DISEASE AND DRUGS. NATURE AND CAUSE OF DISEASE, AND SO-CALLED "ACTION" OF DRUGS.

"Disease is abnormal vital action; hence, to fully understand the nature of disease, it is necessary to understand the actions of the various organs when in health. We may divide the vital organs into two classes, one of which digests the food and circulates it to all parts of the system, where it can be used for the purpose of nourishing and building up the body, while the other class gathers up the waste matters, broken-down tissues, and whatever else there may be in the system that is not usable, and casts the same out of the body. It can be seen at a glance that these two classes of organs must not only exist, and perform their work, but that there must be an exact balance in the work performed by them in order to insure health and prolong life. That is, the organs which supply nourishment to the tissues must supply just the requisite amount; otherwise, the body would decrease in size and strength. The organs that eliminate the impurities from the system must also be faithful in their work, and cast out all the broken-down tissues and other waste matters just as fast as they accumulate; should they fail to do this, there would be a clogging up of the entire system with these matters. When these two classes of actions are just balanced, the individual is in health. If, however**, there is an unbalanced condition of these actions, for any cause, the individual is diseased.**

The law of self-preservation is the first law that is obeyed by the vital organs; and it is an attempt on the part of the organism to obey this law that constitutes disease. Hence, it is plain to be seen that **disease** is not a thing, is not an entity, but **is vital action**. In one sense, it is just as natural to be sick as it is to be well; that is**, disease, or abnormal vital action**, is just as much the work of nature as is health or normal vital action. Both are put forth for self-protection, for the purpose of preserving the life of the body. In health, the organs all act with reference to keeping the body just as it is. That is, the broken-down tissues are removed as fast as they break down, and others are as promptly built up to take their place, all unusable matter being removed from the system as fast as it enters, without either increasing, diminishing, or in any way disturbing or unbalancing, the action of any organ.

In disease, the actions of the various organs are all put forth in obedience to the law of self-preservation the same as in health, with the difference, however, that **in disease the vital actions are disturbed**. They may be increased, diminished, or otherwise unbalanced, according to varying circumstances and causes; yet these actions are all put forth for the purpose of self-protection— not, however, to keep the body as it then is, but for the purpose of restoring it to the condition in which it was before the special cause that occasioned the disturbed action was brought to bear upon the organism. Hence**, disease is remedial effort.**

Whenever any action takes place in any part of the system, a certain amount of vital force is expended, and thus lost to the individual. This is because of the wearing out of some of the tissues of the part in exercise. This being the case, it is evident that all the vitality of the body would soon be expended unless some means was provided by which a constant supply might be furnished to the tissues. Such a supply is furnished by the blood, which is composed of water and organic matters derived from the food.

When the vegetable builds itself up, it does so by taking certain elementary substances of the mineral kingdom, and transforming them into its - own tissues, at the same time also transforming whatever force those elementary substances possess into vegetable life, or vital force. Whenever man or beast eats vegetable food, certain elements of the vegetable are converted into flesh, and the vital force manifested as vegetable life is transformed into animal life. Now, as all the digested food becomes blood before being converted into flesh, and as the flesh loses its vitality by the wearing out of its tissues, it is evident that **the life of the flesh is in the blood**, and that the flesh may replenish its vitality by renewing its tissues. But before this can be done, the broken-down tissues must be removed, which is principally effected by their combustion, or oxidation, as explained in the tract entitled "Good Health," to which the reader is referred. As there stated, these broken-down tissues are burned or oxidized by the oxygen received from the lungs, the carbonic-acid gas thus formed being immediately absorbed by the red corpuscles of the blood, and by them carried away, thus making room for the rebuilding of the tissues.

The **red blood corpuscles** are not used as material for building up any part of the body, their sole office being to convey oxygen from the lungs to the capillaries for the purpose of consuming the broken-down tissues and then conveying the resultant carbonic-acid gas to the lungs for expulsion. And by this process heat is generated in all parts of the system by the oxidation of the wastes of the body. As previously stated, it is very important that the worn-out tissues should not be permitted to accumulate, as by so doing they would hinder the rebuilding of the new tissues. To remove these with sufficient dispatch, a great amount of oxygen is required; so much, that a quantity of blood equal in volume to the whole amount contained in the body is sent to the lungs every three minutes for the purpose of throwing off the carbonic acid, and of receiving fresh supplies of oxygen.

The truthfulness of the foregoing statement may be demonstrated in many ways. If a person with a pulse at seventy or eighty steps quickly up a flight of stairs, or runs for a short distance, or engages for a few moments in any very active exercise, he will find his pulse increased from ten to fifty beats per minute. What is the cause of this increased circulation? Simply this: the tissues, in acting to perform the labors required of them, become worn; and as they cannot repair the wastes until this worn material has been removed, it is necessary for the blood to be sent to the lungs much more rapidly than on ordinary occasions.

Thus we see why violent, or even active, exercise will accelerate the circulation. **The accumulation of worn-out material not only prevents the repairing of the tissues, but it also prevents them from manifesting any vitality.** This we see whenever the supply of air to the lungs is cut off, or whenever the circulation of the blood ceases; for, in either of these conditions, the flesh begins to weaken, and almost instantly loses its strength, and life soon becomes extinct. **These facts show the importance of a constantly full and unimpeded circulation of blood in every part of the human system if we would be free from disease**; for if for any cause the capillary vessels in any part of the system become clogged, there must of necessity be a stoppage of the circulation in that part, and, consequently, it will be insufficiently nourished, the wastes will be improperly removed, and the part will not be as active and strong as it would have been under other circumstances. When any part of the system is clogged with unusable substances, or with retained excretions, or even by a distension of the blood-vessels, as in congestion, nature's first law, self-protection, requires that an effort be made on the part of the organism to remove the obstruction. **The effort which is thus put forth is disease.**

When the effort is slight, and does not differ much from the actions of the system when in health, the individual may not be aware that he is diseased; but if the effort is great, or manifest itself by any very marked symptoms, requiring any very great expenditure of vitality in their manifestation, then the individual becomes aware that he is sick. It sometimes happens that obstructions to the circulation exist for a long time before any very great effort for their removal is put forth by the system. There may be two reasons for this. 1. The individual may have inherited a feeble constitution; 2. He may have lived under circumstances which caused the gradual yet constant reception into his system of the obstructing cause, which, not being cast out by a slightly increased activity of all the depurating organs, occasioned the accumulation of foreign and effete matters, at the same time over taxing some one or more organs, and thus causing their capillaries to become relaxed, and distended with impure blood. These organs soon ceased to perform their functions, and the entire system became clogged with the effete matter which should have been thrown off. The organic nervous system (which stands in the same relation to the vital organs that the brain sustains to the organs of voluntary motion) then perceives that something is wrong, that there is something in the system which is not usable; they consequently call upon the entire system to act for the purpose of eradicating these foreign matters from the vital domain.

The circulation may be clogged in various ways. The surface or **extremities may be chilled**, and the circulation in those parts thereby become impeded, or it may be checked by pressure, as in **the wearing of tight elastics about the limbs**, or corsets and belts about the waist, **or obstructing substances from without** may be introduced into the system. Any effort on the part of the system to remedy the evil, or to remove the obstruction, is in exact accordance with the principle of self-preservation, and is, consequently, a natural action; yet, inasmuch as it differs from the usual actions of the vital organs, it is an abnormal, unusual, or diseased action.

There is another class of causes which occasion disease although they do not materially clog the system with their own substance. This class is by far the most fruitful source of disease of any that can be named. It comprises all the poisons of the mineral, vegetable, and animal kingdoms, and includes both those which are taken into the system from without, and those that are engendered within the body. Many of the poisons taken into the system from without, occasion immediate and prostrating diseases; and, not unfrequently, sudden death follows their reception into the body. Others do not immediately occasion any serious-or marked disturbance of the action of the various organs. The manner in which these poisons occasion disease is a matter which all should understand, for if they do not understand how disease is occasioned, they cannot understand how it should be treated; while a person who fully understands the nature and cause of a disease will be better able to discern the mode of treatment to be adopted to effect a cure.

Of poisons that enter the system from without, perhaps none will better illustrate the subject than the malaria which arises from the decomposing vegetation of swamps, marshes, and other low, wet places. This malarious poison may arise from a chicken-yard, or barn-yard, or pig-pen, or heap of stable litter, or from a cess-pool, a privy-vault, or a swill barrel. It matters not whence it comes, whether from decaying vegetables in the cellar, under the house, or from the mill-pond; from whatever source such emanations arise, they mingle with the atmosphere, and are taken with the inhaled air into the systems of those who live in the vicinity where these poisonous germs are originated and diffused. If very little of the poison is inhaled, or if the person inhaling it has a strong constitution, it will be readily passed out by the organs of depuration without causing any great disturbance of the vital actions; consequently, no apparent disease is occasioned. The same is true of all kinds of poisons if taken in sufficiently minute quantities; but no person can tell how small a dose may occasion serious disease, or even death, for the reason that the condition of the system is constantly changing, and an amount of poison which at one time, and under one set of circumstances, would result in no serious difficulty, may at another time, under different circumstances, produce not only serious disease, but even death.

When a small amount of poison is taken into the system continuously for any considerable length of time, some of the organs of depuration become first weary, then weak, and soon they fail to do their share of the work, and the system becomes clogged, not so much, however, with the poison taken into the system as with the effete matters which the disabled organs should have cast out.

As some of the organs stop to rest, or, through overwork, fail to do their share of the work of keeping the body free from effete matters, other organs are called into increased activity to remove the causes of obstruction that have accumulated within the system, and this overwork, this increased activity, this remedial effort, is disease."

The Hygienic Family Physician: A Complete Guide for the Preservation of Health, and the Treatment of the Sick without Medicine, pg. 57-66 by M. G. Kellogg