times a minute. These great strokes of the central pump must go on through night and day in order that the blood may freely flow through the system. The great tides of air must be drawn in and forced out of the lungs continually, at the expenditure of an enormous amount of nerve-force. When digestion is to be performed, it must be at the expenditure of nerve-force. Most of you have learned from experience this fact, that when you are over-tired a meal will not be digested, which, at other times, you would be able to appropriate without trouble. Many years ago, when a boy, I walked across Chester County from Maryland to the Chester Valley. I had nothing to eat all day, and at night, when we came to a farmer's, he loaded his board down with heavy short-cake. Now, short-cake is a substance that yields only to the digestion of untired boys and ostriches. All through that night, and for several weeks afterwards I wished that I had never been born. I had so exhausted myself that there was left no nerve-power to digest this unreasonable food, and, as a result, it underwent fermentation, and poisoning occurred. The heart must act and air must be breathed, but digestion is not absolutely essential, and, consequently, when a man or woman becomes over-exhausted, digestion suffers and no food is taken. When power is failing and strain is greatest, too little fuel is supplied to meet the demand, and so, little by little, this vicious circle is passed around, until it ends in failure and bankruptcy, which is more and more complete. Again, often after an acute disease there is left a condition of exhaustion in which the vital powers are not able to supply the needs of every-day life and at the same time accumulate strength. Here, again, rest is necessary.

In health, to meet company and associate with our friends adds new life and vigor and power, but the entertainment of people by a woman who is feeble and worn out requires a physical expenditure which is often a great strain. Hence comes the exhaustion of an excessively active social life. Hence it has come that as a central idea of the rest-cure isolation is an important feature. Here there is of course great danger that there shall be rest-cure quacks, just as there are quacks with almost every form of special therapeutics. This is a remedial measure which is to be employed with care. It is not a stereotyped and set mould into which every little fragment of exhausted humanity is to be crowded and made to fit whether or not. In some instances it is to be applied with great severity, while in other cases it is only the principles which underlie it that are to be used.

The principle which underlies the rest-cure is, in the first place, the absolute avoidance of all physical expenditure of strength, so that there shall be opportunity to accumulate the wasted income. One of you lives beyond financial income, and you then go to some hamlet and live in a corner until the income thus saved adds to the capital, and the fortune is restored. This is precisely what the doctor attempts to do when he applies the rest-cure. He puts the patients to bed, keeps them quiet, and does everything to avoid the expenditure of a single unnecessary grain of vital force. He takes that little grain of nerve-energy and uses it to digest a little particle of food, and thereby adds to the exhausted power. It is a very common thing in hungerless patients, put to bed under proper surroundings and kept quiet, to see the appetite return at once. Under these circumstances the appetite is the measure of the deficiency or of the surplus of nerve-power. If there be too little power for nerve-digestion there will be no appetite. When there is a husbanding of the resources the appetite returns.

If a patient is put to bed and allowed to lie there perfectly quiet, then his muscular system is in much the same condition as is that of the fakir's arm. He ties up his arm, and keeps it so through the decades, and as a result there is a withered, structureless mass without power, the muscular fibre absolutely gone out of it. It is in the muscles of the human being and of the animal that the animal heat is chiefly produced. It is chiefly in the muscular system that are burnt up the effete substances that are the waste of the body, so when the muscles waste the animal heat fails, and the power to destroy effete matters fails. If, then, a patient is put to bed and kept perfectly quiet, there is lack of oxygenation of the tissues, and a gradual loss rather than a gain of power. The importance of rest in the treatment of disease has been long recognized, but it is to the sagacity of Dr. S. Weir Mitchell that we are indebted for the comprehension of the fact that we must not only try to conserve nerve-power, but to also supply power by maintaining the activity of the muscles in such a way that there shall be no draught upon the nerve-centres. If I move my arm there is an impulse flows out from the brain, and, by virtue of this expenditure, the arm is moved. If, however, I apply electrical stimulation, the muscle contracts, the structure of the muscle is maintained, and the activity of the muscle in destroying waste matters is kept up, but there is no expenditure of nerve-power.

Again, where there is no contraction of the muscles, there is a tendency to the accumulation of the juices from the blood in what we may call the by-roads of the system. It is not chiefly the blood that is in the vessels that directly nourishes the body, but the juices that have escaped from the blood that nourish the tissues. Along with every blood-vessel there runs a channel through which these juices that are not used are taken up, carried back into the trunk, and returned to the blood. When the muscles are inactive these little