would not so have affected them had they started fairly. In many families, the first child, who was wanted, is normal; some or all the others, who were not desired and on whom attempts were probably made to prevent birth, are neuropaths, as are many illegitimate children. It cannot too emphatically be stated that there is no drug known which will procure abortion without putting the woman's life in so grave a danger as to prevent medical men using it; legal abortion is always procured surgically. Dealing in abortifacients would be a capital offence under the laws of a rational community.

Self-abuse may perhaps play some part in epilepsy commencing or recurring after the age of ten.

The onset of menstruation often coincides with the onset of epilepsy, and in some cases irregularity of the menses seems to be a secondary or exciting cause.

Exciting Causes aggravate the trouble when present, causing more frequent and severe seizures. The chief are irritation of stomach and bowels (from decaying teeth, unchewed, unsuitable, or indigestible food, constipation, or diarrhœa), exhaustion, work immediately after a meal, passion or excitement, fright, worry, mental work, alcoholism, sexual excess, nasal growths, eye-strain; in short, anything that irritates brain or body. [pg 23]

Theories as to Cause. Epilepsy is usually classed as a *functional disorder*; that is, the brain cells are physically normal, but, for some unknown reason, they act abnormally at certain times. This term is a very loose one, and there is reason to believe that the basis of epilepsy is some obscure disease of the brain which has not been detected by present methods.

The new school of psychologists regard the malady as a mental *complex*—a system of ideas strongly influenced by the emotions—the convulsions being but minor symptoms.

Fits are most frequent between 9-10 p.m. the hours of deepest repose. One school says this is due to anæmia of the brain during sleep. Clark traces the cause to lessened inhibitory powers owing to the higher brain centres being at rest, while Haig claims to have explained the high incidence at this hour by the fact that uric acid is present in the system in the greatest amount at this time.

Some doctors have thought, on the contrary, that *excess* of blood in the head was the cause, but results of treatment so directed did not bear out the sanguine hopes built on the theory.

The fact that convulsions occur in diabetes and alcoholism, suggested that epilepsy was due to poisons circulating in the blood, and thus irritating the brain. Every act uses up cell material and leaves waste products, exactly as the production of steam uses up coal and leaves ashes. Various waste products have been found in more than normal quantities in the blood of epileptics, but it is uncertain whether accumulation of waste products causes the seizure.

A convincing theory must satisfactorily account for all the widely diverse phenomena seen in epilepsy, and the problem must remain largely a matter of speculation, until research work has given us a far deeper insight into the biochemistry of both the brain cells, and the germ-plasm than we have at present. [pg 24]

CHAPTER V

PREVENTION OF ATTACKS

In health matters, prevention is nine points of the law.

Some patients are obsessed by a peculiar sensation (the "aura") just before a fit. This warning takes many forms, the two most common being a "sinking" or feeling of distress in the stomach, and giddiness. The character of the aura is very variable—terror, excitement, numbness, tingling, irritability, twitching, a feeling of something passing up from the toes to the head, delusions of sight, smell, taste, or hearing (ringing, or buzzing, etc.), palpitation, throbbing in the head, an impulse to run or spin around—any of these may warn a victim that a fit is at hand. Some patients "lose themselves" and make curious mistakes in talking.

The warning is nearly always the same each time with the same patient, and is more common in mild than in severe cases. Rarely, the attack does not go beyond this stage.

When the patient becomes conscious of the aura he should sit in a large chair, or lie down on the floor, well away from fire, and from anything that can be capsized. He must never try to go upstairs to bed. Some one should draw the blind, as light is irritating.

If the warning lasts some minutes, the patient should carry with him, a bottle of uncoated one-hundredth-grain tabloids of

Nitroglycerin, replacing the screw cap with a cork, so that they can quickly be extracted. When the warning occurs, one—or two—should be taken, and the head bent forward. The arteries are dilated, the blood-pressure thus lowered, and the attack *may* be averted.

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The use of nitroglycerin is based on the theory that seizures are caused by anæmia due to vasomotor constriction. Success is only occasional, but this is so welcome as to justify the habitual use of the method.

If the aura be brief, buy a few "pearls" of **Amyl Nitrite**, crush one in your handkerchief, and sniff the vapour. This has the same affect as nitroglycerin, but the action occurs in 15 seconds and only persists 7 minutes. A headache occasionally follows the use of these drugs, and they should not be employed without professional advice.

When the warning is felt in the hand or foot, a strap should be worn round the ankle or wrist, and pulled tight when the aura commences. This sometimes aborts a fit, as biting a finger in which the aura commences may also do.

If a victim feels unwell after a meal, he must never eat the next meal at the usual time, simply because it *is* the usual time.

Should a patient feel unwell between, say, dinner and tea, instead of eating his tea he must empty his bowels by an enema, or croton oil (see chemist), and his stomach by drinking a pint of warm water in which has been stirred a tablespoonful of mustard powder and a teaspoonful of salt. After vomiting, drink warm water.

Never attempt to empty the stomach at the onset of a definite aura, for if the seizure occurs, the vomit will probably obstruct the trachea, and suffocate the victim.

After the stomach has been empty ten minutes, the patient should take a double dose of bromides ([Chapter XIX](#)) and go to bed. Next morning he will be well, whereas if he eats but a single piece of bread-and-butter he will probably have a fit within five minutes.

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Unfortunately, in 60 per cent of cases, there is no warning at all, while in those cases which do exhibit an aura, the measures mentioned above more often fail than succeed.

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CHAPTER VI

FIRST-AID TO VICTIMS

"First-aid is the assistance which can be given in case of emergency by those who, with certain easily acquired knowledge are in a position, not only to relieve the sufferer, but also to prevent further mischief being done pending the arrival of a doctor."—Dickey.

Never try to cut short a fit. Placing smelling-salts beneath the nose, together with all other remedies for people who have "fainted", are useless in epilepsy.

Lay the patient on his back, with head slightly raised; admit air freely; remove scarf or collar and tie, unfasten waistcoat, shirt, stays or other tight garments, and if it be known or observed that the victim wears artificial teeth, remove them.

If five people are at hand, let two persons grasp each a leg of the victim, holding it above the ankle and above the knee; two others should each hold a hand and the shoulder; the fifth supports the head. Do not kneel opposite the feet or you may receive a severe kick. Prevent the limbs from striking the floor, but *allow them full play*. If the victim rolls on his face gently turn him on his back.

Roll a large handkerchief up *from the side* (not diagonally) and holding one end firmly, tie a knot in the other end, and place it between the teeth to protect the tongue; or slide the handle of a spoon or a piece of smooth wood between the teeth, and thus hold the tongue down. Soft articles like cork and indiarubber should not be used, for if they are bitten through, the rear portion will fall down the throat and choke the victim.

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After the fit, lower the head to one side to clear any vomitus which, if left, might be drawn into the windpipe, lift the patient on to a couch, cover him warmly, and let him sleep. An epileptic's bed should be placed on the ground floor; if his bed be upstairs, it is difficult to get him there after an attack, while he may at any time fall downstairs and be killed.

Any effort to rouse him will only make the post-epileptic stupor more severe, but whether he sleeps or not, he must carefully be watched, for patients in this state are apt to slip away, often half-clothed, and travel towards nowhere in particular at a wonderfully rapid rate.

If several fits follow one another, or if one is very long or severe, send for a doctor.

When a seizure occurs in public, a constable should be summoned, who, being a "St. John" man, will be of far more use than bystanders brimming over with sympathy—and *ignorance*. If some kindly householder near by will allow the victim to sleep for an hour or two—a boon usually denied more from fear of recurrence than lack of sympathy, it is better than taking him home. If

not, let someone call a cab, and deliver the victim safely to his friends.

Every epileptic should carry always with him a card stating his full name and address, with a request that some one present at any seizure will escort him home.

If the victim wakes with a headache, give him a 10-grain **Aspirin** powder, or a 5-grain **Phenalgin** tablet; *never patent "cures"*.

If possible, the patient should lie abed the day after a fit, undisturbed, taking only soda-and-milk and eggs beaten up in *hot* milk.

CHAPTER VII

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NEURASTHENIA

"Some of your hurts you have cured,
And the worst you still have survived;
But what torments of mind you endured
From evils which never arrived."
—Lowell.

To-day, the need to eat forces even sensible men to live—and die—at a feverish rate. In bygone days the world was a peaceful place, in which our forefathers were denied the chance of combining exercise with amusement dodging murderous taxis; knew not the blessings of "Bile Beans", nor the biliousness they blessed either; they did not fall victims to "advert-diseases"; and they left the waters beneath to the fishes, and the skies above to the birds.

Withal they were sound trenchermen, who called their few ailments "humours" or "vapours" and knew what peace of mind meant. Sixty years ago there was one lunatic in every six hundred people; to-day there is one in every two hundred.

At the same time, the "neurasthenic temperament" is not altogether a modern product, for Plato described it with great precision, and declared such people to be "undesirable citizens" for his ideal republic.

Neurasthenia is due to exhaustion and poisoning of the nervous system, the chief symptoms of which is persistent *neuro-muscular fatigue with general irritability*. Its minor symptoms are almost as numerous as the various activities possible in mind and body.

The Predisposing Cause of neurasthenia is inherited nervous instability, but among nervous diseases, neurasthenia seems the least dependent on heredity, this factor playing a less important part than

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Exciting Causes which are the sparks that fire explosive trains laid by the living, and often by the dead.

Worry in any form (especially when accompanied by excess of brain-work),
Accident-shock,
Sexual abuse,
Abuse of drink, drugs or tobacco,
Lack of exercise,
Exhausting diseases,
Menopause, and diseases of the womb,
"Society life",
Retirement,

are the commonest exciting causes of neurasthenia; hard brain-work, unless accompanied by worry, not being injurious.

The disease is more common in men than women (because of the more active part played by them in the struggle for existence), in cities than in the country, in mental than in manual workers, in the "idle rich", and in races which live feverishly, like the Americans. It is rare in old age.

Ambition, the race for "success", the struggle to carry out projects beyond the reasonable capacity of one man, and the ceaseless work and worry with little sleep and no real rest which mark life to-day are responsible for this disease.

Competition has increased in all conditions of life; free course is given to ambition, individuals impose on their brains a work beyond their strength; and then comes care and perhaps reverse of fortune; and the nervous system, under the wear and tear of incessant excitation, at last becomes exhausted,

The basic symptom is an inability to stand a normal amount of mental or physical strain, and shows itself in seven marked ways:

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1. **Muscular Fatigue**, which is often most marked in the morning. The patient rises reluctantly, feeling as if he had not slept, is listless and "lazy", and can neither work nor play much without getting unduly tired. This weariness may pass off as the day wears on.

2. **Backache** is often constant and annoying. It may be a pain, or a general discomfort, and may be felt anywhere in the back, the nape of the neck and down the spine being common places. The legs often "give way", and, in severe cases, patients believe they cannot stand, and become bed-ridden. Under sudden excitement they may walk again, becoming "miracles of healing". These *spinal symptoms* are common in neurasthenia following accident.

3. **Headache** is more often an abnormal sensation than an intense pain. Pulsations, feelings of distress, of lightness, fullness, heaviness and pressure are common, or a band may seem to be drawn tightly round the head across the forehead.

The sensations are usually located in the back of the head, and may be accompanied by dizziness, noises in the ears, or dimness of sight. There may be a feeling of unsteadiness when walking, or a sense of being in motion when at rest. The headache varies in intensity; it is worst in the morning, is increased by thinking, diminished after eating, often improves at night, and never keeps the patient awake.

4. **Stomach and Bowel Disorders.** The victim is indifferent to food, though dainties often tempt him, when he cannot face a square meal. He has a feeling of general well-being after a meal, but within an hour signs of imperfect digestion arise; he feels oppressed, and has flatulence. Later, there are flushes of heat, palpitation, drowsiness, and a craving for food. Constipation is usually obstinate, while diarrhoea may cause great weakness.

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5. **Sleeplessness.** Some patients go to sleep readily, but after some instants wake suddenly, in a state of excitement that persists despite their efforts to calm themselves, and only at an early hour in the morning do they sleep again. Other patients go to bed with the conviction they will not sleep, and are kept awake by incessant cogitation, their minds being harassed by a rapid flow of images, ideas and memories. In some cases the person is calm, his mind is at rest, yet he cannot sleep.

6. **Circulatory Disturbances.** More blood flows to an organ at work than to one at rest. In health we do not notice these changes, but in neurasthenia these internal tides are exaggerated as rushes of blood to the head, flushings of various parts, and coldness of hands and feet.

Heart palpitation is alarming but not dangerous, and the distended blood-vessels of the ears may set up vibrations in the drum, so that at night when the head is on the pillow, every beat of the heart is heard as a thump, which banishes sleep, and works the victim into a state of high tension. A pain in the chest, arms and elbows is often felt, limbs may swell (shown by the tightness of rings, collars, etc.) while the hands and feet are usually moist and clammy. The patient may have to empty the bladder every half-hour. Disorders of menstruation are common.

7. **Mental Fatigue.** Hundreds of pages would be needed to describe all the symptoms due to mental fatigue, the morbid belief that the victim has a fatal disease being very common, though his "disease" rarely makes him lie up; in the day he works, at night describes his symptoms to the home circle.

The inability of most men to apply themselves steadfastly to any one set of ideas is seen in the immense popularity of music halls, cinemas, and short-story magazines, which offer a change of interest every few minutes.

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In normal people there is a slight consciousness of mental processes, but the mind rarely watches itself work; the neurasthenic is unable to concentrate, and gets charged with inconstancy and shiftlessness.

His ideas are restive, continuous thought is impossible, and when talking he has to be "brought back to the point" many times. Memory and attention flag, and he listens to a long conversation, or reads pages of a book without grasping its import, and consequently he readily "forgets" what in reality he never laboured to learn. Trembling of limbs is common.

He lacks initiative, and whatever course he is forced to take—after much indecision—he is convinced, a moment later, it would have been wiser to have taken the opposite one.

All his acts are done inattentively. He goes to his room for something, but has forgotten what when he gets there; later, he wonders if he locked the drawer, and goes back to see. At night he gets up to make sure he bolted the door, put out the gas, and damped the fire.

Regret for the past, dissatisfaction with the present, and anxiety for the future are plagues common to most people, but they become acute in a neurasthenic, who reproaches himself with past shortcomings of no moment, infuriates himself over to-day's trivialities, and frets himself over evils yet unborn.

Such a patient is often greatly upset by a trifle, yet little affected by a real shock, which by its very severity arouses his reactive faculties which lay dormant and left him at the mercy of the minor event. He will fret over a farthing increase in the price of a loaf, but if his bank fails he sets manfully to.

Duty that should be done to-day he leaves to be shirked to-morrow; he is easily discouraged, timid, and vacillating. Extremely self-conscious, he thinks himself the observed of all observers. If others are indifferent toward him, he is depressed; if interested, they have some deep motive; if grave, he has annoyed them; if gay, they are laughing at him; the truth, that they are minding their own business, never occurs to him, and if it did, the thought that other people were *not*

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interested in him, would only vex him.

He is extremely irritable (slight noises make him start violently), childishly unreasonable, wants to be left alone, rejects efforts to rouse him, but is disappointed if such efforts be not made, broods, and fears insanity. The true melancholic is convinced he himself is to blame for his misery; it is a just punishment for some unpardonable sin, and there is no hope for him in this world or the next. The neurasthenic, on the contrary, ascribes his distress to every conceivable cause save his own personal hygienic errors.

A neurasthenic, if epileptic, fears a fit will occur at an untoward moment. He dreads confined or, maybe, open spaces, or being in a crowd. When he reaches an open space (after walking miles through tortuous byways in an endeavour to avoid it) he becomes paralysed by an undefinable fear, and stops, or gets near to the wall.

He fears trains, theatres, churches, social gatherings, or the office.

Other victims fear knives, canals, firearms, gas, high places, and railway tracks, when the basic fear is of suicide. Many patients have sudden impulses—on which the attention is focussed with abnormal intensity—to perform useless, eccentric, or even criminal actions; to count objects, to touch lamp-posts, to continually reiterate certain words, and so on.

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The victim is fully aware that there are no grounds for his panic or impulse, but though his reason ridicules, it cannot disperse, his fear, and the wretched man finds relief in sleep alone, which adds to his woes by being a coy lover.

An almost invariable stage is that wherein the patient studies a patent-medicine advertisement and finds that a disease, or collection of diseases, is the root of his troubles. This alarms but interests him; he studies other advertisements, sends for pamphlets, and so becomes familiar with a few medical terms. He then takes a "treatment", and talks of his "complaint" and how he "diagnosed" it. He has become hypochondriac.

He borrows a book on anatomy from the public library to discover in what part of the body his ailment is located.

He draws up (or copies) a special diet-sheet, and talks of "proteids", notices a slight cloudiness in his urine, and underlines "The Uric-Acid Diathesis" in one of his pamphlets. Then his heart bumps, he diagnoses anew, and so goes on, usually ending by taking phosphorus for his "brain fog". Then he finds he has a disease unknown to the faculty, which discovery interests him as intensely as it irritates his unfortunate friends.

This prince of pessimists has a conviction that, compared with him, Job was a happy man, and that he will go insane. He does not know that it is only when there are flaws in the brain from inheritance or organic disease that mental worry leads to lunacy; a sound brain never becomes unhinged from intellectual stress alone.

Books and friends are daily questioned about his "diseases", and in spite of reassuring replies, he continues to doubt, re-question and cross-examine endlessly, feeding his hopes on the same assurances, consoling himself with the same sympathies, and worrying himself with the same fears.

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Other folk may be "nervy", he is seriously ill; he *knows* it because he *feels* it. He expects the greatest consideration himself, denies it to others, and then complains he is "misunderstood".

"Every symptom becomes magnified; the trifling ache or pain, the trivial flatulence, the disinclination or mere hesitation of the bowels to adhere to a strict schedule, all minor events such as occur to the majority of healthy men from time to time unheeded, come to be of vast importance to the psychasthenic individual."

He keeps a record of hourly changes in his condition, and pesters his family doctor to death. He goes from physician to physician, from hospital to hospital. Having been induced by his friends to see a specialist, he bores that good man—who knows him all too well—with a minute description of his symptoms, presenting for inspection carefully preserved prescriptions, urinary examination records, differential blood counts, and the like. Coming away with precious advice, he feels he omitted to describe all his symptoms, begins to doubt if the specialist really understands *his* case, and so the pitiful farce goes on—for years.

The extraordinary fact is that while he is suffering (*sic*) from cancer, or heart disease, or Bright's disease, and spasmodically from minor affections like tuberculosis, arterio-sclerosis, and liver-fluke, he is probably running a successful business. While making money he forgets his ills; the moment his attention is diverted from the "root of evil" he proceeds to further "diagnosis".

In the end, he makes a pleasant hobby of his imaginary maladies, trying each patent nostrum, and giving herbalists, electric-belt men, Christian Scientists, and dozens of other weird "specialists" a chance to cure him.

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Sexual Neurasthenia occurs chiefly in young men given to self-abuse or sexual excesses. Erections and emissions are frequent, first at night with amorous dreams, then in the day as a result of sexual thoughts; weakness and pain in the back follow, and the sexual act may become impossible. The patient usually studies a quack advertisement, and passes into the hands of men who make a living by bleeding such wretches dry. Cold baths and the treatment outlined in

[Chapter IX](#) will cure him.

Course and Outlook. Neurasthenia is very curable. If the cause be removed, and vigorous treatment instituted, the victim may be well in a couple of months, but in most cases there are obstacles to radical treatment, and the disease drags on indefinitely.

Egoism, moral cowardice, and sexual excess play a part in much neurasthenia, but relatives must not forget, in their indignation at these laxities, that the patient really *is* ill; it is unkind, unjust and useless to tell an ailing man the unpalatable truth that it is his own fault.

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CHAPTER VIII

HYSTERIA

"Diseased nature oftentimes breaks forth
In strange eruptions; ..."
"King Henry IV."

Hysteria, recorded in legend and law, in manuscript and marble, in folk-lore and chronicle, right from history's dawn, is still a puzzle of personality, and only equalled by syphilis in the protean nature of its manifestations.

The sacred books of the East said delayed menstruation due to a devil was its cause; the thrashing-out of the devil its cure. Chinese legends describe it, and its symptoms were ascribed by the Inquisition to witchcraft and sorcery.

Old Egyptian papyri tell how to dislodge the devil from the stomach, and there were hysteria specialists in 450 B.C. All old theories fix on the womb as the seat of the disease. The name hysteria is the Greek word for womb, and 97 per cent of patients are women.

A few of the very numerous modern theories may be noticed.

The unconscious (or the subconscious) and the conscious are only parts of one whole. Our "conscious" activities are those which have developed late in the history of the race, and which develop comparatively late in the history of the individual. The "conscious" is the product of the racial education of the "unconscious"; the first is the man, the modern, the civilized; the last is the child, the primitive, the savage. Between the two there is no gulf fixed, and the Oxford metaphysician need not go to Timbuctoo to seek a superstitious savage; he may find one within himself.

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In hysteria, Janet says, the field of consciousness is narrowed, and the patient lives through subconscious experiences, which she forgets when she again "comes to". She journeys back into the past, back a few years individually, back centuries or æons racially, and becomes a savage child again.

Normally, when anything goes wrong, or we suffer from excessive emotion, we give vent to our feelings by tears, abuse, anger, or impulsive action; in some way we "hit back", and relieve ourselves of the feeling of oppression. Then we forget, which heals the sore, and closes the experience.

If, at the moment, we bottle up our emotions, they obtrude later at inconvenient times until we "get them off our mind" by confiding in some one, when we get peace of mind. Open confession *is* good for the soul, and it is better to "cry your eyes out" than to "eat your heart out".

There are some experiences, however, to which we cannot react by anger or confidence, and so we imprison our emotions, and try to obtain peace of mind by forgetting the irritation.

Freud thinks perverted sex ideas are thus repressed, and cause hysteria by coming into conflict with the normal sex life. If these old sores can be laid bare by psycho-analysis, and the mental abscess drained by confession and contrition, cure follows.

The biologists consider hysteria as an adult childishness, a primitive mode of dodging difficulties. Victims cannot live up to the complicated emotional standard of modern life, and so act on a standard which to us seems natural only in children and uncivilized races.

Savill gives the following differences between neurasthenia and hysteria:

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	NEURASTHENIA	HYSTERIA
Sex	Both sexes equally.	97 per cent females.
Age	Any age.	First attack before age of 25.
Mental peculiarities	Intellectual weakness; bad memory and attention.	Deficient will power, Want of control over emotions.
Causes	Overwork; dyspepsia; accident; nervous shock.	Emotional upset or shock.
Course	Fairly even.	Paroxysms. Vary from hour to hour.
Mental Symptoms	Mental exhaustion; unable to study; restless; sad; irritable; not equal to	Emotional; wayward; no self-analysis, living by rule or reading medical books; Fond of gaiety;

	amusement. May be suicidal.	sad and joyous by turns. Never suicidal.
General	Occasional giddiness; fainting rare;	Flushing; convulsions and fainting common;
Symptoms	convulsions; headache; backache; sleeplessness; no loss of feeling.	no symptoms between attacks; local anæsthesia or hyperæsthesia.
Termination	Lasts weeks or months. CURABLE.	Lasts lifetime in spasms. TEMPORARILY CURABLE.

Hysteria is a disease of youth, usually ceasing at the climacteric. Social, financial and domestic worries are exciting causes, a happy marriage often curing, and an unhappy one greatly aggravating the complaint. It is most common among the races we usually deem "excitable", the Slavs, Latin races and Jews, and is often associated with anæmia and pelvic disorders.

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Symptoms. Changeability of mood is striking. "All is caprice. They love without measure those they will soon hate without reason."

Sensationalism is manna to them. They *must* occupy the limelight. Pains are magnified or manufactured to attract sympathy; they pose as martyrs—refusing food at table, and eating sweets in their room, or stealing down to the larder at night—to the same end. If mild measures fail, then self-mutilation, half-hearted attempts at suicide, and baseless accusations against others are brought into play to focus attention on them.

Minor attacks usually commence with palpitation and a "rising" in the stomach or a lump in the throat, the *globus hystericus*, which the patient tries to dislodge by repeated swallowing. This is followed by a feeling of suffocation, the patient drags at her neck-band, throws herself into a chair, pants for breath, calls for help, and is generally in a state of great agitation. She may tear her hair, wring her hands, laugh or weep immoderately, and finally swoon. The recovery is gradual, is accompanied by eructations of gas, and a large quantity of pale, limpid, urine may be passed later.

Major attacks have attracted attention through all ages, ancient statues showing the same poses as modern photographs. The beginning stage—which may last a few moments or a few days—is one of mental unrest, the victim being irritable and depressed. In some cases a warning aura then occurs; clutchings at the throat, or the *globus hystericus*, palpitation, dizziness, sounds in the ears, spots dancing before the eyes, or feelings of intense "tightness" as if the skin is about to tear or the stomach to burst.

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The victim throws herself on a chair or couch, from which she slides to the floor, apparently senseless, the head being thrown back, the arms extended, the legs held straight and stiff. The face is that of a dreamer, and the crucifix position is not uncommon. This stage is a gigantic sexual stretch.

Next comes the convulsive stage, but the convulsions are not the true jerky movements of epilepsy, but are bilateral tossing, kicking, and rolling movements, interspersed with various irregular passionate attitudes. There is great alteration but *not loss* of consciousness. The patient struggles with those about her, bites them, but never her own tongue, shrieks and fights, but never passes urine, throws things about, and arches the back until the body rests on head and feet (*opisthotonos*). The stretching and convulsive stages alternate, and the attack lasts a long time, being stopped by pain or by the departure of onlookers. During this stage the face may reflect the various emotions passing through the mind—with a fidelity that would rouse the envy of an Irving.

The patient gradually calms down, and a fit of tears or a scream ends the attack, after which the worn-out victim is depressed but not confused, though memory for the events of the attack may only be partial. The patient sometimes passes into the "dream state", described in [Chapter II](#), for some hours or occasionally for far longer; these are the women described with much gusto in the local Press as being in a trance—"the living dead".

The victim of these attacks *is* suffering from a disease, for she shows many temporary mental symptoms which could not possibly be feigned, while there is often a genuine partial forgetfulness of the incidents of an attack. She says she cannot help it; candid friends say she will not. The truth is that she cannot *will* not to help it; for though intelligence and memory are often good and sometimes abnormal, the judgment and will are always weak—indecision, obstinacy, and doubt being common.

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Treatment. A thorough examination by a doctor is *absolutely essential*, to prove that the patient is merely hysterical, and not the victim of unrecognized organic disease. In a few cases, skilled attention to some minor ailment will result in an apparently miraculous cure.

Many who habitually "go into hysterics", are merely grown-up "spoiled children", and in all cases, the basic factor is a lack of control and self-discipline.

Unfortunately, these tainted individuals who are so exquisitely sensitive that any reproof brings floods of tears, turn with mercurial rapidity from passionate fury to passionate self-reproach, and assuage by impassioned protestations of affection the distress they have carelessly inflicted, and, as a consequence of their momentary but undoubtedly sincere contrition, escape blame and punishment.

Harmful sympathy is thus substituted for helpful discipline, and the more stable members of the

family are often made slaves to the whims and caprices of the hysterical member.

The usual home treatment of the victim passes through various stages, and lacks persistence. Violent methods are succeeded by studied indifference; and that again by reproaches and recriminations.

Greene's remarks are very pertinent: "The condition must be regarded as an acquired psycho-neurosis to be ameliorated, and perhaps removed, by suggestion and a complete control, which, though kind, is firm, persistent, insistent, and *lacking in every element that enters into the upbuilding of the hysterical temperament.*"

For anæmic patients, the following is a useful prescription:

[pg 45]

R.

Quininæ valerianatis gr. xx

Ferri valerianatis gr. xx

Ammon. valerianatis gr. xx

Misce et fiant pilulæ no. xx

Sig.: One or two three times a day, after meals.

As far as the minor symptoms are concerned, the disease is usually chronic, for as soon as one symptom has been overcome another takes its place, and there is little hope of cure save when the case is taken vigorously in hand in childhood, treatment being best given in a home or hospital. Home treatment consists in an attempt to inculcate the lost or never-acquired habit of self-control, and in the hygienic measures laid down for neuropaths in general in the rest of this book.

In a major attack, *show no sympathy*. Let every one leave the room, save one attendant, whom the victim knows to be of firm character, and calm but determined disposition. This attendant should get a jug of water, and threaten to douche the victim unless she makes vigorous efforts to control herself. If she cannot, or will not, *douche her*, then hold a towel over her nose and mouth, and she will perforce cease her gymnastics to breathe, though the attendant must be prepared for an outburst of abuse when she has recovered her breath. Between attacks, all who are brought into contact with the victim, must adopt a tolerant but unsympathetic attitude, while efforts are made to inculcate habits of control.

CHAPTER IX

[pg 46]

ADVICE TO NEUROPATHS

"Great temperance, open air,
Easy labour, little care."

The above quotation epitomizes the cure for neurasthenia, for as Huxley said:

"Our life, fortune, and happiness depend on our knowing something of the rules of a game far more complicated than chess, which has been played since Creation; every man, woman and child of us being one of the players in a game of our own. The board is the world, the pieces the phenomena of the universe, while the rules of the game are the laws of nature. Though our opponent is hidden, we know his play is fair, just and patient, but we also know to our sorrow that he never overlooks a mistake or makes the slightest allowance for ignorance. To the man who plays well, the highest stakes are paid with that overflowing generosity with which the strong show their delight in strength. The one who plays badly is checkmated; without haste, but without remorse. Ignorance is visited as sharply as wilful disobedience; incapacity meets with the same punishment as crime."

In many cases some real trouble is the best medicine for a neurasthenic, for though disaster may crush him, it is more likely to act as a spur, by diverting his thoughts from his woes, and making him fight instead of fret.

Since such blessings in disguise cannot be booked to order, first see a doctor. Though little be physically wrong, the sense of comfort and relief from fear, which a clear idea of what *is* wrong brings, goes a long way towards cure by giving the patient hope and confidence.

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Having seen the doctor, assist him by carrying out the following advice as far as real limitations—not lazy inclinations—permit. Do not say after reading this chapter, "I know all that"; you have to *do* "all that", for medicine alone, whether patent or prescribed, is useless.

Go for a long sea voyage, if possible.

If not, get a long holiday in a quiet farmhouse, or, better still, get to the country for good, be it in never so humble a capacity, for a healthy cowman is happier than a neurasthenic clerk. The rural worker has no theatres, but he can walk miles without meeting another; he has woods to roam in, hills to climb, trees to muse under: he has ample light and air, and his is a far happier lot than that of a vainglorious but miserable, sedentary machine in a great city.

The rural districts round Braemar, the Channel Islands, Cromer, Deal, Droitwich, Scarborough, and Weston-super-Mare are, in general, suitable holiday resorts for neuropaths.

Avoid alcohol, tea, coffee, much meat, all excitement, anger and *worry*. Take tickets only for comedy at the theatre, and leave lectures, social gatherings and dances alone.

Nerve-starvation needs generous feeding with easily digested food. Drink milk in gradually increasing amounts up to half a gallon per day. If more food is needed, add eggs, custard, fruit, spinach, chicken, or fish, but do not forgo any milk. Avoid starchy foods and sweets.

Eat only what you can digest, and digest all you eat. Chew every mouthful a hundred times. This is one of the few sensible food fads. [pg 48]

Drink water copiously between meals, and take no liquid (save the milk) with them. Keep the bowels open.

If you *must* "occupy your mind", take up some very simple, quiet hobby. Gardening, fretwork, photography and gymnastics are not necessarily quiet hobbies. Chess, billiards, and contortions with gymnastic apparatus are not to be recommended.

If you *must* read, peruse only humorous novels. Never study, and leave exciting fiction and medical work alone. Symptoms are the most misleading things in a most misleading world.

After your evening meal, take a quiet walk, go to bed *and sleep*. You should occasionally spend from Saturday midday to Monday morning in bed, with blinds drawn, living on milk, seeing nobody and doing *nothing*. The deepest degradation of the Sabbath is to fill it with odd jobs which have accumulated through the week.

Do not get out of bed too early in the morning, but rise in time to eat your breakfast slowly, attend to the toilet, and catch the car without haste. If your occupation be an indoor one, rise an hour earlier, and walk or cycle quietly to work.

Take a warm bath followed by a cold douche on rising. If no warm after-glow follows, use tepid water. Keep your body warm; your head cool.

Be continent. Nerve-tone and sexual delights are not compatible. Matrimony, while a convenient cloak, is no excuse for lust.

Try suggestion for fears and impulses (see [Chapter XVIII](#)), for it is useless to "reason them out", though it is useful for a brief period each day to try deliberately to turn the mind away from the obsession, by singing or whistling, gradually prolonging the attempts. [pg 49]

Rest, to prevent the manufacture of more waste products, the elimination of those present, and the generation of nerve-strength from nourishing food are the things that cure. [Chapters XIX](#) and [XX](#) deal with the drug treatment.

Do not Worry. Whatever your trouble is, it is useless to

"Look before and after, and sigh for what is not"

for the future cannot be rushed nor the past remedied. All patients reply promptly that they "can't help" worrying, when in truth they do not try.

Work never hurt anyone, but harassing preoccupation with problems which no amount of thought will solve drives many thousands to early graves. Anger exhausts itself in a few minutes, fatigue in a few hours, and real overwork with a week's rest, but worry grows ever worse. Ponder Meredith's lines:

"I *will* endure; I will not strive to peep
Behind the barrier of the days to come."

"Look on the bright side!" said an optimist to a melancholy friend.

"But there is no bright side."

"Then polish up the dull one!" was the sound advice tendered.

Learn to forget!

One cannot open a periodical without being exhorted to train one's memory for a variety of reasons. The neuropath needs a system of forgetfulness. Lethe is often a greater friend than Mnemosyne.

To brood on disappointments, failures and griefs only wastes energy, sours temper, and upsets the general health. Resolve *beforehand* that when unhappy ideas arise you will *not* dwell on them, but turn your thoughts to pleasant trifles; take up a humorous book, or take a turn in the fresh air, and you will soon acquire the habit of laughing instead of whining at Fate. [pg 50]

To sum up: Go slow! Your neurons have been exhausted in your foolish attempt to "live this day as if thy last" in a wrong sense; feverish activity and unnecessary work must be abandoned to enable the nerves to recuperate.

When the doctor says "rest", he means "*rest*", not change your bustle from work to what you are

pleased to regard as play.

So much is *absolute rest* recognized as the foundation of treatment, that severe cases undergo the "Weir-Mitchell Treatment". The patient is *utterly secluded*; letters, reading, talking, smoking and visits from friends are forbidden. He is put to bed, not allowed even to sit up, sees no one save nurse and doctor, is massaged, treated electrically, grossly overfed, fattened up, and freed from every care.

In leaving his habitual circle, the patient escapes the too-attentive care of his relatives, and the incessant questions about his complaint with which they overwhelm him. The results of this régime with semi-insane wrecks are marvellous. It is a very drastic but very successful "rest-cure", and while it cannot be undergone at home, neurasthenics will benefit by following its principles as far as they can in their own homes.

High-frequency or static electricity sometimes works wonders in the hands of a specialist, but the electric batteries, medical coils, finger-rings and body-belts so persistently advertised are *useless*.

When the patient has in some measure recuperated, he may try the following exercises in mental concentration. Vittoz claims good results from them, but they must be done quite seriously. [pg 51]

1. Walk a few steps with the definite idea that you are putting forward right and left feet alternately. Go on by easy stages until you concentrate on the movement of the whole body.
2. Take any object in your hand, and note its exact form, weight, colour, etc.
3. Look in a shop-window while you count ten, and as you walk on, try to recall all the objects therein exhibited.
4. Accustom yourself to defining the sounds you hear, and concentrating on a special one, as that of a passing tram, or a ticking watch.
5. Make a rapid examination several times daily of your feelings and thoughts, and try to express them definitely.
6. Concentrate on the mental reproduction of a regular curve: a figure 8 placed on its side.
7. Listen to a metronome, and, a friend having stopped it, mentally repeat the ticking to time.
8. Whenever you handle anything, try to retain the impression of that object and its properties for several minutes, to the exclusion of other ideas.
9. Concentrate on ideas of calm, and of energy controlled.
10. Place three objects on a sheet of white paper. Remove them one by one, at the same time effacing the impression of each one as it is removed, until the mind, like the paper, is blank.
11. Efface two of the objects, and retain the impression of one only.
12. Replace the impressions in your mind, but not the objects on the paper, one by one.

The object of these exercises is to get your wandering mind daily a little more under control; do not exhaust yourself. [pg 52]

After some months of treatment, ask yourself—

Am I able to walk ten miles with ease? when introduced to a stranger of either sex or any age, to converse agreeably, profitably and without embarrassment? to entertain visitors so that all enjoy themselves? to read essays or poetry with as much pleasure as a novel? to listen to a lecture, and be able afterwards to rehearse the main points? to be good company for myself on a rainy day? to submit to insult, injustice or petulance with dignity and patience, and to answer them wisely and calmly? When you are able to answer, "Yes!" to these queries, your nerves are sound.

CHAPTER X

FIRST STEPS TOWARDS HEALTH

"All sick people want to get well, but rarely in the best way. A 'jolly good fellow' said: 'Strike at the root of the disease, Doctor!' And smash went the whisky bottle under the faithful physician's cane."

In neuropaths, all irritation to the nervous system is dangerous, and must be eliminated, and to this end, eyes, ears, nose and teeth, all in close touch with nerves and brain, must be put and kept in perfect order.

The Eye. Only 4 per cent, of people have *perfect* sight. Errors in refraction—common in neuropaths—mean that the unstable brain-cells are constantly irritated. Dodd corrected eye-errors in 52 epileptics, 36 of whom showed improvement.

You take your watch to a watchmaker, not a chemist; take your eyes to an oculist, and if you cannot afford to see one privately, get an eye-hospital note. (To allow a chemist or "optician" to try lenses until he finds a pair through which you "see better" is very dangerous.)

Then you go to a qualified optician, who makes a proper frame, and inserts the lenses prescribed. Patients should inquire if the glasses are to be worn continually, or only when doing close work or reading.

The Ears. Giddiness and other unpleasant symptoms may be due to ear trouble. If there is any discharge, buzzing or ringing, see a doctor, for if ear disease gains a firm hold it is usually incurable.

The Nose. Neuropaths often suffer from moist nasal catarrh, or from a dry type in which crusts of offensive mucus form, the disagreeable odour of which is not apparent to the patient himself. He must pay careful attention to the general health, take nourishing food, and wash out the nose three times a day with:

1 oz. Bicarbonate of Soda,
1 oz. Common Salt,
1 oz. Borax,
Dissolved in 1 pint hot water.

For obstinate nasal trouble, consult an aural surgeon.

The Teeth.

"Most men dig their graves with their teeth."—Chinese Proverb.

Serious ills are caused by defective teeth, for microbes decompose the food left in the crevices to acid substances which dissolve the lime salts from the teeth, and this process continues until the tooth is lost.

Faulty teeth are common in neuropaths, and at the risk of being wearisome—and good advice is wearisome to people—patients must get proper aid, privately or at a dental hospital, from a *registered dentist*, who, like a doctor, does not advertise.

Teeth gone beyond recall will be painlessly extracted, those going, "stopped", and tartar or scale scraped off. If necessary, have artificial teeth, but remember that the comfort of a plate depends upon skilled workmanship, not on gold or platinum. Everyone should visit the dentist as a matter of routine once a year.

Buy 3 ozs. Precipitated Chalk,
1 oz. Chlorate of Potash,

and brush the teeth with this mixture ere going to bed; use tepid water after meals. Do not brush across, but, holding the brush horizontally, brush with a circular motion, cleaning top and bottom teeth at once. Use a moderately hard brush with a curved surface which fits the teeth.

After each meal, it is essential to cleanse the interstices between the teeth with a quill toothpick or dental floss, never with a pin, for it is the decomposition of tiny particles that starts decay; *a tooth never decays from within.*

1½ fl. oz. Glycerine,
1 fl. oz. Carbolic Acid,
½ fl. oz. Methylated Chloroform.

With ten drops of this mixture in a wineglassful of tepid water, wash out your mouth and gargle your throat after every meal, sending vigorous waves between the teeth, and so removing any particles left by toothpick and brush.

Children should be taught these habits as soon as they can eat, for the custom of a lifetime is easy.

CHAPTER XI

DIGESTION

"We may live without poetry, music and art;
We may live without conscience, and live without heart;
We may live without friends, we may live without books,
But civilized man cannot live without cooks."

The human digestive system consists of a long tube, in which food is received, nutriment taken from it as it passes slowly downwards, and from which waste is discharged, in from sixteen to

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thirty hours afterwards.

Six glands pour saliva into the mouth, where it should be—but how rarely is—mixed with the food, causing chemical changes, and moistening the bolus to pass easily down.

The acid **Gastric Juice**, of which a quart is secreted daily, stops the action of the saliva, and commences to digest the proteins, which pass through several stages, each a little more assimilable than the last.

The lower end of the stomach contracts regularly and violently, churning the food with the juice, and gradually squirting it, when liquified to **Chyme**, into the small intestine. If food is not chewed until almost liquified, the gastric juice cannot act normally, but has to attack as much of the surface of the food-lump as possible, leaving the interior to decompose, causing dyspepsia and flatulence.

Most people suppose the stomach finishes digestion, but it only initiates the digestion of those foodstuffs which contain nitrogen, leaving fats, starches and sugars untouched.

By an obscure process, the acid chyme stimulates the walls of the bowel to send a chemical messenger, a **Hormone** through the blood to the liver and pancreas, warning them their help is needed, whereupon they actively secrete their ferments.

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The secretion of the pancreas is very complex. It carries on the work of the saliva, and also splits insoluble fats into a soluble milky emulsion.

Fats are unaffected in the mouth and stomach, which explains why hot, buttered toast, and other hot, greasy dishes are so indigestible. The butter on plain bread is quickly cleared off, and the bread attacked by the gastric juice, but in toast or fatty dishes, the fat is intimately mixed with other ingredients, none of which can properly be dealt with. Always butter toast when cold.

To continue: The secretion of the pancreas also contains a very active ferment, which, on entering the bowel, meets and mixes with another ferment four times as powerful as gastric juice, which completes the digestion of the proteids.

Meantime, the secretions of Lieberkühn's glands (of which there are immense numbers in the small intestine) are further aiding the digestion of the chyme, while the liver (the largest and most important gland in the body) sends its ferments, and the gall-bladder its bile, which further emulsifies the fatty acids and glycerin until they are ready to be absorbed.

The chemically-changed chyme is now termed **Chyle**, and is ready to be absorbed by the minute, projecting **Villi**.

The fatty portion of the chyle is absorbed by minute capillaries and ultimately mingles with the blood, which may look quite milky after a fatty meal.

The remaining food is absorbed by the blood capillaries in the villi, and passes to the liver for filtration and storage.

The large bowel has Lieberkühn's glands, but not villi, and is relatively unimportant, though most of the water the body needs is absorbed from here.

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How food becomes energy and tissue we do not know. The tissues are continually being built up from assimilated food, and as constantly being burnt away, oxygen for this purpose being extracted from the air we inhale, and carried via the blood to every corner of the body. The ashes of this burning are expelled into the blood and lymph, and carried out of the body by the kidneys, lungs, skin and bowels. The product of the burning is the marvel—**Life**; the extinction of the fire is the terror—**Death**.

Energy is obtained almost solely from the combustion of fats and sugars, proteids being reconverted into albumin, and then broken down to obtain their carbon for combustion, the nitrogen being expelled, but proteids are essential for the building of the tissues themselves, the stones of the furnaces which burn up carbohydrates and fats.

The time taken in the digestion of foods was first studied through a wound in the stomach of St. Martin, a Canadian. Experiments were made with various well-masticated foods, and with similar foods placed unchewed, into the stomach through the wound, the latter experiment being carried out by millions of people at every meal, by a slightly different route.

Boiled food is more easily digested than fried or roasted (the frying pan should be anathema to a neuropath); lean meat than fat; fresh than salt; hot meat than cold; full-grown than young animals, though the latter are more tender; white flesh than red; while lean meat is made less, and fat meat more digestible, by salting or broiling. Oily dishes, hashes, stews, pastries and sweetmeats are hard to digest. Bread should be stale, and toasted crisply *right through*. The time, compared with the thoroughness of digestion, is of little importance, as it varies widely within physiologic bounds.

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Most people fancy that the more they eat the stronger they become, whereas the digestion of all food beyond that actually needed to repair the waste due to physical and mental effort consumes priceless nerve energy, and weakens one. The greater part of excessive food has literally to be *burnt away* by the body, which causes great strain, mainly on the muscles. The question is not: "How much can I eat?" but: "How much do I need?"

INDIGESTION

"We know how dismal the world looks during a fit of indigestion, and what a host of evils disappear as the abused stomach regains its tone. Indigestion has led to the loss of battles; it has caused many crimes, and inspired much sulphurous theology, gloomy poetry and bitter satire."—Hollander.

The nervous dyspeptic suffers no marked pain, but often feels a "sinking", has no appetite, and cannot enjoy life because his stomach, though sound, does not get enough nerve-force to run it properly.

A great deal of nerve-force is required for digestion, and if a man comes to the table exhausted, bolts his food, uses nerve-force scheming while he is bolting, and, immediately he has bolted a given amount, rushes off to work, digestion is imperfectly performed, nutriment is not assimilated, the nerve-force supply becomes deficient. He continues to overdraw his account in spite of the doctor's warning, and stomachic bankruptcy occurs, followed by a host of ills.

Nervous dyspepsia is a very obstinate complaint, but if tackled resolutely, it can to a great extent be mitigated; but let it be emphasized at once, that medicines, patent or otherwise, are useless. If dyspepsia be aggravated by other complaints, these should receive appropriate treatment, but the assertions so unblushingly made in patent-pill advertisements are unfounded. The very variety of the advertised remedies is proof of the uselessness of all.

Set aside certain periods three times a day for meals. Fifteen minutes before meal times, sit in a comfortable chair, relax all your muscles, close the eyes, and try to make the mind a blank. *Rest!* [pg 61]

Then eat the meal slowly and thoroughly. Conversation may lighten and lengthen a meal, but avoid politics, "shop" and topics of that type. What is wanted at table is wit, not wisdom.

Water may be drunk with meals, provided it is drunk between eating, and not while masticating, for it has decidedly beneficial effects upon the digestive functions. Water is usually forbidden with meals because if patients drink while eating, the water usurps the functions of saliva, and moistens the bolus, which is then swallowed with little or no mastication. If you cannot drink between mouthfuls, then drink only between meals. *Never drink while food is in the mouth!*

After the meal, lie down on the right side for half an hour, *resting*, and so directing all available nerve-energy to getting digestion well under way.

Indifferent appetites must be tempted by wholesome dishes made up in a variety of enticing ways. Fats are good, but must be taken in a tasty form. Eat fruit deluged with cream.

The crux of digestion is to

"*Chew!* CHEW!! and KEEP ON CHEWING!!!" for until food is thoroughly masticated there will be no relief. The only part of the whole digestive process placed under the control of consciousness is mastication, and, paradoxically, it is the only part that consciousness usually ignores.

A healthy man never knows he has a stomach; a dyspeptic never knows he has anything else, because he will not *eat* his food, but throws it into his stomach as the average bachelor throws his belongings into a trunk.

A varied, tasty diet, thoroughly chewed and salivated, with rest before and after meals, is the only means of curing dyspepsia, for no medicine can supply and properly distribute nerve-energy. [pg 62]

Digestive pills are all purgatives, with a bitter to increase appetite, and occasionally a stomachic, bound together with syrup or soap. Practically all contain aloes, and very rarely a minute quantity of a digestive ferment like pepsin. Taken occasionally as purges, most digestive pills would be useful, but none are suited to continuous use, and the price is, as a rule, out of all proportion to the primary cost, while one or two are, frankly, barefaced swindles.

The analyses of the British Medical Association give the following as the probable formulæ for some well-known preparations:

Beecham's Pills	Aloes; ginger.
Holloway's Pills	Aloes; ginger.
Page Woodcock's	Aloes; ginger; capsicum; cinnamon and oil of peppermint.
Carter's Little Liver Pills	Aloes; podophyllin; liquorice.
Burgess' Lion Pills	Aloes; ipecacuanha; rhubarb; jalap; peppermint.
Cockle's Pills	Aloes; colocynth; jalap.
Barclay's Pills	Aloes; colocynth; jalap.
Whelpton's Pills	Ginger; colocynth; gentian.
Bile Beans	Cascara; rhubarb; liquorice; peppermint.
Cicfa	Cascara; capsicum; pepsin; diastase; maltose.

DIETING

"Simple diet is best; many dishes bring many diseases,"
—Pliny.

"Alas! what things I dearly love—
puddings and preserves—
Are sure to rouse the vengeance of
All pneumogastric nerves!"
—Field.

The man who pores over a book to discover the exact number of calories (heat units) of carbohydrates, proteins and fats his body needs, means well, but is wasting time.

In theory it is excellent, for it should ensure maximum work-energy with minimum use of digestive-energy, but in practice it breaks down badly, a weakness to which theories are prone. One man divided four raw eggs, an ounce of olive oil, and a pound of rice into three meals a day. Theoretically, such a diet is ideal, and for a short time the experimenter gained weight, but malnutrition and dyspepsia set in, and he had to give up. The best diet-calculator is a normal appetite, and fancy aids digestion more than a pair of scales.

In spite of rabid veget- and other "arians", most foods are good (making allowances for personal idiosyncrasy) if thoroughly masticated. The oft-quoted analogy of the cow is incorrect, for herbivora are able to digest cellulose; but even cows masticate most laboriously.

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Meat juices are the most digestion-compelling substances in existence, and a little meat soup, "Oxo" or "Bovril" is an excellent first course.

No one needs more than three meals per day, while millions thrive on one or two only, which should be ready at fixed hours; for the stomach when habituated becomes congested and secretes gastric juice at those hours without the impulse of the will, is ready to digest food, and gets that rest between-times which is essential to sound digestion. The man who has snacks between meals, and chocolates and biscuits between snacks can never hope to get well.

To eat the largest meal at midday, as is the custom of working-men, is best, provided one can take half an hour's rest afterwards.

Drink a pint of tepid water half an hour before every meal. If the stomach be very foul, add a teaspoonful of bicarbonate of soda to the water.

The question of alcohol is a vexed one, but Paul's "Take a little wine for thy stomach's sake," is undoubtedly sound advice, though had Paul been trained at a London hospital, he would have added "after meals". Unfortunately, moderation is usually beyond the ability of the neuropath, and consequently he should be forbidden to take alcohol at all. Spirits must be avoided.

Moderately strong, freshly made tea or coffee may be consumed in reasonable quantity.

Vegetable salads are excellent if compounded with liquids other than vinegar or salad oil, and of ingredients other than cucumbers, radishes, and the like.

Take little starchy food and sweetmeats. It may surprise those with "a sweet tooth" to learn that, to the end of the Middle Ages, sugar was used only as a medicine. Meat must be eaten—if at all—in the very strictest moderation, and never more than once a day. Eggs, fish and poultry—in moderation too—take its place.

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Healthy children need very little meat, while it is a moot point if children of unstable, nervous build need any at all. The diet at homes for epileptics is usually vegetarian, and gives excellent results.

Never swallow skin, core, seeds or kernels of fruits, many of which, excellent otherwise, are forbidden because of the irritation caused to stomach and bowels by their seeds or skins.

Bromides are said to give better results if salt is not taken. A little may be used in cooking, if, as is usually the case, the patient has to eat at the common table, but condiments are unnecessary and often irritating to delicate stomachs.

The diet of nervous dyspeptics must be very simple, and though it is trying and monotonous to forgo harmful dainties in favour of wholesome dishes, it is but one of the many limitations Nature inflicts on neuropaths. Many an epileptic, after believing himself cured, has brought on a severe attack by an imprudent meal. La Rochefoucauld says: "Preserving the health by too strict a regimen is a wearisome malady", but it is open to all men to choose whether they will endure the remedy or the disease.

Most men eat six times the minimum and twice the optimum quantity of food per day. For every one who starves, hundreds gorge themselves to death. "Food kills more than famine", and the poor, who eat sparsely from necessity, suffer far less from gout, cancer, rheumatism and other food-aggravated diseases than the rich.

Most books give detailed lists of foods to be eaten and to be avoided, but this we believe is

productive of little good.

Let the patient eat a mixed diet, well and suitably cooked, taking what he fancies in reason, masticating everything thoroughly, and gradually eliminating foods which experience teaches him are difficult for him to digest.

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CHAPTER XIV

[pg 67]

CONSTIPATION

"Causing a symptom to disappear is seldom the cure of any ill; the true course is to *prevent* the symptom."

Rings of muscle cause wormlike movements of the bowels, and so propel forward food and waste. Weakening of these muscles or their nerve controls from any cause, results in a "condition of the bowels in which motions occur only when provoked by medicines or injections". In some cases though motions occur freely, food ingested is retained too long in the digestive tract.

The blood extracts what water it needs from the fluid waste in the large bowel, but when the weak muscles allow this to remain too long, an excess of moisture is removed, leaving hard, dry masses, painful to pass.

When the fæces reach the anus, they cause an uneasy feeling, which directs us to seek relief, but if we neglect this impulse the bowel may become so insensitive that it ceases to warn its owner of the need to evacuate. Meantime, the muscles which expel the fæces get weak, so that every motion needs a strong effort of will, and much harmful straining.

Much misery is caused by false modesty in the presence of others. It can never be immodest to attend to the calls of Nature, and such hypersensitiveness is dangerous, for rupture, piles, fissure, prolapse, fistula, are often due to straining.

Lack of exercise weakens the intestinal and abdominal muscles. Unsuitable or imprudent foods or drinks, indigestion, excessive worry, and anything that lowers the general health tend to produce constipation.

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Bacteria flourish freely in fæces, and though it is doubtful whether the "Auto-intoxication" so freely ascribed to them, is supported by facts, it cannot be doubted that, whatever the precise mechanism by which the effects are produced, constipation does result in a lowering of the resistance to disease. More frequent fits, colic, foul breath, headache right across the forehead, lost appetite, drowsiness, skin eruptions, irritability, insomnia, melancholia and anæmia (especially the "green sickness" of women, usually connected with menstrual irregularities) are but a few of many ills partly or wholly due to or consequent upon constipation.

The symptoms of constipation of the small bowel are dry stools, usually light in colour.

To cure this type, more water should be drunk, so that the waste may pass to the large bowel in a fluid state. Drink freely between meals, especially in summer, when profuse perspiration often causes obstinate constipation.

The symptoms of constipation of the large bowel are furred tongue, fœtid breath, sallow or jaundiced complexion, and mottled stools of round, hard balls, the first portion being very firm, and the remainder nearly liquid. There are occasional attacks of colic.

The first step towards cure is to form regular habits. At a suitable time, say shortly after breakfast, or after supper if you suffer from hæmorrhoids, go to the lavatory, whether you feel uncomfortable or not. Wait patiently, do not try to hasten matters by violent straining, and if for some weeks there is little improvement, do not despair, for the habits of a lifetime are not overcome in five minutes, just because you have decided to amend your careless ways. A short, brisk walk beforehand often helps.

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If necessary, use a chamber and "squat" as savages do. In this position, the thighs support the abdomen, and force is exerted without straining. Massaging the abdomen by firmly rubbing it round and round, clockwise, with the hand, often does good, as does pressure with a finger on the flesh between the end of the backbone and the anus. Try every method before taking purgatives, for with patience and determination these are rarely necessary.

Carefully cooked and "concentrated", easily digested and "pre-digested" foods contain little residue; every meal should contain some indigestible matter to stimulate the intestines. Brown bread, porridge, lettuce, cress, apples and coarse vegetables are all good for this purpose, but if taken too freely may cause heartburn and flatulence. Meat, milk, fish, eggs and most patent foods have not enough waste. Boiled milk is very constipating.

Purgatives, injections and medicines, alone, are useless, for the bowel becomes still more insensitive to natural calls under the artificial stimulation of drugs, on which it becomes so entirely dependent that without their aid it will not act.

It may be necessary to clean out the bowel by an enema.

Make a lather with clean warm water and plain soap, and fill the enema syringe (a half-pint size is useful). Smear the nozzle with vaseline, lean forward and insert into the anus, pointing a little

to the left. Press the bulb, withdraw the nozzle, retain the liquid a few moments and a desire to go to stool will be felt.

A simpler plan is to buy glycerin suppositories. One is inserted into the anus and acts like an injection. It must be clearly understood that these are emergency measures.

If internal piles come down at stool, do not allow them to remain and get engorged with blood. See that your hands are scrupulously clean, and your nails closely cut and free from dirt; then moisten the middle finger with a little vaseline taken to the lavatory for the purpose, and gently return the hæmorrhoids, sitting down for a few minutes to retain them. [pg 70]

A mild purge may be taken once a week with advantage. Glauber's Salts (Sodium Sulphate), Cascara Sagrada, and liquid paraffin are all good, while Castor Oil Globules are suited for children.

For flatulence, take a 10-minim capsule of Terebine after meals, or charcoal, either as French Rusks ("Biscols Fraudin") or a teaspoonful of powdered charcoal between meals. One drop of creosote on a lump of sugar, peppermint water, and sal volatile may also be used. Sufferers should toast bread, and use sugar sparingly.

Patent medicines almost invariably contain a brisk aperient.

CHAPTER XV

[pg 71]

GENERAL HYGIENE

"Better to hunt in fields for health unbought,
Than fee the doctor for a nauseous draught."
—Dryden.

If men but realized what complicated machines they were, they would use themselves better. In the body are 240 bones and hundreds of muscles. The heart, no bigger than the clenched fist, beats 100,000 times a day; the aerating surface of the lungs is equal in area to the floors of a six-roomed house, and by means of its minute blood-vessels which would stretch across the Atlantic, 500 gallons of blood are brought into contact with over 3,000 gallons of air every day.

Seven million sweat-glands, 30 miles long, get rid of a pint of liquid and an ounce of solid waste each day while it takes a tube 30 feet long, with millions of glands, to deal with a sip of milk.

Man's finest steam engine turns one-eighth of the energy supplied into work; nature's engine, muscle, turns one-third into work. The body contains 9 gallons of water, enough carbon to make 9,000 lead pencils, phosphorus for 8,000 boxes of matches, iron for 5 tacks, and salt enough to fill half a dozen salt-cellars.

Over 40 food-ferments have been found in the liver; there are 5,000,000 red and 30,000 white blood corpuscles in a space as big as a pin's head, each one of which travels a mile a day and lives but a fortnight, millions of new ones being built up in the bone-marrow every second; a flash of light lasting only one eight-millionth of a second, will stimulate the eye, which can discriminate half a million tints. The ear can distinguish 11,000 tones, and is so sensitive that we hear waves of air less than one sixty-thousandth of an inch long; a mass of almost liquid jelly—for 81 per cent of the brain is water, and Aristotle thought it was a wet sponge to cool the hot heart—sends out impulses ordering our every thought and act, and stores up memory, we know not how or where. [pg 72]

There are 10,000,000,000 of cells in the brain cortex alone, and 560,000 fibres pass from the brain down the spinal cord.

A clear, watery cell, no larger than the dot on an "i" encloses factors causing genius or stupidity, honesty or roguery, pride or humility, patience or impulsiveness, coldness or ardour, tallness or shortness, form of head or hands, colour of eyes and hair, male or female sex, and the thousand details that make a man.

Yet man uses this marvellous mechanism but carelessly, and the widespread poverty, the worry and discord in the lives of the happiest, our ignorance, the evil habits we contract, and the vice, miseries, diseases and labours to which most expectant mothers are too often exposed, explain why one baby in every eight never walks; why but four of them live to manhood; why less than 40 years is now man's average span; and why this brief space is filled with suffering and misery, from which many escape by self-destruction.

Sound children do not come from unclean air, surroundings, habits, pursuits, passions and parents. Children conceived in unsuitable surroundings by unsuitable parents, die; must die; ought to die. They are not built for the stern battle of life. [pg 73]

"Where the sun does not enter, the doctor does!"
—Italian proverb.

Plenty of fresh, clean air is essential to health.

In all rooms a block of wood nine inches high should be inserted beneath the whole length of the bottom sash of the window. This leaves a space between the top and bottom sashes through

which fresh air passes freely, without draught, both night and day, for it should never be closed. A handy man will fit a simple device to prevent the windows being forced at night, but better let in a burglar than keep out air.

If it be cold or draughty in the bedroom, hang a sheet a foot from the window, put more blankets or an overcoat on the bed, or put layers of brown paper above the sheets, *but never close the window*.

You can take too much of many good things, but never too much pure air.

Cleanliness. Keep the body clean by taking at least one hot bath per week; per day if possible. Much filth is excreted by your sweat-pores; why let it cake on skin and underlinen, and silently silt up your thirty miles of skin canals, thus overworking the other excretory organs, and gradually poisoning yourself?

Neuropaths always suffer from sluggish circulation of the extremities, and to improve this, hot and cold baths, spinal douches and massage are excellent. A hot bath (98-110° F.) ensures a thorough cleansing, but it brings the blood to the surface, where its heat is quickly lost, enervating one, and causing a bout of shivering which increases the production of heat by stimulating the heat-regulating centre in the brain. Baths above 110° F. induce faintness. To prevent shivering, take a cold douche after the hot bath, and have a brisk rub down with a coarse towel, when a delightful, warm glow will result. Do not freeze yourself, or the reaction will not occur; what is wanted is a short, sharp shock, which sends the blood racing from the skin, to which it returns in tingling pulsations, which brace up the whole system. The douche is over in a few seconds, and may be enjoyed the year round, commencing in late Spring.

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The cold bath must not be made a fetish. If the glow is not felt, give it up, and bathe in tepid (85-92° F.) or warm (93-98° F.) water. When started in the vigour of youth, the cold bath may often be continued through life, but it is unwise to commence in middle life. Parents should never force their children to take cold baths, to "harden them".

Other Hygienic Points. Tobacco is undesirable for neuropaths, save in moderation.

Clothes should be light, loose, and warm. Epileptics should wear low, stiff collars, half a size too large, with clip ties. Such a combination does not form a tight band round the neck, and can quickly be removed if necessary. Wear thick, woollen socks, and square-toed, low-heeled, double-soled boots. Hats should be large, light, and of soft material. Woollen underwear is best. Change as often as possible, and aim at health, not appearance.

Let all rooms be well lighted, well ventilated, moderately heated, and sparsely furnished with necessities. Shun draperies, have no window boxes, cut climbing plants ruthlessly away from the windows, and never obstruct chimneys.

Buy Muller's "My System", which gives a course of physical exercises without apparatus, which only take fifteen minutes a day. The patient must conscientiously perform the exercises each morning, not for a week, nor for a month, but for an indefinite period, or throughout life.

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Finally, remember that so few die a natural death from senile decay because so few live a natural life.

CHAPTER XVI

[pg 76]

SLEEPLESSNESS

"O magic sleep! O comfortable bird
That broodest o'er the troubled sea of the mind
Till it is hushed and smooth."
—Keats.

Some men need only a few hours' sleep, but no one ever overslept himself in natural slumber. There are anecdotes of great men taking little sleep, but their power usually consisted in going without sleep for some days when necessary, and making up for it in one long, deep sleep. Neuropaths require from 10-13 hours to prepare the brain for the stress of the next day, but quality is more important than quantity.

Patients go to bed tired, but cannot sleep; fall asleep, and wake every other hour the night through; sleep till the small hours, and then wake, to get no more rest that night; only fall asleep when they should be rising; or have their slumber disturbed by nightmare, terrifying dreams, heart palpitation, and so on.

Noise often prevents sleep. A clock that chimes the quarters, or a watch that in the silence ticks with sledge-hammer beats, has invoked many a malediction. Traffic and other intermittent noises are very trying, as the victim waits for them to recur. Townsmen who seek rural quiet have got so used to town clatter, that barking dogs, rippling streams, lowing cows, rustling leaves, singing birds or chirruping insects keep them awake. Too much light, eating a heavy supper, all tend to banish repose, as do also violent emotions which produce toxins, torturing the brain and causing gruesome nightmares.

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Grief and worry—especially business and domestic cares—constipation, indigestion, bad

ventilation, stimulants, excitement and a hearty supper are a few of the many causes of insomnia.

In children sleeplessness is often due to the bad habit of picking a child up whenever it cries, usually from the pain of indigestion due to having been given unsuitable food. Feed children properly, and train them to regular retiring hours. School home-work may cause insomnia; if so, forbid it.

Man spends a third of his life in the bedroom, which should be furnished and used for no other purpose. Pictures, drapery above or below the bed, and wallpaper with weird designs in glaring colours are undesirable. The wall should be distempered a quiet green or blue tint, and the ceiling cream. A bedroom should never be made a storeroom for odds and ends, nor is the space beneath the bed suitable for trunks; least of all for a soiled-linen basket.

Some time before retiring, excitement and mental work should be avoided. The patient should take a quiet walk after supper, drink no fluid, empty bladder and bowels, and take a hot foot-bath.

Retire and rise punctually, for the brain, like most other organs, may be trained to definite habits with patience.

If sleeplessness be ascribed, rightly or wrongly, to an empty stomach, a glass of hot milk and two plain biscuits should be taken in bed; dyspeptics should take no food for three hours before retiring. If the patient wakes in the early morning he may find a glass of milk (warmed on a spirit-stove by the bedside) and a few plain biscuits of value.

A victim of insomnia should lie on his side on a firm bed with warm, light coverings, open the window, close the door, and endeavour to fix his attention on some monotonous idea; such as watching a flock of white sheep jump a hedge. Think of trifles to avoid thinking of troubles.

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How often do we hear people complain that they suffer from insomnia, when in fact they get a reasonable amount of sleep, and indeed often keep others awake by their snoring.

When you wake, *get up*, for a second sleep does no good. When some one, on seeing the narrow camp-bed in which Wellington slept, said: "There is no room to turn about in it," the Iron Duke replied: "When a man begins to turn about in his bed it is time he turned out of it."

The only safe narcotic is a day's hard work. For severe insomnia consult a doctor; do not take drugs—that way lies ruin. By taking narcotics, or patent remedies containing powerful drugs, you will easily get sleep—for a time only—and then fall a slave to the drug. Such victims may be seen in dozens in any large asylum.

CHAPTER XVII

[pg 79]

THE EFFECTS OF IMAGINATION

"The surest way to health, say what they will
Is never to suppose we shall be ill;
Most of the ailments we poor mortals know
From doctors and imagination flow."
—Churchill.

"Men may die of imagination,
So depe may impression be take."
—Chaucer.

"Suggestion is the introduction into the mind of a practical belief that works out its own fulfilment."—Guyau.

Man suffers from no purely imaginary ills, for mental ills are as real as physical ills, and though an individual be ailing simply because he persuades himself he is ailing, his mind so affects his body that he is actually unwell physically, though the cause of his trouble is purely mental.

The suffering of this world is out of all proportion to its actual disease, many people being tortured by fancied ills. Some dread a certain complaint because a relative has died of it.

Others are unwell, but while taking proper treatment they brood gloomily, and get worse instead of better as they should and *could do*.

Cheap medical and pseudo-medical works are not an unmixed blessing, for many a person who knows, and needs to know, nothing about disease, gets hold of one, and soon has most of the ills known to the faculty and some which are not.

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If a patient be an optimist and persuades himself he is improving, he *does* improve. This is the explanation of "Faith moving mountains", for the curative power of prayer, Christian Science, laying-on of hands, suggestion treatment and patent medicine, depends on man's own faith, not on the supernatural.

A doctor in whom a patient has perfect confidence, will do him far more good with the same medicines, or even with no medicines at all, than one of riper experience in whose skill he has no faith.

Eloquent, though often inaccurate accounts of the benefits derived from patent medicines are persistently advertised until the mind is so influenced by the constant reiteration of miraculous cures, that, either because the healing forces of the body are thereby stimulated, or because the disease is curable by suggestion, the patient is benefited by such medicines.

Thinking of pain makes it worse and vice versa.

The curative effects of auto-suggestion were demonstrated at the Siege of Breda in 1625. The garrison was on the point of surrender when a learned doctor eluded the besiegers, and got in with some minute phials of an extraordinary Eastern Elixir, one drop of which taken after each meal cured all the ill flesh was heir to; two drops were fatal.

The "learned doctor" was a quick-witted soldier, and the elixir was *coloured water* sold by order of the commander. Its potency was due to the faith of all, who persuaded each other they were getting better, and an epidemic of infectious wellness followed ill due to depressed spirits.

One man after reading a list of symptoms said in great alarm: "Good Heavens. I have got that disease!" and, on turning the page, found it was... *pregnancy*.

As the great Scotch physiologist, Reid, said seventy years ago:

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"Hope and joy promote the surface circulation of the body, and the elimination of waste matter and thus make the body capable of withstanding the causes which lead to disease, and of resisting it when formed. Grief, anguish and despair enfeeble the circulation, diminish or vitiate the secretions, favour the causes which induce disease, and impede the action of the mechanism by which the body may get rid of its maladies. An army when flushed with victory and elated with hope maintains a comparative immunity from disease under physical privations and sufferings which, under the opposite circumstances of defeat and despair, produce the most frightful ravages."

The classic description of the woeful effects of imagination is in Jerome's "Three Men in a Boat". Harris, having a little time on his hands, strolls into a public library, picks up a medical work, and discovers he has every affliction therein mentioned, save housemaid's knee. He consults a doctor friend and is given a prescription. After an argument with an irate chemist, he finds he has been ordered to take beefsteak and porter, and not meddle with matters he does not understand. A sounder prescription never was penned.

CHAPTER XVIII

[pg 82]

SUGGESTION TREATMENT

"To purge the veins
Of melancholy, and clear the heart
Of those black fumes that make it smart;
And clear the brain of misty fogs
Which dull our senses, our souls clog."

—Burton.

Hypnosis and suggestion have suffered from those people who put back every reform many years—quacks and cranks—for while science, with open mind, was testing this new treatment, the quacks exploited it up hill and down dale.

Yet there is nothing supernatural in suggestion, for we employ it on ourselves and others every hour we live. Conscience consists only of the countless stored-up suggestions of our education, which by opposing any contrary suggestions, cause uneasiness.

Many of us conform through life to the suggestions of others, affection, awe, hero-worship and fear taking the place of reason.

The most resolute of men are influenced by tactful suggestions, which quietly "tip-toe" on to the margin of consciousness, awaken ideas which link up more and more associations, until an avalanche is started which forces itself on to the field of consciousness, the subject thinking the idea is his own.

Author and actor try by suggestion to make us think, laugh, or weep at their will, books are sold by suggestive titles, and many clothes are worn only to suggest wealth or respectability.

The best salesman is he who by artful suggestion sells us what we do not want; the best buyer he who by equally astute suggestion makes the seller part at a price which makes him regret the bargain the moment it is closed.

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Suggestion treatment is of great use in curing nervous states and bad habits, and all neuropaths should practice self- or auto-suggestion. In severe cases a specialist must give the treatment.

The patient is taken by the neurologist to a cosy, restfully-furnished, half-lighted room, and placed in a huge easy chair facing a cheery fire. He sinks into the depths of the chair, relaxes every muscle, allows his thoughts to wander pleasantly, and soon his brain is at rest, and his mind, undisturbed by the fears which usually harass it, is ready to receive suggestions.

The doctor talks quietly, soothingly, but with the conviction born of knowledge to the patient about his trouble, assuring him that he *can* control his cravings; that he *can* put away the doubts or fears that have grown upon him. The true reason of his illness is pointed out, any little organic factors given due weight, and the idea that it is hereditary or due to Fate dispelled. Faults of character, reasoning and living are unsparingly exposed and appropriate remedies suggested, and he is shown how unmanly his self-torturing reproaches are, and how futile is remorse unless transmuted into reform.

The doctor's earnestness inspires confidence, and the patient unburdens his secret troubles, discusses means of remedying them, and turns from pain to promise, from remorse to resolve, from introspection to action, from dreading to doing.

Struck by the way the psycho-analyst reads his soul and lays bare petty meannesses, impressed by the patient thoroughness with which the doctor attends to each little symptom, confident that organic troubles—if there be any—will receive appropriate treatment, ready to carry out instructions, and disposed to believe the new treatment is of real value: under all these circumstances, the physician's suggestions carry very great weight with the patient.

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The resolutions passed by the victim in this calm state sink deep into subconsciousness, and when next temptation, impulse or fear assails him, his own resolutions and the doctor's suggestions are so vividly recalled that he tries to control his thoughts, and, in due time he "wins out".

Anyone may induce the calm state, and repeat suitable suggestions. The patient should go to a quiet room, and, reclining on a comfortable couch before a cheery fire, close the eyes, relax the muscles, breathe deeply, and avoid all sense of strain.

The next step is to fix the imagination on some scene which suggests tranquility—smooth seas, autumnal landscapes, snow-clad heights, old-world gardens, deep, shady silent pools, childhood's lullabies, secluded backwaters, dim aisles of ancient churches.

After a few evenings' practice, you will be able gradually to exclude all other ideas, and focus on one, inducing a state which, somewhat similar outwardly, is free from the excitement of religious exaltation, and from the delusions of a medium's trance.

In this state, an appropriate suggestion must be made, sincerely, and with *absolute faith* in its power. Christ's miracles were the result of suggestive therapeutics, and He took care to inspire relatives with faith, to exclude scoffers, to surround himself by his believing Apostles, and, after treatment, said: "See thou tell no man!" well knowing that suggestion cannot withstand derision.

In this way, a patient of limited means can do for himself exactly what more fortunate ones pay large fees to specialists to do for them. The treatment is uncommon, but sound, for the medical profession is perhaps the most conservative on earth, and when specialists of repute use a method, you may be confident it is of value.

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To cure sleeplessness, see that stomach and brain are at rest, bed comfortable, and feet warm; calm yourself, and focus on the idea of sleep, saying:

"I shall go to sleep in a few minutes, and wake at eight o'clock in the morning."

Repeat this a few times, persist for a few nights and you will quickly get drowsy, and fall asleep.

Phrases for other requirements will readily occur, as:

"I shall feel confident in open spaces!"

"I shall find no more pleasure in alcohol!" and so on.

Suggestion will not cure epilepsy, hysteria or neurasthenia, but it overcomes many of the symptoms which make the patient so wretched.

"Crutches are hung on the walls of miraculous grottos, but *never a wooden leg*."

Suggestion may move a paralysed arm, but the muscles only become healthy again in many days by slow repair; suggestion releases the catch, but the spring must be wound up by energy suitably applied.

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CHAPTER XIX

MEDICINES

"Of simples in these groves that grow
He'll learn the perfect skill;
The nature of each herb, to know
Which cures and which can kill."
—Dryden.

So distressing a malady as epilepsy early attracted attention, and every treatment superstition could devise, or science could suggest, has been tried. Culpepper in his "Herbal" (300 years old), recommends bryony; lunar caustic (nitrate of silver) was extensively used, because silver was the

colour of the moon, which caused madness.

The royal touch for scrofula (King's Evil) was also extended to epilepsy, the king blessing a ring, which was worn by the sufferer.

Another old remedy was to cut off a lock of the victim's hair while in a seizure and put it in his hand, which stopped (?) the attack. In Berkshire a piece of silver collected at the communion service and made into a ring was specific, but in Devon a ring made of three nails from an old coffin was preferred. Lupton says: "A piece of child's navel-string borne in a ring is good against falling sickness."

Nearly every drug in the Pharmacopœia has been tried, the drugs now generally used being sodium, potassium and ammonium bromide.

Before bromides were introduced by Locock in 1857, very strict hygienic, dietic and personal disciplinary treatment combined with the use of drugs often effected improvement. Since the use of bromides, these personal habits have, unfortunately, been neglected, far too much reliance being placed on the "three times a day after meals" formula. [pg 87]

All bromides are quickly absorbed from the stomach and bowels, and enter the blood as sodium bromide, which lowers the activity of both motor and sensory centres, and renders the brain less sensitive to disturbing influences.

Unfortunately, the influence of bromides is variable, uncertain, and markedly good in only a small proportion of cases.

In about 25 per cent of cases, in which mild seizures occur at long periods, without mental impairment, the bromides arrest the seizures, either temporarily or permanently, after a short course. In another 25 per cent the bromides lessen the frequency and severity of the fits, this being the common *temporary* result of their use in *all cases* in the first stages.

In quite 50 per cent of cases, the effect of bromides diminishes as they are continued, and they finally exert no influence at all. Many cases are temporarily "cured", the drug is stopped, and the seizures recur. Bromides are valuable in recent and mild cases, but no medicine exerts much effect on severe cases of long standing, which usually end in an institution.

When these drugs are taken continuously, nausea, vomiting, sleepiness, confusion of thought and speech, lapses of memory, palpitation, furred tongue, unsteady walk, acne and other symptoms of "bromism" may arise, whereupon the patient must stop taking bromides and see a doctor, who will substitute other drugs for a time.

If heart palpitation be troublesome while using bromides, take a teaspoonful of sal volatile in water. [pg 88]

See a doctor if you can; *until* you see him, get from a chemist:

Potassii bromidi	10 grains.
Sodii bromidi	10 grains.
Boracis purificati	5 grains.
Aquæ	1 fluid ounce.
Two tablespoonfuls in water three times a day after meals.	

This prescription is for an adult. If the patient be under twenty-one, tell the chemist his age, and he will make it up proportionately.

Victims who have seizures with some regularity at a certain time, should take the three doses in one, two hours before the attack is expected. If there are long intervals between attacks, cease taking bromides after one fit and recommence three weeks before the next seizure is apprehended. When there is an interval of six months or more between attacks, take no drugs.

Bromides in solution are unpalatable, patients grow careless of regularity and dosage.

You must learn from your doctor and your own experience the prescription, time and dose best suited to your case, and then *never miss a dose until you have been free from fits for two years*, for the beneficial action of bromide depends on the tissues becoming and remaining "saturated" with the drug. Never give up bromides suddenly after long use, but gradually reduce the dose.

It is just when the disease has been brought under control, that patients consider further doctor's bills an unnecessary expense, with the result that a little later the fits recur, and a tedious treatment has to be commenced over again.

No value can be placed on any specific for epilepsy until it has been thoroughly tested for some years, and so proved that its effects are permanent, for almost any treatment is of value for a time, possibly through the agency of suggestion. [pg 89]

"Men who prescribe purifications and spells and other illiberal practices of like kind."—Hippocrates.

"...Corrupted
By spell and medicines bought of mountebanks."
"Othello." Act I.

Carlyle said the world consisted of "so many million people, *mostly fools*"; and he was right, for to public credulity alone is due the immense growth of the patent-medicine trade.

It was formerly thought that for each disease, a specific drug could be found, but this idea is exploded. The doctor determines the exact condition of his patient, considers how he best may assist nature or prevent death, and selects suitable drugs. He carefully notes their action and modifies his treatment as required. The use of set prescriptions for set diseases is obsolete; the doctor of to-day treats the patient, not the disease.

A few patent medicines are of limited value; many are made up from prescriptions culled from medical works, and the rest are frauds, like potato starch. The evil lies in charging from three to four hundred times a just price, in ascribing to a medicine which may be good for a certain disorder, a "cure-all" virtue it does not possess, and in inducing ignorant people to take powerful drugs, reckless of results.

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Ephemeral patent-medicine businesses, run by charlatans, whose aim is frankly to make money before they are exposed, spring up like mushrooms; and their cunningly worded advertisements meet the eye in the columns of every paper one opens for a few months; then they drop out, to reappear under another name, at another address. These rogues buy a few gross pills from a wholesale druggist, insert a small advertisement, and so lay the foundations of a profitable business.

The lure of the unknown is turned to account. "The discoverer went back to the Heart of Nature—and found many rare herbs used by Native Tribes." "The "Heart of Nature" was probably a single-room office tucked away down a Fleet Street alley, and analysis proves these medicines contain only common drugs, one "*Herbal Remedy*" being *metallic* phosphates.

A common procedure is to send a question form, and, after answering the query, "What are you suffering from?" with "Neurasthenia", the company "carefully study" this, and then inform you with a gravity that would grace the pages of "Punch", "You are the victim of a very intractable type of Neurasthenia", so intractable in fact that it will need "additional treatment"—at an "additional" fee.

The quack's advertisements are models of the skilful use of suggestion, and turn to rare account the half-knowledge of physiology most men pick up from periodicals. He frightens you with alarming and untrue statements, gains your confidence by a display of semi-true facts reinforced where weak by false assertions, and, having benefited himself far more than you, leaves you to do what you should have done at first, go to a doctor or a hospital.

Were it made compulsory for the recipe to be printed on all patent medicines, people would lose their childlike faith in coloured water and purges, and cease the foolish and dangerous practice of treating diseases of which they know little with drugs of which they know less.

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The British Medical Association of 429, Strand, London, W.C., issue two 1s. books—"Secret Remedies: What they cost and what they contain", "More Secret Remedies"—giving the ingredients and cost price of most patent medicines. You are strongly urged to send for these books, which should be in every home.

The basis of every cure for epilepsy (not obviously fraudulent) *is bromides*. The usual method is to condemn vigorously the use of potassium bromide, and substitute ammonium or sodium bromide for it. Some advertisers condemn all the bromides, and prescribe a mixture of them; others condemn potassium bromide, and shamelessly forward a pure solution of this same salt in water as a "positive cure!"

In all cases the sale price is out of reasonable proportion to the cost, victims paying outrageous sums for very cheap drugs.

Most epileptics are poor, because their infirmity debars them from continuous or well-paid work, leaving them dependent on relatives, often in poor circumstances also. The picture of patients, already lacking many real necessities, still further denying themselves for weeks or months to purchase a worthless powder, is truly a pitiful one.

Bromides are unsatisfactory drugs in the treatment of epilepsy, but they are the best we have at present. Get them made up to the prescription of a doctor, and see him every month to report progress and be examined. In the end, this plan will be very much cheaper, and incomparably better, than buying crude bromides from quacks.

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There is no drug treatment for either hysteria or neurasthenia, and when the doctor gives medicines for these complaints, it is to remedy organic troubles, or, more often because necessity forces him to pander to the irrational and pernicious habit into which the public have fallen of expecting a bottle of medicine whenever they visit a doctor. Osier, the famous Professor of Medicine at Oxford, truly observed that he was the best doctor who knew the uselessness of

medicines. But when public opinion demands a bottle, and is unwilling either to accept or pay for advice alone, the doctor may be forced to give medicines which he feels are of little value, hoping that their suggestive power will be greater than is their therapeutic value.

Neuropaths invariably contract the habit of physicking themselves, and taking patent foods and drugs which are valueless.

So universal is this pernicious habit that we deem it desirable to criticize it here at some length.

One highly popular type consists of port wine, reinforced (?) by malt and meat extracts, and sold under a fanciful name. It has about the same value as a bottle of port, which costs considerably less. It is well to remember that many a confirmed drunkard has commenced with these "restoratives".

Malt extracts are also popular. They contain diastase, and therefore aid the digestion of starch, but the diastatic power of most commercial extracts is negligible.

Meat extracts of various makes contain no nourishment, but are valuable appetisers. Meat gravy is as effective and far cheaper.

Foods containing digestive ferments, which are widely advertised under various proprietary names are practically valueless, as are the ferments themselves sold commercially. Digestive disorders are very rarely due to deficiency of ferments, while pepsin is the only one among all the ferments that could act (and that only for a little while) in the digestive system. [pg 94]

Some of the disadvantages of predigested foods have been noted, and their prices are usually so exorbitant that eggs at 2s. 6d. each would be cheaper. The remarks of Sollmann the great pharmacologist are pertinent:

Limitations. The administration of food in the guise of medicine is sometimes advantageous; but medicinal foods are subject to the ordinary law of dietetics, and therefore cannot accomplish the wonders which are often claimed for them. The proprietary foods have been enormously overestimated, and have probably done more harm than good. The ultimate value of any food depends mainly on the amount of calories which it can yield, and on its supplying at least a minimum of proteins. In these respects, the medical foods are all inferior, for they cannot be administered practically in sufficient quantity to supply the needs of the body. They have a place as adjuvants to other foods, permitting the introduction of more food than the patient could otherwise be induced to take. Aside from the special diabetes foods and cod-liver oil, their value is largely psychic.

Predigested Foods. The value of these is doubtful, for digestive disturbances involve the motor functions and absorption more commonly than the chemical functions. Their continued use often produces irritation.

Liquid Predigested Foods. As sold, these are flavoured solutions containing small amounts ($\frac{1}{2}$ -6 per cent) of predigested proteins, $\frac{1}{2}$ -15 per cent of sugars and other carbohydrates, with 12-19 per cent of alcohol, and often with large quantities (up to 30 per cent) of glycerin. Their protein content averages less than that of milk, and in energy value they are vastly inferior. Their daily dose yields but 55-300 calories including their alcohol; this is only one-thirtieth to one-fifth the minimum requirements of resting patients. To increase their dose to that required to maintain nutrition would mean the ingestion of an amount of alcohol equivalent to a pint of whisky per day. [pg 95]

Of recent years very expensive preparations of real or alleged organic iron compounds have had a large sale. Iron is a component of hæmoglobin, a solid constituent (13 per cent by weight) of the blood, which combines with the oxygen in the lungs, and is carried (as oxyhæmoglobin) all over the body, giving the oxygen up to the tissues. Hæmoglobin is an exceedingly complex substance, but it contains only one-third per cent by weight of iron in organic form.

The liver is the storehouse of iron, its reserve being depleted when there is an extraordinary demand for iron. The minute amounts of iron in ordinary food are amply sufficient for all our needs; any excess is simply stored, and, later excreted, and has no effect whatever on the circulating hæmoglobin.

Iron is only of value in certain forms of anæmia, and the many patent medicines purporting to contain hæmoglobin or organic iron are therefore useless to neuropaths. The Roman plan of drinking water in which swords had been rusted, is quite as valuable as drinking expensive proprietary compounds. When iron is indicated Blaud's Pills are perhaps the best preparation.

Huge quantities of patent medicines containing phosphates in the form of hypo-or glycerophosphates, and (or) lecithin are sold annually. [pg 96]

All phosphorus compounds are reduced to inorganic phosphates in the digestive tract, absorbed and eliminated, so that, as with iron, if phosphates are needed, the form in which they are taken is of no moment. Why, then, pay huge sums for organic-phosphorus compounds (synthesized from inorganic phosphates) when they are immediately reduced to the same constituents from which they were constructed, the only value in the reduction process being seen in the immense fortunes which patent-medicine proprietors accumulate?

Lecithin is isolated from animal brain, or egg-yolk, and commercial lecithin is impure. Not only does the ordinary daily diet contain ample lecithin (5 grammes), but two eggs will double this, while liver or sweetbread, both rich in phosphorous, may be eaten.

The much-vaunted glycerophosphates are decomposed to and excreted as phosphates. Sollmann's remarks apply to all similar proprietary articles:

"A proprietary compound of glycerophosphates and casein has been widely and extravagantly advertised as 'Sanatogen'. It is a very costly food, and in no sense superior to ordinary casein, such as cottage cheese."

Hypophosphites have been boomed by various people, chiefly for financial reasons. Five or six of them are usually prescribed, with the addition of cod liver oil, and perhaps quinine, and (or) iron and strychnine, the complexity of the prescription being expected, apparently, to compensate for the uselessness of its various ingredients.

To deduce rational remedies, it is first necessary to elucidate the causes of inefficiency; and to expect a brain which is out of order to function in an orderly manner simply because it is supplied with one of the substances necessary to its normal functioning (regardless of whether a deficiency of that substance is the cause of the disorder), is as rational as it would be to expect to restart an automobile engine, the magneto of which was broken, by filling up the half-empty petrol tank.

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CHAPTER XXI

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TRAINING THE NERVOUS CHILD

"When shall I begin to train my child?" said a young mother to an old doctor.

"How old is the child, madam?"

"Two years, sir!"

"Then, madam, you have lost just two years," answered the old physician, gravely.

Neuropathic children are super-emotional, and from them come prodigies, geniuses, perverts and madmen. They are usually spare of build, with pale, sallow complexions, and dark rings under the eyes.

They can never sit still, but wriggle restlessly about on their seats, pick their nostrils, and bite their nails. They are always wanting to be doing something, but soon tire of it, and start something else, which is as quickly cast aside; their energy is feverish but fitful. They jump to conclusions, quickly grasp ideas; as quickly forget them. Having no capacity for calm, reasoned judgment, they are creatures of impulse, imperative but timid, suffer from strange ideas, and worry over trifles.

The affections are strong and vehement, likes and dislikes are taken without reason, while intense personal attachments—often unrequited—occur, but not seldom swing round to indifference, or even bitter enmity. The passions and emotions are all abnormal, for owing to deficiency in the higher inhibitory centres, the victim is blown about by every idle emotional wind that blows. The slightest irritation may provoke an outburst of maniacal rage, or a fit. Consequently, they require the most careful, but firm training, right from birth, to bring them up with a minimum of nerve-strain. Twitchings, night or day terrors, sleep walking, and incontinence of urine often trouble them. They should be examined by a doctor once a year.

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These children have no *balance*, and are usually selfish, always garrulous, with a love of romancing, while a ready wit combined with fertile imagination often gains them a bubble reputation for learning they do not possess. Invention, poetry, music, artistic taste and originality are occasionally of a high order, and the memory is sometimes phenomenal; but desultory, half-finished work, and shiftlessness are the rule.

Their appetite is fitful and fanciful, they like unsuitable foods, and their digestive system is easily upset. At puberty, sexual perversity is common, and the animal appetite, is as a rule, very strong, though rarely, it may be absent. During adolescence, there is excessive shyness or bravado, always introspection, and exaggerated self-consciousness.

As they grow older, they readily contract hypochondria, neurasthenia, hysteria, alcoholism, insomnia and drug habits, and react unduly to the most trifling external causes, even to the weather, by which they are exhilarated or depressed.

Education. Send them to school only when the law compels you, and observe them closely while there, for health is far more important to them than education. "Infant prodigies" lack the mental staying power and physical robustness which real success demands, though they may do well for a time. Go to your old school: the successes of to-day were dunces twenty years ago; about those whose names are proudly emblazoned in fading gold on Rolls of Honour, a discreet silence is maintained.

Keep a keen lookout for symptoms of over-effort. Sleepiness, languor, a vacant expression, forehead wrinkled, eyebrows knit, eyes dull, sunken and surrounded by dark rings, twitchings, restlessness, or loss of appetite are all warnings that the pace is too strong for the child.

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"These are the cases in which the School Board—who ordain that if children are well enough to play or run errands, they are well enough to attend school—should be defied."

This defiance must of course be reinforced by a doctor's certificate.

To the healthy, the strain of preparing for and enduring an examination is tremendous; to highly strung children it is dangerous. Home-work should be forbidden in spite of the authorities. Let the child join in the sports of the school as much as possible.

School misdemeanours form a thorny problem, for discipline must be maintained, and a stern but just discipline is very wholesome for this type, who are too apt to assume that because they are abnormal, they can be idle and refractory. On the other hand, parents should promptly and vigorously object to their children being punished for errors in lessons, or struck on the head.

Diet. Food, while being nourishing, and easily digested, must not be stimulating or "pappy". Meat, condiments, tea, coffee and alcohol are highly undesirable, a child's beverage being milk and water.

Meals should be ready at regular hours, and capricious appetites should freely be humoured among suitable foods, served in appetizing form to tempt the palate. Let them chatter, but see they do not get the time to talk by bolting their food.

Most children can chew properly soon after they are two, but they are never taught. Their food is "mushy", or is carefully cut, and gives them no incentive to masticate. So long as food is digestible, the harder it is the better, and plain biscuits, raw fruits, and foods like "Grape Nuts", are splendid. Mastication helps digestion; it also prevents nasal troubles. [pg 101]

The desire for food at odd moments causes trouble, which is aggravated if the meals are not ready at stated hours. Gently but firmly refuse the piece of bread-and-butter they crave, explain why you do so, and though they weep, or fly into a passion, do not lose your own temper, or beat, or give way to them. When accustomed to regular hours and firm refusals they will not crave for titbits between meals.

It is very hard for them to see other members of the family freely partaking of condiments, drinks and unsuitable foods, and be told they are the only ones who must refrain. A little personal self-sacrifice helps immensely, and if your child *must* refrain so *might* you.

All foods must be pure. Avoid tinned goods, and cheap jams, which contain mangels and glucose. Judged by the nutriment they contain—most cheap foods are very expensive.

Lightly boil, poach, or scramble eggs; steam fish and vegetables; cook rice and sago in the oven for three hours. See that milk puddings are chewed, for usually they are bolted more quickly than anything else. The stomach is expected to deal with unchewed rice pudding, because it is "nourishing". So are walnuts, but you do not swallow them whole.

Fruit must be fresh, ripe and raw, with skin and core removed. Brown bread, crisply toasted and buttered when cold, is best. Porridge is admirable, but many children dislike it. Try to induce a taste by giving plenty of milk, and sugar or syrup with it.

The starch-digesting ferments in the saliva and pancreas are not active until the age of 18 months, before which infants must not be given starchy foods like potatoes, cereals, puddings and bread. [pg 102]

All greenstuffs must be thoroughly washed, or worms may pass into the system. Foul breath, picking the nose, restlessness, fever and startings are often attributed to worms, when the real "worms" are mince pies, raisins, sour apples, and even beer.

Never force fat on children in a form they do not like, for there are plenty of palatable fats, as butter, dripping, lard and milk. Cream is as cheap, as good, and far nicer than cod-liver oil.

Decide on your children's diet, but do not discuss it with or before them. If a child *does* dislike a dish, never force it on him, but try to induce a liking by serving it in a more appetizing way. Never mix medicines with food.

Worms. Various symptoms are due to intestinal worms, and a sharp lookout should be kept for the appearance of any in the stools, and suitable treatment given when necessary.

Treatment for thread and round worms:

R.

Santonini gr. ij.

Hydrarg. chloridi mitis gr. ij.

Pulv. aromatici gr. iv.

Mix and divide into four.

Take one at bedtime every other night, followed by castor oil in the morning.

Tapeworms. These are rarer, being much more frequently talked or read about than seen. A

doctor should be consulted.

Moral Training. The road to hell is broad and easy; so is that to heaven, for if bad habits are easily acquired, so are good ones.

Example is the best moral precept, and if the conduct of parents is good, little moral exhortation is needed. "What is the moral ideal set before children in most families? Not to be noisy, not to put the fingers in the nose or mouth, not to help themselves with their hands at table, not to walk in puddles when it rains, etc. To be 'good!'" To hedge in the child's little world, the most wonderful it will ever know, by hidebound rules enforced by severe punishments, is to repress a child, not to train it. While the commonest error is to spoil a child, it is just as harmful to crush it. Be firm, be kindly, and, above all, *be fair*. [pg 103]

Issue no command hastily, but only if necessary, and shun prohibitions based on petulance or pique. Give the child what it wants if easily obtainable and not harmful.

If the desire is harmful, explain why, but if a child asks for a toy, do not pettishly reply: "It's nearly bedtime!" when it is not, or even if it is.

Discipline is essential, but discipline does not consist in inconsistent nagging; harshly insisting on unquestioning obedience to some unreasonable command one moment, and weakly giving way—to avoid a scene—on some matter vitally affecting the child's welfare the next.

There must be no coddling, and no inducement to self-pity. Such children must be taught that they are capable of real success and real failure, and that upon personal obedience to the laws of health of body and of mind, this success or failure largely depends.

A child should be early accustomed to have confidence in himself. For this purpose all about him must encourage him and receive with kindness whatever he does or says out of goodwill, only giving him gently to understand, if necessary, that he might have done better and been more successful if he had followed this or that other course. Nothing is more apt to deprive a child of confidence in himself than to tell him brutally that he does not understand, does not know how, cannot do this or that, or to laugh at his attempts. His educators must persuade him that he *can* understand, and that he *can* do this thing or that, and must be pleased with his slightest effort. [pg 104]

It seems a trifle to let a child have the run of cake plate or sweet-tray, or to stay up "just another five minutes, Mummy!" to avoid a howl, but these are the trifles that sow acts to reap habits, habits to reap character, and character to fulfil destiny. It is selfish of parents to avoid trouble by not teaching their children habits of obedience, self-restraint, order and unselfishness. Between five and ten is the age of greatest imitation, when habits are most readily contracted.

Come to no decision until hearing the child's wishes or statements, and thinking the matter out; having come to it, *be inexorable* despite the wiles, whines and wails of a subtle child. Reduce both promises and threats to a minimum, but *rigidly* fulfil them, for a threat which can be ignored, and a promise unfulfilled, are awful errors in training a child.

Persuade, rather than prohibit or prevent, a child from doing harmful actions. If it wants to touch a hot iron, say clearly it is hot, and will burn, but *do not move it*. Then, if the child persists, it will touch the iron tentatively, and the small discomfort will teach it that obedience would have been better. Let it learn as far as possible by the hard, but wholesome, road of experience.

Makeshift answers must never be given to a child. Awkward questions require truthful answers, even though these only suggest more "Whys?"

Sentimentality must be nipped promptly in the bud, and an imaginative and humorous view of things encouraged. The child must be taught to keep the passions under control, and to face pain (that great educator which neurotic natures feel with exaggerated keenness) with fortitude. [pg 105]

Fear must be excluded from a child's experience. "Bogies!" "Ghosts!" "Robbers!" and "Blackmen!" if unintroduced, will not naturally be feared. The mental harm a highly strung child does by rearing most fearsome imaginings on small foundations is incalculable, and has led more than one to an asylum.

Try to train the child to go to sleep in the dark, but if it is frightened give it a nightlight. As Guthrie says, the comfort derived from the assurance that Unseen Powers are watching over it, is small compared to that given by a nightlight. He mentions a child who, when told she need not fear the dark because God would be with her, said: "I wish you'd take God away and leave the candle."

If the child wakes terrified, it is stupid and wicked to call upstairs: "Go to sleep!" A child cannot go to sleep in that state, and a wise mother will go up and softly soothe the frightened eyes to sleep.

Neuropathic children often have night terrors within an hour or two of going to bed. Piercing screams cause a hasty rush upstairs, where the child is found sitting up in bed, crouching in a corner, or trying to get out of door or window. His face is distorted with fear and he stares wildly at the part of the room in which he sees the terrifying apparition. He clings to his mother but does not know her. After some time he recovers, but is in a pitiful state and has to have his hand held while he dozes fitfully off. He often wets the bed or passes a large amount of colourless urine. Medical treatment is imperative.

Corporal punishment is unsuitable for neuropathic children, for the mere suggestion of its application usually causes such excessive dread, mental upset and terror as make it really dangerous. Such children are often said to be "naughty" when in reality they are unable to exercise self-control, owing to defective inhibitory power. Try patiently to inculcate obedience from the desire to do right, and make chastisement efficacious from its very exceptional character.

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"The young child is too unconscious to have a deliberately perverse intention; to ascribe to him the fixed determination to do evil, is to judge him unjustly and often to develop in him an evil instinct. It is better in such a case to tell him he has made a mistake, that he did not foresee the consequences to which his action might lead, etc." Many parents fall into a habit of shaking, ear-boxing, and such-like harmful minor punishments for equally minor offences, which should be overlooked.

In all little troubles, keep *quite calm*. The child's nerve and association centres have not yet got "hooked up", and you cannot expect it to act reasonably instead of impulsively. This excuse does not apply to you. One excitable person is more than enough, for if both get angry, sensible measures will certainly not result.

The necessity for calmness cannot too strongly be urged. The treatment for a fit of temper, is to give the unfortunate child a warm bath, and put it to bed, with a few toys, when it will soon fall asleep, and awake refreshed and calm.

Proceed gently but with absolute firmness, *start early*, and remember that example is better than precept.

Religion. Offering advice on this subject is skating on very thin ice, and we do so but to give grave warning against neuropathic youth being allowed to contract religious "mania", "ecstasy", or "exaltation".

Neuropaths are given naturally to "see visions and dream dreams", and if this tendency be exaggerated an unbalanced moral type results. Jones says:

"The epileptic is apt to be greatly influenced by the mystical or awe-inspiring, and is disposed to morbid piety. He has an outer religiousness without corresponding strictness of morals; indeed the sentiment of religious exaltation may be in great contrast to his habitual conduct, which is a mixture of irritability, vice and perverted instincts."

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Lay stress on the simple moral teaching of the New Testament, and avoid cranky creeds, cross references, or Higher Criticism. Teach them to practise the moral precepts, not to quote them by the page.

Without this practical bent, a "Revival" meeting is apt to result in a transient but harmful "conversion"; a form of religious sentiment which finds outlet, not so much in works as in morbid excitement. In these people, as in the insane, there is often a weird mixing-up of religious and sexual emotion.

Teach these children that the greatest good is not to sob over their fancied sins at "salvation" meetings, but to love the just and good, to hate the unjust and evil, and to do unto others as they would others should do unto them.

It is better for them to join one of the great churches, than become members of those small sects which maintain peculiar tenets.

A word of special warning must be given against Spiritualism. There may or may not be a foundation for this belief, but it is highly abnormal, and has led thousands into asylums.

The medium and the majority of her audience are highly neurotic, and a more unwholesome environment for an actual or potential neuropath could not be imagined.

The educated neuropath often peruses certain agnostic works, the result usually being deplorable, for this class are dependent on some stable base outside themselves, such as is found in a calm religion manifested in a steadfast attempt to overcome the weakness of the flesh, by ordering life in accordance with the teachings of the New Testament.

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So long as abnormalities of character do not become too pronounced, friends must be content.

Such children must be trained to express themselves in a practical manner, not in weaving gorgeous phantasies in which they march to imaginary victory. Day dreams form one of those unlatched doors of the madhouse that swing open at a touch, the phantasy of to-day being written "emotional dementia" on a lunacy certificate to-morrow.

Finally, remember that above them hangs the curse:

"Unstable as water, *thou shall not excel*."

"Go thou softly with them, all their days!" and whether your tears fall on the ashes of a loved and loving, but weak and wilful one, or whether their tears bedew the grave of the only friend they ever knew, you will not have lacked a rich reward.

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DANGERS AT AND AFTER PUBERTY

"Th' expense of spirit in a waste of shame
 Is lust in action; and till action, Lust
 Is perjured, murderous, bloody, full of blame,
 Savage, extreme, rude, cruel, not to trust;
 Enjoyed no sooner but despised straight;
 Past reason hunted; and, no sooner had,
 Past reason hated, as a swallow'd bait
 On purpose laid to make the taker mad;
 Mad in pursuit, and in possession so;
 Had, having had, and in quest to have, extreme;
 A bliss in proof, and proved, a very woe;
 Before, a joy proposed; behind, a dream;
 All this the world well knows; yet none knows well,
 To shun the Heaven that leads men to this Hell!"
 —Shakespeare. Sonnet 129.

At puberty (from the age of 11-15) a boy becomes capable of paternity, a girl of maternity; during adolescence (from puberty to 25) the body in general, and the reproductive organs in particular, grow and mature.

In the boy, semen is secreted, the voice breaks, the genitals enlarge, hair grows on the pubes, face and armpits, and there is a rapid increase in height owing to growth of bone. In the girl menstruation commences, the pelvis is enlarged, bust and breasts develop, the complexion brightens, the hair becomes glossy, and the eyes bright and attractive.

In both, the sexual instinct awakens, and the mental, like the physical, changes are profound. There is great general instability, the child, at one time shy and reticent, is at another, boisterous and self-assertive.

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Parents rarely realize the importance and trying nature of this period when "there awakes an appetite which in all ages has debased the weak, wrestled fiercely with the strong and overwhelmed too often even the noble". Adolescents suffer more from the lack of understanding, sympathy, appreciation and wise guidance shown by their blind parents, than they do from their own ignorance and perfervid imagination.

The transitions from radiant joy and confident expectation, reared on a flimsy basis of supposition, to dire despair consequent on a wrong reading of physical and mental changes, are rapid. Friends, lovers and heroes quickly succeed one another, play their parts, and give place to others.

The awakening of the sexual appetite is usually ignored, and children are left to gain knowledge of man's noblest power from companions, casual references in the Bible and other books, and unguarded references in conversation. Under such conditions not one in a thousand—and *your* child is *not* that one—escapes impurity and degraded sex ideas.

Wherever youth congregate, this subject crops up, and those who talk most freely to the others are just those with the most distorted and vicious ideas, whose discourse abounds in obscene detail and ribald jest. Your child must learn either from ignorant, unclean minds, or be taught in a clean, sacred way, which will rob sex of secrecy and obscenity; *learn he will*; if you will not teach your child, his pet rabbit will.

When children ask awkward questions, say quietly that such matters are not discussed with children, but promise to tell them all about it when they are ten years old; delay no longer, for most children learn self-abuse between ten and twelve.

Self-abuse is a bad habit, and no more a "sin" than is biting the nails. Unfortunately, people with no other qualification than a desire to do good, wrongly harp on the "sin" of it and draw lurid pictures of physical and mental wreck as the end of such "sinners", ignorant that if all masturbators went mad the world would be one huge asylum.

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Exaggeration never pays in teaching youth. Tell the truth, which is bad enough without adding "white lies" with an eye to effect.

Coitus causes slight prostration, Nature's device to remind man to keep sexual intercourse within bounds, for while in moderation it is harmless, in excess it causes great prostration. *Exactly the same applies to self-abuse*, for, paradoxical as it seems, the real harm is done by the *fear* of the supposed harm.

The masturbator first suffers from the knowledge he is indulging in a pleasure he knows would be forbidden, and from fear of being found out; later he learns from friends, quack advertisements, or well-meaning books that self-abuse is a most deadly practice, and thereupon a tremendous struggle occurs between desire and fear, each act ending in an agony of remorse and dread of future consequences, which struggle does a thousand-fold more harm than the loss of a little semen.

The ill-effects of these mental struggles disappear after marriage, which means greater indulgence, but indulgence free from mental stress. In neuropaths, these mental struggles are the worst things that could occur, for they tend to make permanent the states we are trying to cure.

The most serious results of masturbation are moral not physical. Loss of will-power, self-reliance, presence of mind, reasoning power, memory, courage, idealism, and self-control; mental and physical debility, laziness, a diseased fondness for the opposite sex, and in later years, some degree of impotence or sterility, are its commoner results.

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Teach *your* child, therefore, not from fear of physical harm, but because you wish him to be one of those fortunate few who live and die "gentlemen unafraid", because they had wise parents.

Let the mother instruct a girl, the father a boy, and not leave so vital a matter to an unsuitable pamphlet.

Buy one of the many "Knowledge for Boys or Girls" books and read it carefully.

Having made sure you can convey a simple account of the wonders of reproduction, and that you have rooted out the idea that sex is something to be apologized for, see the child and tell him it is time he learned of his private parts, as manhood draws near.

Then, speaking in a quiet, unembarrassed way, deliver your little homily, all the time insisting on the marvel, the romance, the poetry and the beauty of the sex. Let chivalry be your text, not fear, and repeat the Squire's sound parting advice to Tom Brown:

"Never listen to or say things you would not have your mother or sister hear."

Give a clear and complete description in simple words of the mechanism and marvel of reproduction, for half-knowledge generates a prurient curiosity about the other sex, thus defeating the very end you have so earnestly striven for.

Purity not impurity should be your text, and you should only refer to masturbation as a harmful habit, which should not be contracted.

Warn them to

"Keep the heart with all diligence, for out of it are the issues of life!"

by turning their thoughts instantly and determinedly away from sex ideas when they arise, as they *will* arise, time and again. It is useless to try *not* to think of them, the child must instantly turn its thoughts to to *something else*, for one who cannot stamp out a spark will not subdue a fiercely-raging conflagration.

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Babies should not be carelessly caressed, and a fretful infant must never be soothed by playing with the genitals, as is done innocently by some mothers and nurses, and by others from motives more questionable. Freud showed that there are subconscious sexual desires in infants, which die out until reanimated at puberty in Nature's own way. If exaggerated by exuberant fondling, they gather force in the dark corners of the mind, and are later manifested in morbid sexual or mental perversity.

If you have good grounds for believing the habit has already been contracted, enlist medical advice. A great factor in the successful treatment of self-abuse is early recognition, and, after the unhygienic nature of the habit has carefully been pointed out, the child's sense of honour should be invoked.

Without further reference to the matter, try to become your child's confidant, for he will have to fight fires within and foes without. See that his time is filled with healthy sport and play, and ennoble his ideas with talk, books and plays which lay stress on chivalry and manliness. Give him plain food, tepid douches, and a firm bed with light, fairly warm clothing. Get him up reasonably early in the morning, and let him play until he is "dog-tired" at night.

Let children rub shoulders with others, keep them from highly exciting tales, let them read but little, and train them to be observant of external objects all the time.

Neuropaths develop very early sexually, and contract bad habits in the endeavour to still their unruly passions; with them, the future is darker than with the normal child, and the parent who neglects his duty may justly be held accountable for what happens to his child or his child's children.

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Puberty is always a critical period in epilepsy, many cases commencing at this time, while in a number, fits commence in infancy, cease during childhood, and recommence at puberty, the baneful stimulus of masturbation being undoubtedly a factor in many of these cases.

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CHAPTER XXIII

WORK AND PLAY

Although most people would assume that epileptics are unable to follow a trade, there is hardly an occupation from medicine to mining, from agriculture to acting, that does not include

epileptics among its votaries.

Outdoor occupations involving but little mental work or responsibility are best, but unfortunately just those which promise excitement and change are those which appeal to the neuropath.

A light, clean, manual trade should be chosen, and those that mean work in stuffy factories, amid whirring wheels and harmful fumes, using dangerous tools, or climbing ladders, must be avoided.

For the fairly robust, gardening or farming are good occupations, such workers getting pure air, continuous exercise, and little brain-work. Wood-working trades are good, if dangerous tools like circular saws are left to others.

For the frail neuropath with a fair education, drawing, modelling, book-keeping, and similar semi-sedentary work may do. Other patients might be suited as shoemakers, stonemasons, painters, plumbers or domestic servants, so long as they always work on the ground.

Some work is essential; better an unsuitable occupation than none at all, for the downward tendency of the complaint is sufficiently marked without the victim becoming an idler. Work gives stability.

Epilepsy limits patients to a humble sphere, and though this is hard to a man of talent, it is but one of many hard lessons, the hardest being to realize clearly his own limitations. [pg 116]

If seizures be frequent, the ignorant often refuse to work with a victim, who can only procure odd jobs, in which case he should strive to find home-work, at which he can work slowly and go to bed when he feels ill. A card in the window, a few handbills distributed in the district, judicious canvassing, and perhaps the patronage of the local doctor and clergy may procure enough work to pay expenses and leave a little over, for the essential thing is to occupy the mind and exercise the body, not to make money.

Very few trades can be plied at home and many swindlers obtain money under the pretence of finding such employment, charging an excessive price for an "outfit", and then refusing to buy the output, usually on the pretext that it is inferior. Envelope-addressing, postcard-painting and machine-knitting have all been abused to this end.

An auto-knitter seems to offer possibilities, but victims must investigate offers carefully.

Photography is easy. A cheap outfit will make excellent postcards, modern methods having got rid of the dark room and much of the mess, and postcard-size prints can be pasted on various attractive mounts.

If the work is done slowly, and in a good light, and the patient has an aptitude for it, ticket-writing is pleasant. Among small shopkeepers there is a constant demand for good, plainly printed tickets at a reasonable price.

On an allotment near home vegetables and poultry might be raised, an important contribution to the household, and one which removes the stigma of being a non-earner.

The mental discipline furnished by this home-work is invaluable, Neuropaths, especially if untrained, are unable to concentrate their attention on any matter for long, and do their work hastily to get it finished. When they find that to sell the work it must be done slowly and perfectly they have made a great advance towards training their minds to concentrate. Their weak inhibitory power is thus strengthened with happy results all round. [pg 117]

When the work and the weather permit, work should be done outdoors, and when done indoors windows should be opened, and, if possible, an empty or sparsely-furnished bedroom chosen for the work.

Recreations. These offer a freer choice, but those causing fatigue or excitement must be avoided, for patients who have no energy to waste need only fresh air and quiet exercise.

Manual are better than mental relaxations. Dancing is unsuitable, swimming dangerous, athletics too tiring and exciting. Bowls, croquet, golf, walking, quoits, billiards, parlour games and quiet gymnastics without apparatus are good, if played in moderation and much more gently than normal people play them. Play is recreation only so long as a pastime is not turned into a business. When a player is annoyed at losing, though he loses naught save his own temper, any game has ceased to be recreative.

CHAPTER XXIV

HEREDITY

"Man is composed of characters derived from pre-existing germ-cells, over which he has no control. Be they good, bad, or indifferent, these factors are his from his ancestry; the possession of them is to him a matter of neither blame nor praise, but of necessity. They are inevitable."—Leighton.

The body is composed of myriads of cells of *protoplasm*, in each of which, is a *nucleus* which contains the factors of the hereditary nature of the cell. In growth, the nucleus splits in half, a wall grows between and each new cell has half the original factors,

Female *ovum* and male *sperm* (the cells concerned with reproduction) divide, thus losing half their factors, and when brought together by sexual intercourse form a *germ-cell* having an equal number of factors from mother and father.

How these factors are mingled—whether shuffled like two packs of cards, or mixed like two paints—we do not know. If two opposite factors are brought together, one must lie dormant. The offspring may be male or female, tall or short; it cannot be both, nor will there be a mixture. *This rule only applies to clearly defined factors.*

We are *made by the germ-plasm* handed down to us by our ancestors; in turn we pass it on to our children, *unaltered*, but mixed with our partner's plasm.

"The Dead dominate the Living" for our physical and mental inheritance is a mosaic made by our ancestors. [pg 119]

Variations which may or may not be inheritable do arise spontaneously, we know not how, and by variations all living things evolve.

A child resembles his parents more than strangers, not because they made cells "after their own image" but because both he and they got their factors from the same source.

Man's physical and mental, and the *basis* of his moral, qualities depend entirely on the types of ancestral plasm combined in marriage. Man may control his environment; his heritage is immutable. To suppress an undesirable trait the germ-cell must unite with one that has never shown it—one from a sound stock. An unsuitable mating in a later generation, however, may bring it out again (for factors are indestructible), and the individual showing it will have "reverted to ancestral type".

To give an instance: Does the son of a drunkard inherit a tendency to drink? No! The father is alcoholic because he lacks control, consequent upon the factors which make for control having been absent from his germ-plasm. He passes on this lack; if the mother does the same, the defect occurs—in a worse form—in the son. If the mother gives a control factor, the son may be unstable or *apparently* stable, this depending entirely on chance, but if the mother's plasm contains a *strong* control-factor, the defect will lie dormant in her son, who will have self-control, though if he marries the wrong woman he will have weak-willed children.

If the son becomes a toper, therefore, it is because he, like his father before him, was born with a defect—weak control—which might have made of him a drug-fiend, a tobacco-slave, a rake, or a criminal; in his home drink would naturally be the temptation nearest to hand, and he would show his lack of control in drunkenness. [pg 120]

The way a lily-seed is treated makes a vast difference to the plant which arises. If sown in poor soil, and neglected, a dwarf, sickly plant will result; if sown in rich soil, and given every care that enthusiasm, money and skill can suggest or procure, the result will be magnificent.

So with man. A well-nourished mother, free from care and disease, may have a finer child than a half-starved woman, crushed by worry and work, but neither starvation nor nourishment alter the inborn character of the child.

The *body-cells* are greatly changed by disease, poison, injury, and overwork, but these changes are not passed on, and despite the influence of disease from time immemorial, the *germ-cell* produces the same man as in ancient days. Without this fixity of character, this "continuity of the germ-plasm", "man" would cease to be, for the descendants of changeable cells would be of infinite variety, having fixity of neither form nor character.

Epilepsy, hysteria and neurasthenia are all outward signs of defect in the germ-plasm, and so they (or a predisposition to them) can be passed on, and inherited.

If a man shows a certain character, his plasm, had, and has, the causative factor. He may have received it from *both* his parents, when it will be *strong*, or from one only, when it will be *normal*. If he have it not, it is absent. The same applies to the plasm of the woman he mates, so there are six possible combinations, with results according to "Mendel's Law."

All the children will not inherit a taint unless *both* parents possess it, but, however strong one parent be, if the other is tainted, *none* of the children can be absolutely clean, but will show the taint, weak, strong, or dormant. This means that neuropathy will recur—and that it has previously occurred—in the same family, unless there be continual mating into sound stocks. If there is continual mating into bad stocks, it will recur frequently and in severe forms. All intermediate stages may occur, depending entirely on the qualities of the combining stocks. [pg 121]

From this we shall expect, in the same stock, signs of neuropathic taint other than the three diseases dealt with here, and these we get; for alcoholism, criminality, chorea, deformities, insanity and other brain diseases, are not infrequent among the relatives of a neuropath, showing that the family germ-plasm is unsound.

Epilepsy, one symptom of taint, is more or less interchangeable with other defects; the taint, as a whole, is an inheritable unit whose inheritance will appear as any one of many defects. This is shown by the fact that very few epileptics have an epileptic parent. Starr's analysis of 700 cases of epilepsy emphasizes this point.

Epilepsy in a parent	6
Epilepsy in a near relative	136
Alcoholism in a parent	120
Nervous Diseases in family	118
Rheumatism and Tuberculosis	184
Combinations of above diseases	142

As medicine and surgery cannot add or delete plasmic factors, the only way to stamp out neuropathy in severe forms would be to sterilize victims by X-rays. This would be painless, would protect the race and not interfere with personal or even with sexual liberty. In fifty years such diseases would be almost extinct, and those arising from accident or the chance union of dormant factors in apparently normal people could easily be dealt with.

There are 100,000 epileptics in Great Britain, and as *all* their children carry a taint which tends to reappear as epilepsy in a later generation *the number of epileptics doubles every forty years*. We protect these unfortunates against others; why not posterity against them? [pg 122]

Neuropaths must pass on *some* defect; therefore, though victims may marry, *no neuropath has a right to have children*.

CHAPTER XXV

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CHARACTER

"All men are not equal, either at birth or by training. Nature gives each of us the neural clay, with its properties of pliability and of receiving impressions; nurture moulds and fashions it, until a *character* is formed, a mingling of innate disposition and acquired powers. But clay will be clay to the end; you cannot expect it to be marble."—Thomson & Geddes.

"Heaven lay not my transgression to my charge."—King John.

It is essential that attendants, relatives, and friends carefully study the character of neuropaths, and recognize clearly how abnormal it is, for untold misery is caused by judging neuropaths by normal standards.

Patients are often harshly treated because others regard the victim of defective inhibition as having gone deliberately to work, through wicked perversity and pure wilfulness, to make himself a nuisance, to persist in being a nuisance, and to refuse to be other than a nuisance, rather than exercise what more fortunate men are pleased to term self-control.

Character is usually appraised as "good" or "evil" by the nature of a man's actions, the assumption being made that he can control his impulses if he be so minded.

This is not so. "Good" and "evil" are only relative terms. What one man thinks "evil", a second holds "good", while a third is not influenced.

Now the performance of the act judged is directed by the performer's brain, the constitution of which was pre-determined by the germ-plasm from which he arose, so that *the basis of character is inherited*. [pg 124]

The moral sense is the last evolved and least stable attribute of the last evolved and least stable of our organs, the brain; and brains are born, not made to order. To blame a man for having weak control—a sick will—is as unreasonable as to blame him for a cleft palate or a squint. The "good" people who jog so quietly through life little reckon how much they owe their ancestors, from whom they received stability.

These tendencies represent the total material for building character. Training and environment can only nourish good tendencies and give bad ones no encouragement to grow gigantic.

If training and environment alone formed character, then children reared together would be of similar disposition; by no means the case. Similarly, if external influences altered inborn tendencies, then, not only would the evil man be totally reformed by strong inducements to virtue, but strong inducements to vice would lead totally astray the good man, for "good" is no *stronger* than "evil", both being attributes of mind.

In mind as in body, from the moment he is conceived to the moment his dust rests in the tomb, man is directed by immutable laws, though he is not simply a machine directed by impulses over which he has no control. There is real meaning in "strong will" and "weak will" will being a tendency to deliberate before and be steadfast in action, a tendency which varies immensely in different people. The fallacy of "free will" lies in assuming that every one has this tendency equally developed, making character a mere matter of saying "Yes!" and "No!" without reference to the individual's mental make-up.

Deliberate, persistent wickedness implies a strong will, just what neuropaths lack. A man of weak will can never be a very good nor yet a very bad man. He will be very good at times, very bad at times, and neutral at times, but neither for long; before sudden impulses, whether good or bad, [pg 125]

neuropaths are largely powerless.

The many perversities of a neuropath are not deliberately put forth of his "free will" to annoy both himself and others, for the neuropath inherits his weak-control no less than his large hands.

Friends *must* remember they are dealing with a person whose *nature* it is to "go off half-cock", and who cannot be normal "if he likes". The neuropath, young or old, says what he "thinks" *without thinking*, that is he says what he *feels*, and acts hastily without weighing consequences.

Cassius: Have you not love enough to bear with me,
When that rash humour which my mother gave me
Makes me forgetful?

Brutus: Yes, Cassius; and, from henceforth
When you are over-earnest with your Brutus,
He'll think your mother chides, and leave you so.

One cannot detail the effects of neuropathy on character, when its victims include madmen, sexual perverts, idiots, criminals, imbeciles, prostitutes, humble but honest citizens, common nuisances, invalids of many kinds, misanthropists, designers, enthusiasts, composers, communists, reformers, authors, artists, agitators, statesmen, poets, prophets, priests and kings.

Very mild epilepsy—from one fit a year to one in several years—instead of hindering, seems rather to help mentality, and many geniuses have been epileptic. These talented victims, are less rare than the public suppose, owing to the jealous care with which symptoms of this disease are guarded. Socrates, Julius Cæsar, Mahomet, Joan of Arc, Peter the Great, Napoleon, Byron, Swinburne, and Dostoeffsky are but a few among many great names in the world of art, religion and statecraft. Epileptic princes, kings and kinglets who have achieved unenviable notoriety might be named by scores, Wilhelm II being the most notable of modern times.

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This brilliant mentality is always accompanied by instability, and usually by marked disability in other ways. The success of these men often depends on an ability to view things from a new, quaint or queer standpoint, which appeals to their more normal fellows.

In matters that require great fertility, a quick grasp, ready wit, and brilliant but not sustained mental effort, numerous neuropaths excel. In things calling for calm, well-balanced judgment, or stern effort to conquer unforeseen difficulties, they fail utterly.

Subtle in debate, they are but stumbling-blocks in council; brilliant in conception, they fail in execution; fanciful designers, they are not "builders of bridges". They are boastful, sparkling, inventive, witty, garrulous, vain and supersensitive, outraging their friends by the extravagance of their schemes; embarrassing their enemies by the subtlety of their intrigues.

They wing on exuberant imagination from height to height, but the small boulders of difficulty trip them up, for they are hopelessly unpractical; they have neither strength of purpose nor fortitude, and their best-laid schemes are always frustrated at the critical moment, by either the incurable blight of vacillation, or by the determination to amplify their scheme ere it has proved successful, sacrificing probable results for visionary improvements.

Great and cunning strategists while fortune smiles, they are impotent to direct a retreat, but flee before the fury they ought to face. They rarely have personal courage, but are timid, conciliatory and vacillating just when bravery, sternness, and determination are needed; furious, obstinate and reckless, when gentleness, diplomacy and wisdom would carry their point.

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They are ready to forgive when there is magnanimity, vainglory and probably folly in forgiveness, but will not overlook the most trivial affront when there is every reason for so doing. They have brain, but not ballast, and their whole life is usually a lopsided effort to "play to the gallery".

In poetry and literature, fancy has free play, and they often succeed, sometimes rising to sublime heights; usually in the depiction of the whimsical, the wonderful, the sardonic, the bizarre, the monstrous, or the frankly impossible. They are not architects as much as jugglers of words, and descriptive writing from an acute angle of vision is their forte. They sometimes succeed as artists or composers, for in these spheres they need not elaborate their ideas in such clean-cut detail, but many who might succeed in these branches have not sufficient strength of purpose to do the preliminary "spadework".

They have too many talents, too many differing inclinations, too much impetuosity, too much vanity, too little concentration and will-power, and they fail in ordinary walks of life from the lack of resolution to lay the foundations necessary to successful mediocrity.

No greater obstacle to progress exists than the reputation for talent which this class acquire on a flimsy basis of superficial brilliance in conversation or a penchant for witty repartee. They are self-opinionated and egoistical, with a conceit and assurance out of all proportion to their abilities. Their mental perspective is distorted and they are conspicuous for their obstinacy. In conversation they are prolix and pretentious, and they often contract religious mania, in which their actions by no means accord with their protestations, for they have very elementary notions of right and wrong, or no notions at all.

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Often they are precocious, but untruthful, cruel, and vicious; the despair of relatives, friends, and

teachers. They combine unusual frankness with an audacity and impulsiveness that is very misleading, for below this show of fire and power there is no stability.

Their character is a tangle of mercurial moods, the neuropath being passionate but loving, sullen one moment, overflowing with sentimental affection the next, vicious a little while later, quick to unreasoning anger, and as quick to repent or forgive, obstinate but easily led, versatile but inconstant, noble and mean by turns, full of contradictions and contrasts, at best a brilliant failure, vain, deaf to advice or reproof, having in his ailing frame the virtues and vices of a dozen normal men.

Mercier aptly describes him:

"There is a large class of persons who are often of acute and nimble intelligence, in general ability equal to or above the average, of an active, bustling disposition, but who are utterly devoid of industry. For by industry we mean steady persistence in a continuous employment in spite of monotony and distastefulness; an employment that is followed at the cost of present gratification for the sake of future benefit. Of such self-sacrifice these persons are incapable. They are always busy, but their activity is recreative, in the sense that it is congenial to them, and from it they derive immediate gratification. As soon as they tire of what they are doing, as soon as their occupation ceases to be in itself attractive it is relinquished for something else, which in its turn is abandoned as soon as it becomes tedious.

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"Such people form a well-characterized class: they are clever; they readily acquire accomplishments which do not need great application; and agreeably to the recreative character of their occupations, their natures are well developed on the artistic side. They draw, paint, sing, play, write verses and make various pretty things with easy dexterity. Their lack of industry prevents them ever mastering the technique of any art; they have artistic tastes, but are always amateurs.

"With the vice of busy idleness they display other vices. The same inability to forgo immediate enjoyment, at whatever cost, shows itself in other acts. They are nearly always spendthrifts, usually drunkards, often sexually dissolute. Next to their lack of industry, their most conspicuous quality is their incurable mendacity. Their readiness, their resources, their promptitude, the elaborate circumstantiality of their lies are astonishing. The copiousness and efficiency of their excuses for failing to do what they have undertaken would convince anyone who had no experience of their capabilities in this way.

"Withal, they are excellent company, pleasant companions, good-natured, easy-going, and urbane. Their self-conceit is inordinate, and remains undiminished in spite of repeated failures in the most important affairs of life. They see themselves fall immeasurably behind those who are admittedly their inferiors in cleverness, yet they are not only cheery and content, but their confidence in their own powers and general superiority to other people remains undiminished.

"*The lack of self-restraint is plainly an inborn character*, for it may show itself in but one member of the family brought up in exactly the same circumstances as other members who do not show any such peculiarity. The victim is born with one important mental faculty defective, precisely as another may be born with hare-lip."

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In neuropaths the mental mechanism of *projection*, which we all show, is often marked.

Any personal shortcoming, being repugnant to us causes self-reproach, which we avoid by "projecting" the fault (unconsciously) on some one else.

Readers should get "The Idiot" by Fedor Dostoeffsky, an epileptic genius who saw that for those like him, happiness could be got through peace of mind alone, and not in the cut-throat struggle for worldly success. He projected his stabler self into Prince Muishkin, the idiot, and every one of the six hundred odd pages of this amazing description of a neuropathic nation is stamped with the hall-mark of genius.

CHAPTER XXVI

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MARRIAGE

"Between two beings so complex and so diverse as man and woman, the whole of life is not too long for them to know one another well, and to learn to love one another worthily."—Comte.

No neuropath should have children, but marriage is good in mild cases, for neuropaths are benefited by sympathetic companionship, and their sexual passions are so strong that they must be gratified, by marriage, prostitution, or unnaturally.

Bernard Shaw's sneer—

"Marriage is popular because it combines the maximum of temptation with the

is justifiable, though the "maximum of opportunity" is better than a maximum of unnatural devices to satisfy and intensify normal and abnormal cravings.

There is a popular belief that an epileptic girl is cured by pregnancy, a state that ought never to occur.

The lack of sex-education causes millions of miserable marriages. Sexual desire is cultivated out of all proportion to other desires, the will cannot control the desire to relieve an intolerable sense of discomfort, and men eagerly seize the first chance of being able to satisfy these fierce cravings at pleasure.

If sex were treated sensibly it would develop into a powerful instead of an overpowering appetite, and reason would have some say in the choice of a life-partner. [pg 132]

A neuropath needs a calm, even-tempered, "motherly" wife. For him, gentleness, self-control, sound common sense and domestic virtues are superior to wit or beauty. Unfortunately, contrary to public belief, people are attracted by their like, not by their opposites. The sensitive, refined neuropath finds the normal person insipid and dull; the normal person is rendered uncomfortable by the morbid caprices of the neuropath.

There must be no disparity of age, for at the menopause the woman no longer seeks the sexual embrace, and if her husband be young unfaithfulness ensues. Not only that, but she, knowing, probably to her sorrow, how rarely the hopes of youth mature, cannot take a keen interest in his ambitions like a younger woman, or fire his dying enthusiasm at difficult parts of the way. If he be his wife's senior he will be as little able to appreciate her ideas and habits.

An excitable, volatile, garrulous, "neighbourly" woman, or one who can do little save strum on the piano or make embroidery as intricate as it is useless, means divorce or murder. For him, sweetness, gentleness, self-control, sound common sense, shrewdness, and domestic virtues are incomparably superior to any mental brilliance or physical comeliness. He needs a "homely" woman, and should remember that no banking account can match a sweet, womanly personality, and no charms compare to a sunny heart, and an ability steadfastly to "see the silver lining".

He must on no account marry a woman in indifferent health, for under the strain of her husband's infirmity the woman, who if she were well would be a help, is a source of expense, worry and friction.

On the other hand the woman who receives a proposal from a neuropath, be he ever so gifted, has grave grounds for pausing, though it is hard to counter the specious arguments of one who may be "a man o' parts", a witty companion and an ardent lover. It is doubtful if a neuropath is ever permeated by a steadfast emotion, for all his emotions are fierce but unstable, the love of an inconsistent man being ten times more ardent than that of a faithful one, *while it lasts*. [pg 133]

"You can't marry a man without taking his faults with his virtues,"

and love must be strong enough to stand, not storms alone, but the minor miseries of life, the incessant pinpricks, the dreary days when the smile abroad has become the scowl at home. At best, her husband will be capricious, hard to please, and though rabidly jealous without cause, at the same time very partial to the attractions of other women. He usually needs the attention of the whole household, which his varying health and moods keep in a mingled state of anxious solicitude and smouldering resentment.

His infirmity may mean a very secluded and humdrum life. She will have to make home an ever-cheery place, an ideal that means hard work and self-sacrifice through lonesome years in which her nobility will be unrecognized and unrewarded.

A woman fond of amusements and sport, and having many acquaintances would find this unbearable. Any happiness in marriage to a neuropath is largely dependent on the self-sacrifice of the wife.

Should marriage occur, the wife must judiciously curb her husband's passions without driving him to other women by coldness, a problem which is often solved by separation. The suggestion should never come from her, and the more she can curb his ardour by tactful suggestion, the healthier will he and the happier will she be, for nothing causes such an irritable, nervous state as excessive coitus. [pg 134]

She will often have to give way in this matter, but must be firm on the necessity for preventing conception, for she can only bear a tainted child; her responsibility is great, and she must *insist* that her husband use those simple methods which prevent conception, thereby ending in himself one branch of a worthless tree. This must be done at any cost, for her happiness is nought compared to the welfare of future generations. Bitter though it be that no fruit of her womb may call her blessed, it is less bitter than hearing her children call themselves accursed.

"So many severall wayes are we plagued and punished for our father's defaultes, that it is the greatest part of our felicity to be well born, and it were happy for humankind if only such parentes as are sounde of body and mind should be suffered to marry. An Husbandman will sow none but the choicest seed upon his lande; he will not reare a bull nor an horse, except he be right shapen in all his parts, or permit him to cover a

mare, except he be well assured of his breed; we make choice of the neatest kine, and keep the best dogs, and how careful then should we be in begetting our children? In former tyme, some countreys have been so chary in this behalf, so stern, that if a child were crooked or deformed in body or mind, they made it away; so did the Indians of old, and many other well governed Commonwealths, according to the discipline of those times. Heretofore in Scotland, if any were visited with the falling sickness, madness, goute, leprosie, or any such dangerous disease, which was like to be propagated from the father to the son, he was instantly gelded; a woman kept from all company of men; and if by chance, having some such disease, she was found to be with child she with her brood were buried alive; and this was done for the common good, lest the whole nation should be injured or corrupted. A severe doom, you will say, and not to be used among Christians. Yet to be more looked into than it is. For now, by our too much facility in this kind, in giving way to all to marry that will, too much liberty and indulgence in tolerating all sorts, there is a vast confusion of hereditary diseases; no family secure, no man almost free from some grievous infirmity or other. Our generation is corrupt, we have so many weak persons, both in body and mind, many feral diseases raging among us, crazed families: our fathers bad, and we like to be worse."

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Her husband will want much petting and caressing, and she must foster his love by lavishing on him much fondness, and ignoring amours as but the mischievous results of his restless, intriguing mind.

She must let him see in an affectionate way that she can let others enjoy his company betimes, secure in the knowledge that she is supreme in his affections—cajolery that flatters his overweening vanity, and rarely fails.

In anger, as in every other emotion, the neuropath is as transient as he is truculent. A trivial "tiff" will make him blaze up in ungovernable rage and say most abominable and untruthful things; even utter violent threats. He will not admit he is wrong, but like a spoilt child must be kissed and coaxed into a good temper, first with himself and with others next.

At one moment he is in a perfect paroxysm of fury; five minutes later he is passionately embracing the luckless object of it and vowing eternal devotion. In a further five he has forgotten all his remarks and would hotly deny he used the vexing statements imputed to him.

Epileptics are morbidly sensitive, and reference to their malady must be avoided. Victims are intensely suspicious, and a pitying look will reveal to them the fact that some outsider knows all about the jealously-guarded skeleton. Resentment, distrust and misery follow such an exposure, for every innocent look is then translated into a contemptuous glance, and the victim detects slights undreamt of in any brain save his own.

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Unless seizures are severe, no one should be called in; if they cause alarm, ask a discreet male neighbour to assist when necessary, leaving when the convulsions abate so that the victim is not aware of his presence. Avoid the word "fit" and "epilepsy", and if reference to the attack be necessary, refer to it as a "faint" or "turn".

Living with a man liable to have a fit at inopportune times is a tremendous strain, and the soundest advice one can offer a woman thinking of marrying such a one is Punch's—"DON'T!"

We have painted the black side, but, tactfully managed, a neuropath will merge in the kindest of husbands, the most constant of lovers. The wife need not be unhappy. Tactless, masterful women will fail, but no one is more easily led, particularly in the way he should not go, than a neuropath.

A man with definite views of his own value will not be successful foil for "mother-in-lawing", nor remain quiet under the interference of relatives, who should remember that well-meaning intentions do not justify meddling actions.

Many a neuropath led a useful life and gained success in a profession, solely because his wife tactfully kept him in the path, watched his health, prevented him frittering away his gifts in many pursuits or useless repining, and made home a real haven.

When the yolk seems unbearably heavy, the wife should remember her husband has to bear the primary, she only the reflected misery, for the limitations neuropathy puts on every activity and ambition, social and professional, are frightfully depressing.

[pg 137]

In spite of his peevishness her husband may be trying hard to minimize his defects and be a reasonable, helpful companion.

"Judge not the working of his brain,
And of his heart thou can'st not see;
What looks to thy dim eyes a stain
In God's pure light may only be
A scar brought from some well-fought field,
Where thou would'st only faint and yield."

Magnify his virtues and be tenderly charitable to his many frailties, for he is "not as other men" and too well he knows it. Love at its best is so complex that it easily goes awry, but death will one day dissolve all its complexity, and when, maybe after "many a weary mile"

"The voice of him I loved is still,
The restless brain is quiet,
The troubled heart has ceased to beat
And the tainted blood to riot"—

it will comfort you to reflect that you did your duty and, to best the of your ability, fulfilled your solemn pledge to love and honour him.

To quote George Eliot:

"What greater reward can thou desire than the proud consciousness that you have strengthened him in all labour, comforted him in all sorrow, ministered to him in all pain, and been with him in silent but unspeakably holy memories at the moment of eternal parting?"

Surely, none!

[pg 138]

We have considered the mournful case of a wife with a neuropathic husband, and must now say a few words about the truly distressing fate of a husband afflicted with a neuropathic wife, for neuropathy in its unpleasant consequences to others is far worse in woman than in man.

A man is at work all day, and his mind is perforce distracted from his woes, and, though he retails them at night to the home circle, they get so used to them as to disregard them, proffering a few words of agreement, sympathy or scorn quite automatically.

With women the distraction of work is not so complete, for housework can be neglected, there are always neighbours and friends to listen to tales of woe and thus generate a very harmful self-pity, and women are not content to enumerate their woes, but demand the attention and sympathy of all listeners.

Many of the facts in the foregoing parts of this chapter apply with equal force to both sexes, but women being usually more patient, tactful, resigned and self-sacrificing than men, can—and often do—alleviate the lot of the male neuropath; whereas the absence of these qualities in the average man means that he aggravates, instead of alleviating, the lot of any female neuropath to whom he may be wedded.

Having taken her "for better, for worse" he will find her irritating, unreasonable, and unfitted to shoulder domestic responsibilities. Her likes and dislikes, fickle fancies, unreasonable prejudices, selfish ways will cause trouble; he must be prepared for misunderstandings and feuds with relatives and friends, and on reaching home tired and worried, he is like to find his house in disorder, be assailed by a tale of woe, and perhaps find that his wife's vagaries have involved him in a tiff with neighbours.

She will be fretful, exacting, impatient, and given to ready tears. Sensitive to the last degree, she will see slights where none are intended, and a chiding word, a reproachful look, or a weary sigh will mean a fit of temper or depression.

[pg 139]

Not only are men less gifted for "managing" women than vice versa, but women are far less susceptible to tactful management than men; a man, like a dog, can be led almost anywhere with a little dragging at the chain and growling now and then; a woman, like a cat, is more likely to spit, swear, and scratch than come along.

Consequently, it is almost impossible to suggest means of obtaining relief to one who has been luckless enough to marry, or be married by, a neuropathic woman.

If the husband sympathize, the condition will but be aggravated; medicinal measures will only increase, instead of diminishing, the number of symptoms; indifference will procure such an exhibition as will both prove its uselessness and ensure the attention craved.

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CHAPTER XXVII

SUMMARY

To sum up: we have learnt that Epilepsy is a very ancient disease due to some instability of the brain, in which convulsions are a common but not invariable symptom.

Its actual cause is unknown. Heredity plays a big part, but there are secondary causes beside factors which excite attacks.

Various methods and drugs to prevent seizures have a limited use.

First-aid treatment consists solely in preventing the victim sustaining any injury.

Neurasthenia is a disease due to nerve-exhaustion and poisoning from overwork and worry. Its symptoms are many, but fatigue and irritability are the chief.

Hysteria is an obstinate, functional, nervous disease in which the patient acts in an abnormal manner, which is highly provoking to other individuals.

The cure for hysteria and neurasthenia is solely hygienic, and depends mainly on the patient.

The first step towards health consists in getting any slight organic defects remedied.

Digestion is often poorly performed.

This must be remedied by thorough mastication and rational dieting.

Constipation is very inimical to neuropaths, and must be remedied.

Patients must pay careful attention to general hygiene.

Insomnia is exhausting and must be conquered.

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The effects of imagination are profound.

Suggestion treatment overcomes imaginary ills.

Drug treatment is either of very limited utility, or frankly useless.

Patent medicines are never of the slightest use.

The rational training of neuropathic children is a very difficult but essential task.

Puberty and adolescence are very critical times.

Occupations and recreations must be wisely chosen.

Heredity is the primary cause of these diseases. As it cannot be treated, sufferers must not have children.

Character is abnormal in nervous disease.

Marriage is very undesirable.

As a parting injunction, whether you are an epileptic or a neurasthenic, or a friend, relative, or attendant of such a one:

"GO THOU SOFTLY ALL THY DAYS!"

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BIBLIOGRAPHY

"Oh! for a booke and a shadie nooke,
Eyther indoore or oute;
Where I maie reade, all atte my ease
Both of the newe and olde:
For a jollie goode booke, whereonne to looke
Is better to me than golde!"

The following books are suitable for laymen, and are most of them very readable.

EPILEPSY

We know of no book suitable for laymen,

NEURASTHENIA AND HYSTERIA

"Nervous Disorders of Men" (Kegan Paul) Hollander.

"Nervous Disorders of Women" (Kegan Paul) Hollander.

"National Degeneration" (Cornish, Birmingham) D.F. Harris.

"Hysteria and Neurasthenia" J.M. Clarke.

"The Management of a Nerve Patient" Schofield.

"Confessions of a Neurasthenic" (F.A. Davis Co., Philadelphia) Marrs.

"Conquest of Nerves" (Macmillan) Courtney.

GENERAL:

INDIGESTION

"Indigestion" Herschell.

DIETING

"Dietetics" (Jack's People's Books) A. Bryce.

"Diet in Dyspepsia" Tibbles.

"Cookery for Common Ailments" Brown.

"Constipation" Bigg.

HYGIENE

"Laws of Life and Health" A. Bryce.

"Health" M.M. Burgess.

INSOMNIA

"Sleep and Sleeplessness" H.A. Bruce.

"The Meaning of Dreams" I.H. Coriat.

IMAGINATION

"Psychology in Daily Life" Seashore.

"Hygiene of the Mind" T.S. Clouston.

SUGGESTION

"Hypnotism and Suggestion" Hollander.

"How to Treat by Suggestion" Ash.

"Hypnotism and Self-Education" (Jack's People's Books) Hutchinson.

PATENT MEDICINES

"Patent Foods and Patent Medicines" (Bale & Davidson) Hutchinson.

See Chapter XX for B.M.A. Books.

THE CHILD

"Our Baby" R.D. Clark.

"Abnormal Children" (Kegan Paul) Hollander.

"The Baby" (Jack's People's Books) Anonymous.

"Training the Child" (Jack's People's Books) Spiller.

PUBERTY

"Youth and Sex" (Jack's People's Books) Scharlieb and Sibley.

"Woman in Childhood, Wifehood, and Motherhood" M.S. Cohen.

"The Adolescent Period" Starr.

"Physiology" (Home Univ. Library) McKendrick.

"Human Physiology" Leonard Hill.

HEREDITY AND CHARACTER

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"Evolution" (Home Univ. Library) Thomson and Geddes.

"Heredity in the Light of Recent Research" (Cam. Univ. Press) Doncaster.

"The Psychology of Insanity" (Cam. Univ. Press) Bernard Hart.

MARRIAGE

"On Conjugal Happiness" R.G.S. Krohn

"Race Culture and Race Suicide" R.R. Rentoul.

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