HOW MUCH SLEEP DO WE NEED?

by R. T. Wilkinson

It is probably true to say that up to thirty years ago not only could we not answer this question, but we could see no research tools which might eventually enable us to do so. Since then there have been important developments which have changed the picture; in particular new forms and techniques of neurophysiological measurement have emerged, and, secondly, experimental psychology has developed better methods of evaluating human performance and behaviour. Studies, for example, of body and eye movements, of sensory thresholds, and, above all, of the electrical potentials of the brain during sleep, encourage us to think that we may be able to assess with useful accuracy the depth of quality of sleep. In carefully controlled experiments also the amount of sleep has been varied to find the effects of lack of sleep upon performance and upon physiological changes in the body, especially those which accompany the effort to maintain normal behaviour and working standards in spite of deprivation of sleep.

There are some who think we can leave the body to regulate these matters for itself. "The answer is easy", says the authority. "With the right amount of sleep you should wake up fresh and alert five minutes before the alarm rings ". If he is right many people must be undersleeping, including myself.

From animals we get the impression that it is satiation rather than fatigue which promotes sleep; many of them appear to wake mainly to satisfy their bodily needs; during the rest of the time they return to the negative state of sleep This may be true for adult humans also, but with the important difference that their needs are often so complex and long-term in nature that they can never be completely satisfied.

Other people feel sure that the current trend is towards too little sleep. To quote one medical opinion, "Thousands of people drift through life suffering from the effects of too little sleep; the reason is not that they can't sleep but that they just don't ". What could be disastrous is that we should sacrifice sleep only to gain more time in which to jeopardize our civilization by actions and decisions made weak by fatigue and neurosis.

Then to complete the picture, there are those who believe that most people are persuaded to sleep too much. Dr H. Roberts, writing in *Everyman in Health,* asserts; " It may safely be affirmed that, just as the majority eat too much, so the majority sleep too much ". One can see the point of this also; it would be a pity to retard our development by holding back those people who are gifted enough to work and play well with less than the average amount of sleep, if indeed it does them no harm.

Of course, we are not sure. Not only are we unable to give a formula for individual sleep requirement, we cannot even give confident averages for the different age groups. This is because we have no substantial scientific evidence to draw from, and opinions based on clinical evidence present a picture which is too contradictory to be a dependable guide. Indirect evidence on the amount of sleep we need comes from studies of what happens when we do without it. At first sight these suggest that we do not need as much as we take. It has been difficult to show any effect on performance of as little as one night's loss of sleep, and even after three days awake we can expect normal efficiency in a man taking responsible decisions in a job which he finds really absorbing and exciting. Furthermore, when at last he is allowed to sleep he will probably wake after some twelve hours and show little, if any, ill-effect. These laboratory observations are borne out by examples in everyday life. It seems clear that the human body is equipped to over-ride the need for sleep in order to meet emergencies of quite long duration with faculties unimpaired. But this reversibility of the effect of loss of sleep in face of urgent and absorbing demands may be the greatest source of danger. People may think they are more efficient than they really are.

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DRINKING-WATER

An ample supply of wholesome drinking-water has probably prevented more disease than any drug in the Pharmacopoeia. International standards of purity were suggested by the World Health Organisation in 1958, but for many citizens of the world these must remain a distant goal. A new publication from the same source suggests standards applicable to Europe only.

It is hard to fault. Above all there is a lucid exposition of the general principles which must govern the provision of pure water. Expert knowledge of the origin and distribution of the supply is of over-riding importance. Neither bacteriological nor chemical tests are enough by themselves, and these may, in fact, be misleading. A simple test often repeated is of more value than a more accurate and elaborate one performed infrequently. It is not enough to test the water: faults must be explained and corrected as soon as possible. The professional hygienist may not learn much that is new from this booklet; but we do not know of a better introduction to the subject for the politician, national or local. The provision of pure water is his responsibility, and if he finds the subject boring he ought to witness the enthusiasm and excitement of a Balkan village which has exchanged ancient wells and cisterns for clean water from the tap.

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