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After a good American breakfast, topped off with a second cup of coffee. Mr. Brown rushed for his coat and hat and dashed for the garage on the first subzero morning of the winter. He had allowed himself the usual 20 minutes to get to his office where he would be busily occupied all day with perplexing business problems. This morning, however, only the slow growl of the starter mechanism greeted his push of the starter button. Mr. Brown then realized that for several weeks he had noticed the light had been dimming considerably when he started the car, but he hadn't paid any attention to this evidence of an exhausted battery. The result was that he was moderately inconvenienced this morning when the added strain of turning over a very cold motor was more than the already weakened battery could overcome. A short, but rather impatient, delay of an hour while the service man changed the battery and the slight expense of having the battery recharged were very trivial consequences, indeed, to pay for his negligence in observing that the additional electrical gadgets that he had recently installed were taking more energy out of the battery each day than the generator was restoring.

This experience with the battery meant very little to Mr. Brown, however, when six months later he began to feel fatigued, noticed some increasing irritability, a change in his disposition, and toward the end of the day a distinct need for a stimulant which he took in order to keep up his usual pace. At this time, he was engaged in an important piece of work that required more of his time and concentrated attention than usual. He soon became more irritable, was annoyed by the children, had trouble in getting to sleep, and was quite perturbed by his depressed spirits, his inability to concentrate and make decisions as was his custom. He was still in the midst of his important business and forced himself to carry on although his work was becoming quite inefficient. acutely aware of this and was haunted by the fear that his employers would discover it. It wasn't long until he began to have some digestive disturbances, and then he started to experiment with his diet and consequently lost some weight. It was only when he experienced some vague, peculiar feelings in his head and had had an occasional crying spell without the slightest provocation that he decided to consult his physician. He was certain there was some physical basis for his trouble because he had always been able to forge ahead and do more work than the average man and, although he realized that he had undergone some added strain during recent months, he had often done the same thing before. Still his experience with the battery on the cold morning meant nothing to him.

The physician whom he consults is immediately confronted with a difficult problem.

This clinical syndrome is of course not limited to business executives, but it may well be applied to Mrs. Jones who has several active children, an overworked school teacher, or to any one who is expending more nervous energy than can be restored during hours of rest and relaxation.

It is very easy for the physician to appreciate that there is some relation of such symptoms to the excessive consumption of nervous energy. It is not sufficient, however, just to advise the patient to take a vacation of several weeks or, as is sometimes prescribed, to take more physical exercise or to busy himself with other lines of activity in order to snap out of the "blues."

The difficult problem in these cases is the task of determining whether there is some vague, underlying organic pathology that has been slowly sapping the patient's vitality and acting as an extra load on his energy-producing mechanism. On the other hand, as in the case of the battery, the exhaustion may be due entirely to excessive drain of energy and an unbalanced energy-consumption, energy-production rate.

A double responsibility devolves on the physician in these cases. First he must institute a scrutinizing search for disease, not only because it is of the utmost importance to locate the hidden source of energy loss, but of prime importance to convince the patient of the absence of such disease if it does not exist. The emotion of fear becomes very dominant in the too nervous patient and most frequently takes the form of fear of These fears are best controlled by the confidence that the examining physician may exert through his methods of examinations. Many examinations that seem unnecessary and a waste of time and money must be made to relieve the patient's fears. For example, a common fear that has arisen in the lay mind in recent years, owing to much publicity, is that of brain tumor. It seems that nearly every one with peculiar feelings in the head combined with some changes in personality has heard or read of somebody with brain tumor who had just the same symptoms. It is true that cerebral neoplasm must be very carefully considered in the differential diagnosis but, from the viewpoint of the patient, a roentgen examination of the head is one of the most satisfying examinations the physician can make although actually it is of little real value in the diagnosis of brain tumors.

The responsibility of locating or disproving the presence of disease is slight in comparison to the responsibility of deciding the rôle that any discovered abnormality may play in the patient's symptoms. Rare is the patient in whom at least some minor ailment cannot be found and the greatest discretion and judgment are necessary in evaluating the relation of this to the patient's trouble. This is necessary in order that

insult may not be heaped on injury by advising that some therapeutic regimen or procedure be followed that will only further exhaust the meager store of nervous energy. Many of the symptoms that point indefinitely to disease are a result, rather than a cause, of the exhausted state. Uncertain procedures must never be attempted in a hurry, and the timing of absolutely necessary therapeutic measures requires unusual understanding of the patient's possible reaction to such procedures.

That the energy-producing and energy-dispensing mechanism of all people is not the same requires no keen observation and is almost axiomatic. The fact remains that, in our struggle for existence, a certain amount of energy is required for merely maintaining existence. Considerably more is required to satisfy those inner feelings of self-respect. ambition, and other cravings of an emotional nature. It is in the latter or emotional make-up that the human race varies so greatly. Every individual possesses an emotional pattern just as different from that of other individuals as is the physiognomy of his face or the contour of his body. It appears unquestionable that inherited genes furnish the basic pattern that shapes the emotions, but the environment that gives the opportunity for the emotions to be displayed is the test of the real quality of the underlying structure. Differences in the outward appearance of the body are appreciated and readily accepted by all. Variations in the ability to acquire knowledge from teaching and experience are appreciated by most. Dissimilar structural design of the body is recognized by students of medicine as the cause of many of the diseases of mankind. A knowledge and understanding of the dissimilarity of the emotional tone of individuals and how this accounts for his behavior must also be fully understood by those physicians who would attempt to administer aid to the nervous patient.

The psychologists have studied the inherited differences of emotional tone and the manner in which it affects the responses to the objective stimuli of the environment. The character and personality of the individual are the results of the environmental force acting on the hereditary emotional pattern. It is not the purpose of this paper to enter into a discussion of the various classifications that psychologists have devised for the different personality groups. Those extremes of personality and emotional types that eventually terminate in the more serious psychoses are excluded also. I realize, of course, that it is only a matter of degree of emotional instability between the patient with extreme manic depression and the patient whom I am discussing as suffering from nervous exhaustion. I prefer, however, to limit my discussion to those individuals who do fall in the normal range of psychological behavior and would remain so if the fatigue caused by the stresses and strains

of life did not lower their reserve of nervous energy to the level where abnormal psychological behavior appears.

This group is seen more frequently by the internist and the family physician than by the psychologist. This is because the patient's symptoms are chiefly referred to the somatic domains of the body and only rarely do the emotional changes progress beyond what the patient believes by experience to be the normal manifestation of severe emotional upset. He is concerned with why these come on without any apparent cause and he may have definite fears for his sanity, but he still retains sufficient insight to try to explain his trouble on the basis of bodily disease.

In my experiences, patients who most frequently show the symptoms of nervous exhaustion can be conveniently grouped into three fairly distinct types of personalities.

The first, and by far the largest, group is comprised of young or middle-aged adults, usually females, who are above the average in mentality, frequently are attractive in physical appearance, and are inclined to possess some artistic talent. These persons are easily elated and just as easily depressed. They are extremely neat in their work and appearance and in their youth they appear to possess abundant energy and ambition so that they usually have many friends. They are restless, unable to relax easily, and worry excessively over trivial matters. They begin to notice fatigue after going through some of the usual stresses of life such as college experiences, childbirth, or illness. Following this, they never feel rested and gradually become more and more fatigued, eventually complaining of many indefinite symptoms in various parts of the body.

I choose to think of this group as the race horse type, unusually attractive and capable of speed, but attempting both to maintain the speed of the race horse and the stamina of the work horse. Insufficient rest to compensate for excessive use of energy is the downfall of these patients.

The second group has been seen more frequently in recent years. Highly capable, unusually ambitious, and endowed with a robust constitution, patients in this group are predominately masculine. Under ordinary conditions of life, they should be able to carry on until old age without any more ills than the usual acute infections. In the fourth or fifth decade of life, however, they begin to notice excessive fatigue, irritability, and the need for stimulants as cited previously. These are the men who, because of the necessity of the competitive struggle of making a place in the world, because of excessive ambition, or because of their unusual capabilities, are having additional work constantly thrust upon them. The result is a slowly ebbing reserve of nervous

energy until the level has reached such a state of exhaustion that normal functions are interfered with. I choose to think of these individuals as marathon runners whose goal should be life span, but because they set their pace too rapidly they must fall by the wayside and watch the slower but better paced runner reach the goal.

The third group is smaller, but the patients have a very distinct personality and it is much more difficult to explain the mechanism causing the loss of energy. Patients in this group are about evenly divided as to sex. The onset of exhaustion is late in the fifth or sixth decades. They are unusually good, quiet, peaceful citizens and unusually conservative in their work and dealings with their fellow men. They are of the slow, plodding type, extremely cautious, and not inclined to take on more responsibilities than they can handle well. They are not inclined to be overly social with their fellow men, preferring to be lone wolves. All their lives, however, they have paid undue attention to details and their lives are built around the clock. When the break comes the result is predominately one of melancholia and depression. It is probably due more to a psychopathic personality than to undue consumption of energy. These patients have scrupulously devoted themselves to ceaseless hard work for a cause and show many of the signs of degenerative diseases which probably affect the energy-producing, energy-storing mechanism. This is more frequently the cause rather than exhaustion due to excessive consumption of nervous energy. choose to think of this group as confining their ceaseless, plodding activity in a too narrow groove with an actual wearing-out process which accounts for a more permanent type of trouble than a mere exhaustion of an otherwise normal mechanism.

After this general introduction to the nervously exhausted patient who consults us for aid, let us investigate his problem more carefully and see in what manner we can be of help to him.

A critical observer can sense after a few words with the patient that his confidence is shaken and that he is very much in need of a sympathetic ear. The examining physician will do well to allow him to tell his story without unduly hurrying him by direct or leading questions. Careful attention should be paid to the symptoms that are uppermost in the patient's mind; usually a good insight into the emotional state, and especially about the fears, can be gained in this.

The complaints of these patients are legion. They all complain of exhaustion and easy fatigability. Many are blue, melancholy, and depressed with fears for their sanity. They are restless, irritable, and unable to relax. Insomnia is almost the rule. Memory is usually poor, especially for names, and it is difficult for them to concentrate. They notice particularly that it is difficult for them to read and concentrate on

a subject. It becomes increasingly difficult to make decisions and have confidence in the correctness of the decision. People and especially crowds make them very nervous and they prefer not to see people although they frequently desire the companionship of some very close friend in order to avoid being entirely alone. They are extremely sensitive to the slightest personal remarks which often are greeted with outbursts of tears.

All kinds of peculiar bodily feelings occur. They have drowsy feelings, creepy feelings, band-like feelings in the head, stupid feelings, dizzy feelings, and many others. The top of the head, the back of the neck, and the region of the throat are favorite locations in which tight feelings or a feeling of pressure occur. We have had an opportunity to study a great number of patients who complained of peculiar subjective disturbances in the throat which they feared were caused by goiter. A sense of heaviness in the chest and deep sighing respirations are almost pathognomonic of a depressed emotional state. Precordial distress and cardiac palpitation become a source of great fear. All types of digestive symptoms appear. The disturbed appetite leads to faddish diets and deficiency states. The rectum and sex organs are not uncommon sites for vague subjective feelings. Other symptoms too numerous to mention could be detailed, but these are usually sufficient to give the examiner a good clue into the nature of the trouble before the patient finishes his story. It is only the unwary who will expose his hand at this time and try to argue with and convince the patient that he has no organic ills to account for his trouble. The wise physician will make careful inquiry into those regions and domains that seem of greatest concern to the patient.

A physical examination should be performed in a thorough and routine manner and all possible clues to disease should be elicited. It is curious how frequently the patient will reveal, during the examination, his secret fears of disease by being overanxious about the examiner's findings in the domain of his interest.

Foci of infection, evidences of glandular derangement, evidence of mineral and vitamin deficiency, and organic disease of the nervous system should be the chief object of search as the examination is conducted. Laboratory investigations, roentgen studies, and consultations in special fields are almost indispensable in these problems. The teeth, tonsils, and sinuses should be thoroughly investigated for foci of infection. The prostate is frequently overlooked as a source of infection that frequently is most devitalizing to the patient. Errors of refraction and muscle balance should be ruled out as a cause of fatigue and a thorough examination of the eye is of great value to rule out intracranial lesions. A determination of the basal metabolic rate will differentiate the occa-

sional cases that are confusing in the diagnosis of hyperthyroidism. It is very difficult to differentiate hypothyroidism, because practically every patient in a state of nervous exhaustion will have a very low basal metabolic rate. Such a finding must not be immediately interpreted as one of hypothyroidism. In many cases only a carefully controlled therapeutic test with thyroid extract will differentiate the exhaustion of thyroid deficiency from nervous exhaustion.

The fears of the patient, more often than the concern of the physician, require that roentgen examination of the chest and electrocardiograms be made. Roentgen examination of the gastro-intestinal tract is made only in those patients having digestive symptoms. A spastic, irritable colon is almost universally found in the nervous patient. Cancerphobia, especially fear of cancer of the stomach, is so prevalent that roentgen examination of the gastro-intestinal tract is invaluable as a psychotherapeutic agent. Care must be taken in interpreting the significance of nonfunctioning gallbladders. For some unexplainable reason it is not uncommon to find a nonfunctioning, or poorly functioning, gallbladder in a highly nervous patient with marked symptoms of dyspepsia. A repetition of the examination after a brief period of rest and treatment will frequently show a complete return of function of the gallbladder. I have found the Ewald meal to be of inestimable value. Achlorhydria and its significance in possible deficiency states has often been the directing clue to the correct replacement therapy in patients who otherwise appear to be nervously exhausted. The pelvis has been the happy hunting ground of the surgeons to explain many of the nervous ailments of women. Medical gynecologic treatments, plastic operations, suspension, and total or partial ablation of the ovaries are usually of no value in the treatment of nervous disorders and the results are frequently more harmful than good. Routine examination of the blood and urine and complement fixation will reveal the true nature of many unsuspected diseases. Many observers have reason to believe that undulant fever in its chronic form, chronic brucellosis, may be the explanation of the symptoms of many patients suffering from chronic exhaustion. In such cases it is well to test for this disease, but unfortunately the tests are unsatisfactory in determining to what degree this condition accounts for the patient's symptoms even if there is a positive reaction. Furthermore, treatment, for the most part, has yielded such discouraging results that this diagnosis has been more discouraging than encouraging to the patient.

Innumerable chronic disease states may devitalize the patient, producing the general symptoms of exhaustion rather than the outstanding symptoms of the disease. Many such diseases will remain undiscovered because of lack of sufficient localizing symptoms; it is important to re-

examine these patients periodically with a fresh viewpoint if the response to therapy is not satisfactory.

After the examination has been completed to the satisfaction of the patient and the examiner, the most difficult problem of therapy begins.

If the patient is satisfied that the examination is complete and thorough, and especially that his fields of particular fears have been thoroughly studied, he is usually satisfied with the statement that no disease exists which accounts entirely for his trouble. He must be convinced that his symptoms are predominantly due to poor function of all the organs of the body because of a devitalized central energy station. If some minor foci or other disease processes are found, he can be told that they have contributed to his loss of energy but that their correction is not the sole answer to his problem. Even though they are a major contributing factor, their removal will still leave him in the same exhausted state that only the energy-building processes of nature, rest, relaxation, food, sleep, confidence, and happiness will restore.

As mentioned previously, if the treatment of disease is likely to be extremely devitalizing, it had better be postponed. Frequent talks with the patient to bolster up his waning confidence and especially to explain, in a way that allays rather than increases the fear, the reason exhaustion can cause all his symptoms is the most helpful type of psychotherapy. A patient left alone too long with his own thoughts slowly reverts to all the fears that the original examination may have allayed.

New symptoms arise to replace the old ones and these must continually be combatted with ready explanations. The slightest expression of anxiety on the part of the physician is multiplied many times in the patient's mind.

The patient must be cautioned that the loss of energy has been slow and over a much longer period of time than he believes. Likewise, he must be told that the restoration of energy will be slow and the period of treatment must extend long after he believes himself fully recovered if a reserve of energy is to be built up to carry him through any unusual strain; otherwise he will surely have a recurrence. He must also be warned that his energy budget must be balanced after he recovers and that consumption must not exceed production. Inevitably he will have a recurrence if he does not get more rest and do less work than he did prior to his illness. The milder cases may be treated without a period of complete rest; but if rest is advised it should be sufficiently long to restore the patient completely or it is a loss of the patient's time and money. It is extremely discouraging for the patient to be advised to go to Florida for a month only to find on his return that he is no better. Frequently a patient will even be much worse after several weeks or a month of rest.

This can be explained to him, or even predicted, on the basis that as he relaxes he will feel even more exhausted. It must be explained that this was only his real condition prior to rest and his small output of energy was only being kept up by constant unwise stimulation. Economically, it is better for these patients to rest voluntarily a shorter period of time at the beginning of their trouble than to be forced to give up completely for a longer period of time later on, because this frequently results in loss of their positions.

Specific vitalizing agents are next to useless. A condition in all respects similar to nervous exhaustion is seen at the menopause which frequently shows startling results following endocrine therapy. I firmly believe that we may expect new additions to our endocrine armamentarium in the future which may be helpful in similar conditions other than at the menopause. The cyclic fatigue and nervous states which so frequently accompany the menses and completely disappear during pregnancy, and the postpartum exhaustions should eventually be solved on a glandular basis.

All types of symptomatic therapy should be practised, especially with a view to better sleep and a better nourished state. Physiotherapy and hydrotherapy are especially valuable. The undernourished patient should receive extra calories in frequent feedings, the gastro-intestinal symptoms should be relieved, and as this is most frequently due to a spastic colon, laxatives should be eliminated and normal bowel function restored. This may follow any of the rational treatments for irritable colon. Obese patients do better with restriction of food. A reduction in weight should be slow and preferably it should be accomplished by means of a well-balanced diet with sufficient vitamin and mineral constituents. Deficiency states are much more prevalent than is supposed and they are not an unimportant factor in the nervously exhausted patient. Because of digestive disturbances these patients frequently limit their diets. The teeth often have been the first object of suspicion and their removal has further restricted the diet, especially the intake of the valuable protein foods. While vitamin therapy is unquestionably much overdone, there is nothing to replace it when actually needed.

Insomnia is the most troublesome of all symptoms and its treatment would require a discussion longer than space permits. Sedatives are allowed when necessary, but their excessive use should be discouraged, especially in the older patients whose tolerance is often exceedingly small. Not infrequently an increase in the patient's psychic symptoms is due entirely to overuse of sedative drugs. Slight sedation throughout the day is often of more value in obtaining relaxation and sleep than knockout doses at night which cause a hangover the following day. All psychic

and other well-tried methods of obtaining sleep are preferable to complete reliance on drugs.

Every patient is a problem unto himself, and the solution requires much time, patience, and ingenuity on the part of the physician. Any discussion of treatment will always be inadequate to cover the specific details in all cases.

There is just one final admonition in regard to treatment that I believe should be enforced in all cases. Almost universally the rule with relatives and friends and only too often the advice of physicians is to urge the patient to do things which he previously liked, but now finds very difficult and extremely fatiguing. This especially applies to his routine duties and social relationships with his friends. He would prefer not to see people and must constantly force himself to perform his usual duties. He is afraid he will be considered lazy and continues to force himself for this reason. Well-meaning friends and relatives devise all manners of stimulating activities to revive his waning interest in life. I firmly believe that this disinterest in life is Nature's way of effecting a rest cure and that further stimulation of any sort is to be strictly avoided. I advise these patients never to do anything they do not want to do and to carry out only a fraction of the activity some revived interest may incite them to want to do. It should be made clear to the patient and to his relatives that it is entirely contrary to the nature of these patients to be lazy and that only by catering to the desire for rest can he be restored to normal activity. Crowds and people above all other things are exhausting to these patients. The fight between being bored to death by rest and tired to death by activity requires very great consideration, and when a patient cannot be placed in a well-managed sanatorium where this is all provided for, the problem is a big one. It must be solved in each individual case by the limitations of the patient's environment.

The prognosis is almost universally good in the young patient, but this decreases with increasing age and the frequency and severity of the attacks—a very important point in the history for both diagnosis and prognosis. Once a patient has suffered an attack of nervous exhaustion he is never free to follow the dictates of his own will and desires, but if recurrences are to be prevented his life should be regulated almost as carefully as the highbred race horse's life is governed by his trainers. Each succeeding recurrence is more severe, lasts longer, and the recovery is less complete.

Endeavor, if the patient feels you have been responsible for his recovery, to have frequent conferences with him so that you may act as his conservator of energy. These patients have a natural tendency to recover and if the physician is fortunate enough to see them at, or near,

the natural time for this improvement, he receives great credit regardless of his mode of therapy. Woe unto him, however, if the patient has another relapse. The treatment which was hailed as so marvelous will surely fail to give the same quick response a second time, and the patient must go through another period of energy upbuilding.

Finally, the patient should be strictly cautioned as he approaches recovery. He must be warned that he will have occasional good days on which he will almost surely commit some foolish overactivity unless he is specifically told that such days are only a beginning of recovery and that rest on these days will be much more advantageous in hastening his recovery.