

ON PURITY OF BLOOD.

BY A FAMILY DOCTOR.



It has well been said, that as soon as a man begins to live he begins to die. This world is one of constant change, every living thing we see around us exists, one might say, in a ferment of change, and our own bodies prove no exception to the rule. In our every tissue there is continually going

on a process of waste and reconstruction, of building up and casting down. This is necessary for life itself, and also, in order that life and health may be retained, there must be a due proportion of material supplied to support this constant chemical action, for if this be not the case, the general condition of equilibrium is lost, the wasted tissues not being rebuilt, decay is the result, and death follows. In other words, and probably plainer language, the amount of food, water, and pure air assimilated, or

converted into healthy blood, for the nutriment of our bodies must be equal to the quantity of the material lost in living. It is said that in the course of one year a healthy man receives into his body over one ton of material for the support thereof, and through expiration, through evaporation from the skin, and the discharge from the various secreting and other organs, he loses just as much.

The blood in our bodies is in constant motion, this movement being termed the circulation. The heart is the centre and great propelling organ of this circulation, from it radiate to every portion of the frame, arteries and veins. It is in reality a double pump internally, though united by its external walls; the right side impels the blood through the lungs, the left sends it through the body. Each side of the heart is divided into two chambers, the upper of which is termed the auricle, and the lower the ventricle. The blood is received by the ventricles from the auricles, through passages which are guarded by valves that prevent the regurgitation of the fluid on the contraction of the former. For a complete description of the circulation of the blood, and the beautiful arrangement of arteries, capillaries, and veins with their system of valves, I must refer my readers to some work on physiology; the present paper I wish to make useful rather than descriptive. Suffice it to say here that the maintenance of life is only to be secured by the circulation of pure arterial blood; that that blood, having parted with a portion of its oxygen, is returned by the veins to the heart, and before it can again be rendered useful in supplying the waste of the tissues, it has to be pumped through the lungs. Here it meets with the air we breathe, and by it the blood is purified and oxygenised, and thus returns again to the heart, to be used as before. There is an immense difference, then, between the blood which comes to the lungs from the heart, and that which returns thereto.

The blood is supplied with matter from three distinct sources—first from the atmosphere, secondly from the proceeds of the digestion of food, and thirdly from the products of what is called the secondary digestion, or the absorption among the tissues themselves of that portion of them which has already served its purpose and become effete. This latter is got rid of, burned off in fact, in the lungs.

From healthy blood, not only is warmth afforded to the whole body, and the tissues themselves maintained in a state of efficient repair, but the excretions are formed, and the secretions necessary for various purposes in the animal economy, but notably that of digestion, such as the secretions of saliva, gastric juice, and bile. A healthy balance can only be maintained in the system so long as the sources of the blood are well supplied, and there is no interference with its manufacture. Nothing must be absent from the blood that is required for the support of the various tissues, and no injurious matter or substance must float in our veins, if we would enjoy good health and the prospect of a reasonably long life.

I believe that from the want of knowing how properly to retain the blood in a state of life-giving purity, thousands die annually, and tens of thousands do not enjoy their existence as they otherwise might. Their name is legion who pass their lives, if living it may be called, in a condition very far indeed from that of health. They have never much to complain of, probably, while on the other hand they never can boast. Their state is perhaps best summed up in the simple but expressive word "middling," which we hear scores of times every day. Such people are very easily affected by the state of the atmosphere, and by the weather, and in nine cases out of ten they are rendered constitutionally weak, from the fact that the blood in their systems is not so pure as it ought to be. They easily catch colds and other ailments because their bodies have no resisting power, being either insufficiently nourished or partly poisoned by the blood that circulates therein.

Of course there are a great many morbid conditions of the blood which may have been either acquired or inherited; of these I do not mean at present to speak, but each and all of them may be improved by observation of the general hints I am going to give, to those who wish to preserve their blood in the greatest state of purity. But here are one or two facts which no one should forget: any organ and every organ in the body will be rendered weak, inactive, and probably unhealthy, if it be for a time supplied with blood of insufficient strength and purity; but even a weakly and unhealthy organ will begin to regain its strength and vigour, from the very hour the blood-making process has been placed upon a purer and more healthy footing. This should give hope to many who may have been suffering long from chronic derangements of some internal organ.

Now let us see upon what purity of blood depends. As a general rule, blood is rendered weak and impure from errors in diet, and I might add errors in cooking or preparing the food that comes to our tables. I am not going to give the reader a lecture on digestion or indigestion, but I must be allowed to say that any one who imagines he can long retain health of body and purity of blood without paying attention to what he eats and drinks, and how and when he eats, imagines a very vain thing. We hear every other month almost of new "cures," as they are called, or plans of treating bodily ailments; we have cures by every possible kind of bath that can be imagined, and we have milk cures and whey cures, and even blood cures, any one of which may be good, bad, or indifferent; but there is no cure to which chronic diseases and weakness or debility of any kind will more readily or speedily yield, than the plan of living by rule, for the simple reason that it tends to render the blood pure and rich; and the reason why more cures are not effected by this means is, that the plan is not oftener tried, or when tried, not long enough persisted in. And how long, it may be asked, should this kind of treatment be carried out? Why, until living by rule comes to be a habit and a second nature, and then its benefits will be felt, and there will be little chance of its being deviated from. Living by rule is irksome at first, I admit; it is really difficult to throw off old habits and ways, and submit oneself to new, however much a person may be impressed with the belief that they are bound to do one good in the long run. And this very difficulty is a sign that neither mind nor body is strong, but it is one that can be got over in time, and if the battle be won at last and the object gained, it matters not that we failed a few times ere the victory came.

I will now tell you of a few things which tend to render the blood pure and healthy. Rising in the morning at a reasonably early hour and going out for a short walk before breakfast does, previously having bathed and dressed without any undue haste. The walk need not be a long one, and a glass of pure cold water can always be taken just before starting with advantage, or a cup of milk by those who are weakly. Seven o'clock or earlier in summer is a good time to get up. It is just possible, however, that when called you may be enjoying a sound sleep, not having rested very well in the first part of the night. If such be the case are you to get up? Yes, get up all the same; you will sleep better next night. Secure yourself being aroused at a certain hour every morning by an alarm or otherwise. Early rising is a habit that is not by any means difficult to acquire, but it really is a blessed one. The walk, too, before breakfast may not be relished for a time, but it will soon be found to have improved the appetite. The breakfast on the live-by-rule principle should be a fairly substantial one, both in quality and quantity. As to the latter, be guided by your own judgment; there ought to be a sense of satiety after eating, but no feeling of fulness and no depression of spirits or sleepiness.

The morning meal, and indeed all meals, ought to be taken at the same hour every day. By getting up soon you gain many advantages, two of which are these: you have not to hurry through with breakfast—due mastication is the very first act in the manufacture of healthy blood—and you can spare half an hour after the meal before going to work or business; this gives the stomach a fair start and enables it to do its work properly. If you have more than half an hour to spare and letters to write, by all means write them, for the evening before retiring to rest should be a time of perfect peace of mind and repose of body.

Those who are not very strong should dine early, and adopt the habit of having a rest in the recumbent position for about an hour afterwards—the Spanish siesta in fact. I do not think it does harm to sleep, but failing sleep one should read, and read a newspaper; this requires no continued effort of thought, and if it should render the reader drowsy he can place it over his head and thus secure forty winks. Why a newspaper placed in this position should be in some measure a narcotic I won't pretend to say with certainty; whether it be that the slight crackling of the paper hides other sounds, and that draughts are excluded, and a degree of warmth and retirement conducive to sleep be obtained, I know not, but the fact remains—it is.

Now as the blood is largely composed from the food we eat, we should never forget what that food should consist of. It must contain a mixture, and no alimentary principle should preponderate. Some people are inordinately fond of certain kinds of food, and would make it a grand staple of diet. This may be bread, meat, or potatoes, but the habit of using a quantity of any one thing is one which must be got over. The blood needs nitrogenous substances to be converted into albumen and fibrin, to build up the muscular and nervous tissues. *Fatty foods* are also wanted in due proportion; they are essential to the maintenance of mechanical force, and to the heat-supply of the body. *Starches* and *sugars* are also heat-givers. The purity of the blood cannot be maintained without certain salts; these are obtained from the flesh food we eat. Highly-spiced dishes should be avoided. Tea and coffee and cocoa should be taken in moderation; they are all refreshing both to body and mind. Sound sleep is necessary, and it should be earned by exercise.

A person who wishes to possess pure blood, must be as much of his time as possible in pure air; he must avoid stifling close bed-rooms as he would a pestilence, and he must take sufficient exercise without fatigue.

The condition of the blood depends, too, greatly on the amount of food we eat. The rule as to this is that sufficient should be taken, but no more than will make up for the daily loss of tissue. Men who work much with either body or mind, require more food of a flesh and nerve forming kind than those who don't. Two conditions of the blood call for a word or two ere I conclude. The first is *plethora*, or fulness of blood, the most common cause of which is

too free living. It is a highly dangerous state, and far from a comfortable one; the blood may be healthy, but it is in excess. It often relieves itself by the bursting of small blood-vessels; this forms a safety-valve if the blood can escape from the body; if otherwise, it means death. A condition like this calls aloud for abstemiousness of every kind, for plenty of exercise, and the total avoidance of fermented liquors or alcohol, and the occasional use of saline aperients.

Poverty of the blood is the very reverse of this. The symptoms are almost too well known to need description. The pale face, the blanched appearance of the gums, the occasional headache, the weakness of digestion, the irregularity of bowels, the nervousness,

the general debility and languor, and the mental depression, all point to an impoverished state of the vital fluid. Here, there must be a careful regulation of diet; excess of every kind must be avoided. The food should be nutritious and easy of digestion. Moderate exercise should be taken, sleep secured, and perfect repose of mind. Tonics, too, should be used. Iron is our usual sheet-anchor, and may be taken in some form for months. If an aperient be necessary, the following pill taken three times a day after meals will be found very useful: it is composed of three grains of aloes-and-myrrh pill and two grains of the granulated sulphate of iron. As a blood-purifier and nutrient I cannot speak too highly of MILK.



RUSSIAN PEASANTS AT SUPPER.

A RUSSIAN HOME.

BY A VISITOR.



NE bright July morning I landed at the very rough port of a Russian town. On the wharf stood a number of official-looking people in grey uniforms, who proceeded to search our boxes. Once free from their tender mercies, my companion and I found ourselves joined by our Russian relative whom we had come to visit, and whose carriage was waiting to take us up to the citadel where he lived. We jolted along at an alarming pace, over hilly streets paved with great cobble-stones—not wood, the usual pavement for streets in Russia—till we arrived at the door of a lofty house, with the family escutcheon emblazoned in colour on the door-posts.

Here we were greeted with a warm welcome by our Muscovite connections, who led us into a large apartment, with an inlaid floor of polished wood; it was singularly bare and dreary-looking to our English eyes, for the only furniture it contained stood in little encampments in the corners of the room, and consisted of a large rug, or piece of carpet, on which were placed

a small table, a sofa, and two or three chairs. The bed-rooms, to which we were afterwards conducted, were in like manner equally destitute of furniture other than what was absolutely necessary, and looked rather prison-like, except for their immense size, with their bare, plastered walls.

Having arrived at such an early hour, we were quite ready for the breakfast which we were soon told was awaiting us. Our friends took us into another room, where we found it laid on a long table, headed by a large brass urn—this was our first acquaintance with a Russian samovar; it rather resembled our English urns, with the exception that it is made of brass, and heated by burning charcoal, and the tea-pot is placed on the top to be kept warm by the steam; the result is splendid tea.

The Russians are an essentially tea-drinking nation, and few houses are so poor as not to possess a samovar. They pride themselves also on the quality of their tea, which, being brought over-land, is certainly very finely flavoured; it is supposed that tea brought over-sea is always more or less affected in flavour.