What Happens When— We Go To Sleep

by Frank Lambe

NATURE has made certain rules which every single person must obey, and if a person does not obey those rules, he or she will die.

Rule No. 1 is that we must eat. The body is a machine, and we must keep putting fuel into it if it is to keep working, just as you have to put petrol in a motor-car to make it go.

Rule No. 2 is that we must spend some of our time in sleep, just as a motor-car must have a rest now and again. If a motor-car was driven hard all the time, and its engine was never allowed to rest, it would soon wear out.

That is a simple explanation, but it must be borne in mind if we are to understand properly why sleep is necessary to us. It will also help us to understand what sleep is. It means resting and relaxing.

A great poet called sleep "a little death." Of course we do not die when we go to sleep, but in sleep we certainly come nearer to being dead, in a certain sense, than at any other time in our lives.

Restoring Last Energy

Nature's purpose in making us feel that we must spend a number of hours out of the 24 hours in a day in sleep is to enable us to restore the energy we have lost during our waking hours. Thus, to call sleep "nature's sweet restorer" is quite true. Our nervous system is divided into two main groups for which doctors have long words. We need not bother about the long words ; we can simply call these two main groups "savers" and "spenders".

When we are awake, especially when we are working hard at something, we are busy burning-up carbon, oxygen and hydrogen. This burning-up process is the "spending". It produces a lot of waste products which clog the blood stream and prevent fresh, clean blood from flowing to the brain. The brain must be kept supplied with good clean blood if it is to work properly. If the only blood that gets to it is impure, then the brain becomes sluggish.

You know how you feel after working hard. You are tired, and do not want to have to think about anything. That is an indication that Nature is telling you that you have been "spending" too much of your energy, and must now take some time off to "save up" some more. In other words, you must sleep. Then the "saving" machinery of the body takes control, while the "spending" machinery has a rest.

Sparks Cease to fly

What really happens in sleep is this. The brain itself is a big nerve with lots of little bits sticking up—little bits of nerves which you could see only by looking at the brain through a microscope. These nerve-endings may be compared to the terminals on an electric battery, or to the little hairs that you see on the skin of a gooseberry.

When they are deprived of blood, they tend to shrink or droop, and so cannot properly send or receive the nervous impulses which, like electric sparks, jump across the gaps between these nerves during our walking state and thereby maintain consciousness, or the ability to think.

When enough of these little "terminals" shrink or droop, as when Nature tells us we are tired and it is time to rest, it becomes more and more difficult for the "sparks" to fly about. Thought ceases, and we go to sleep.

Little drops of Water, little grains of Sand,
Make the mighty ocean and the pleasant land.

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Little deeds of Kindness, little words of Love,
Help to make earth happy like the heaven above.

— JULIA A. F. CARNEY, *Little Things.*