

prove that some form of stimulation is necessary to keep the nerve centres awake, thus explaining why the "theory of isolation against external stimulation" should be taken into account when studying the problem of sleep. It is difficult to admit that this theory alone suffices to explain sleep or wakefulness. How many have tried to woo sleep by cutting themselves off from external impressions, without success. It is quite possible, even probable, that "fatigue toxins" act as narcotics and insensibilise the brain to external stimulations, but the conjunction of "fatigue toxins" and isolation from external impressions does not always induce sleep. An active effort of the brain is necessary to achieve isolation against the reactions of the senses. But what is the nature of this internal effort? Several tests made by the celebrated physiologist Pavlov, who died a year or so ago, led him to establish what he dubbed the "theory of disconnection, or declutching," in relation to sleep.

Pavlov had accustomed his experimental dogs to receive their mash to the accompaniment of the ringing of a bell. After a time, the sound of the bell alone was sufficient to produce a flow of saliva. By gradually lengthening the interval between the ringing of the bell and the appearance of the mash, Pavlov was able to observe that, during the intervening period, the dog was seized with an irresistible desire to sleep. Thus the delay produced a relaxation of the brain's activity, or a generalised throwing out of gear, which seems to explain the mechanism of sleep.

These experiments recall "monoideism," *i.e.*, the concentration of the mind on a single idea. The soporific effects of a lullaby fall into this category. Soldiers have related that, during the war, the din of the guns produced the same effect by its monotony.

There appears to exist a sleep centre which, either by producing "disconnection" or through some active effect, isolates the brain from the impressions of the senses. The Swiss physiologist, Hess, experimenting on cats, inserted fine silver needles into this centre through which was passed electric current without irritating the adjacent portions of the brain. The animal immediately fell asleep. In his studies of sleeping sickness, von Economo reached the same conclusions, *viz.*, that the inflammation of the centre induces the somnolence characteristic of this disease.

To sum up, whatever conception we may have of sleep, we must taken into account "fatigue toxins," isolation against external impressions, "disconnection," and the sleep centre. We must assume, therefore, that at the moment of falling asleep and during slumber an active phenomenon of isolation against external impressions takes place, directed by the sleep centre and facilitated by the narcotic effect of "fatigue toxins." But how the sleep centre contrives to produce this interruption of the normal brain functions is still a mystery.

(Communicated by the Secretariat of the League of Red Cross Societies.)

SWIMMING BATH FOR NURSES.

The nurses of the London Hospital now have a swimming bath of their own owing to the generosity of Mr. E. W. Meyerstein, and it was formally opened by Lady Desborough. Lady Desborough said she wondered if the high standard of ideals of the London Hospital were upheld as readily in any part of the world. Mr. Meyerstein, telling the story of how he came to give the bath, said that in the Jubilee procession he was shown into his seat by a nurse from the London Hospital. When she got back she told the matron, and in due course he received a letter from the matron. She said that all the nurses had to go down to Bethnal Green to get a bath, and he decided to give them a bath even if he had to pawn his shirt.

We hope Mr. Meyerstein will not be reduced to these straits, as cessation of his proverbial generosity would materially injure standards of health in the nursing world.

THE PUBLIC HEALTH.

THE REPORT OF THE ADVISORY COMMITTEE ON NUTRITION.

The first Report of the Advisory Committee on Nutrition, appointed on May 30th, 1935, by the Minister of Health (then Sir E. Hilton Young) and Sir Godfrey P. Collins, Secretary of State for Scotland, with Lord Luke as Chairman, Mr. W. J. Peete, of the Ministry of Health, and Mr. N. F. McNicoll, of the Department of Health for Scotland, as Secretaries, and Dr. H. E. Magee, of the Ministry of Health, as Medical Secretary, have now issued their first Report.

TERMS OF REFERENCE.

The terms of reference were to inquire into the facts quantitative and qualitative, in relation to the diet of the people, and to report as to any changes therein which appear desirable in the light of modern advances in the knowledge of nutrition.

The particular questions to which the Committee have addressed themselves are:—

(1) Is there sufficient food produced in and imported into the country to ensure for everyone a diet in conformity with the principles of modern knowledge?

(2) Are the diets of different sections of the population adequate in every respect in the light of recent advances in the knowledge of nutrition?

(3) Is the state of nutrition of every section as good as it could be made by the application of modern knowledge?

The Committee say that recent discoveries which are the result of experimental work and clinical observations, make it clear that if the diet is unsuitable, the body cannot be properly constructed, neither can it function effectively. Here, of course, say the Committee, we include the maternal diet during intra-uterine life.

Before the principles of the recent knowledge of nutrition were established, conceptions of human nutrition were confined almost entirely to protein and energy requirements, and to the mode of utilisation of proteins, fats, and carbohydrates of the body. Recent discoveries have shown that various mineral elements and vitamins play rôles as essential in the economy of the body as those played by the proteins, fats and carbohydrates, and, in addition, that proteins of animal origin are generally of higher nutritional value than those from the vegetable kingdom. That is to say, they are superior for the construction of the body and repair of tissues. It is now well known that deficiency of suitable protein, or of any one of the essential mineral elements or vitamins, results in a disorganised state of nutrition.

The Committee record their opinion that what is needed is that everyone, and especially expectant and nursing mothers and young children, should have included in their dietary sufficient amounts of the protective foods, of which the most important are milk and milk products, green vegetables, fruit and eggs.

The Committee point to the great improvement in public health in the last quarter of a century, and state that the consumption per head of most foodstuffs, especially those of the greatest nutritional value, has progressively increased, that that increase has continued particularly since the War, and that "the diet of the people is now more in conformity with physiological principles than it was in pre-war years." "Much," the Committee say, "has been achieved, but much still remains to be done before the general health and physique of the population reach the optimum level, and further improvement in diet will play an important part in attaining this end."

Sir Kingsley Wood, in a statement appended to the Committee's Report, states: "I regard the First Report of the Ministry's Advisory Committee as the most valuable

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