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REMARKS ON THE EFFECTS OF SLEEP, IN EXHAUSTED STATES OF THE SYSTEM.

Read before the Medical Society of Oneida Co., N. Y., by JOHN MCCALL, M.D., of Utica.

I PROPOSE making a few remarks, on the present occasion, respecting certain views and practices which have obtained to some extent among physicians, of not allowing such patients as are regarded as much exhausted, from whatever cause, to sleep but a few minutes at a time, from an idea, as they express it, that sleep beyond fifteen or twenty minutes at once, would exhaust and prostrate the vital forces. That such opinions have been entertained by some of our members, I know, and if nurses and other attendants upon the sick are to be relied on in all cases, it is to be feared that they are still put in practice by some of the profession. At least I have been credibly informed that in different parts of our country, some physicians still give directions to the nurses to wake up patients who are in a feeble state, every few minutes, though they may be sleeping soundly at the time.

Several years since, I was called in consultation in a severe case of bilious fever, occurring in the fall season. The patient was a young man in single life, who had been sick some two weeks, and was in danger of having a typhoid form of the disease; he was so reduced in strength at the time as to faint on being raised from his bed. On my second visit, which was in the morning, I inquired of the attendant how the patient had slept during the preceding night. She replied, "pretty well," but remarked that she awoke him every fifteen or twenty minutes. With some surprise, I asked by what authority she had done so; and learned that it was according to the directions of the attending physician, and upon further inquiry I found that such had been the practice enjoined upon the nurse for several days. Regarding such advice as not only singular, but pernicious, I took occasion in the presence of the medical attendant to urge upon the nurse and family the danger of such practice, and advised that the patient be allowed to sleep as long as he wished, even three hours at a time if he could, and that on no occasion should he be again disturbed in like manner. From this time he was permitted to sleep as long as he desired, and often from one to three hours without waking. With careful nursing, strict attention to ventilation and cleanliness, and a mild, supporting course of treatment, our pa-

tient gradually recovered, though his convalescence was slow, and it was not until the approach of the cold weather of winter that he fully regained his strength and health. In another instance, where I was called in consultation, the same course had been pursued. The patient was a young lad about 11 years of age, the son of a clergyman, suffering an attack of inflammation of the bowels. He was naturally feeble, and easily prostrated, had been ill six days when I first saw him, and by accident I learned that the nurse and watchers, by direction of the medical attendant, had made it a rule to wake him every few minutes. He was petulant, "nervous," as it is called, and easily disturbed by trifling things; his pulse was very frequent, varying from 120 to 140 in the minute, small and feeble, and he was irritated and annoyed by almost everything said or done to him. He was now told and enjoined to sleep as long as he wished, and the nurse was forbidden to wake him, even though he should "sleep hard," to use their own words. "Tired nature's sweet restorer, balmy sleep," was now allowed to do her work "in her dire way," and with the aid of suitable anodynes and soothing remedies, the young patient slowly recovered.

In proof that one or more of our profession in distant States or sections of the country entertain like views, and pursue similar treatment, if such a term is admissible, I may mention the case of a merchant from Michigan, who became a patient of mine while suffering a severe inflammation of the middle finger of the left hand, occasioned by a slight wound received from the point of a needle near the first joint. This gentleman's constitution was a good deal impaired, in consequence of a severe course of fever which he had passed through in the preceding fall or winter. In the relation of his illness to me, he stated that by the advice of the physician who attended him, he was allowed to sleep but a few minutes at a time. On my third visit, I learned that his good young wife had made it a rule to wake him every fifteen or twenty minutes, assuring me that his medical attendant in Michigan had advised this practice. The patient was now told to sleep all night if he could, and his wife respectfully requested to do the same, and thus give herself no further solicitude about his "sleeping too hard." From this time he was allowed and enabled to rest quite comfortably by one or two small Dover's powders in the evening. He is now fully convinced that sleep, even if "hard," is nature's best restorer.

How prevalent these opinions may be, I am unable to say, but I fear there are still a few of the medical profession who entertain them, and it is very certain that in this region such notions too generally obtain among nurses and attendants upon the sick. My object in presenting the subject is to solicit attention thereto, and at the same time to ascertain, if possible, if such practice is ever advisable in the class of patients above mentioned.

Having never seen or heard any good reason given in support of such practice, and being unable to reconcile either with any experience of my own touching the physiological and pathological view of the case, I trust I shall be excused in thus briefly discussing the subject. And in order to find out the truth here as elsewhere (which, by-the-bye, is

often a difficult matter, and he who asks, *what is truth?* and endeavors to find it by patient thought, and careful examination, is deserving of something more than the sneers and ridicule of the world), I shall at once proceed to inquire into the condition of the human economy in a state of sleep.

And in the first place—What is sleep? Is it a state or condition of rest of the mind and body, or simply of some portion of the organism? To arrive at the facts in the case, let us take for an example a person sleeping soundly. All the external senses are more or less locked up—in other words, resting. Neither the sense of vision, hearing, tasting, smelling, nor speech, attend to their respective functions in sound sleep. The muscles of locomotion are all quiet and immovable, and all those parts or portions of the brain and nervous system concerned in thought and feeling, no longer take note of time or circumstances, or the objects of earth or heaven. The individual on awakening can rarely give any account of himself, or what occurred during his sleep. The circulating system with the secretions and the respiratory movements all move onward regularly during such a state, and yet, on awakening, the person is unable to give any account of what passed during his state of rest. And what is particularly worthy of notice, as bearing on this question, is the fact, that the sleeper is generally, if not always, refreshed and invigorated, so as to be ready and willing to resume again his labors of body and mind. How often, too, have we not witnessed the restoration of the poor patient to health and reason, who only a few hours before was perhaps all but exhausted from the dreadful effects of delirium tremens? In this, as in all diseases and affections of the brain and nervous system which eventuate in some form of insanity, *sleep* is the only certain remedy. These statements require no special proof, as they are known to many intelligent persons out of the profession. So long as an individual sleeps well, there is little or no danger of the supervention of insanity. I suppose that all parts of the brain which are concerned in mental manifestations, require rest or sleep, as well as the muscles of locomotion. Not only man, but animals, birds and all living things require sleep. Plants droop and suffer, when deprived of that great restorative principle of nature.

The opinion that sleep of two or three hours' continuance can exhaust the powers of the system when in an enfeebled condition, seems to me unreasonable, and is not founded on any physiological or pathological principle with which I am acquainted. It is a common idea, that the mind may become fatigued, sick or diseased, and that it is never idle or asleep. I cannot conceive how all this can happen to an immaterial thing, which the mind is said to be. It seems to me, that physiological and pathological facts relating to the encephalon can best explain this matter, and one such fact is worth a thousand metaphysical speculations.

And now let me ask, What is the amount of our knowledge on this subject? What do we know of the use or purposes of the brain in health, and what do we know of its pathology? Certainly if we understood its physiology and pathology, we could talk intelligibly upon the great subject of mental philosophy. Have we any system on that sub-

ject recognized as sound in all its points, aside from phrenology? And yet who but the medical philosopher should best understand this matter, as, also, the subject of sleep and its effects both in health and disease?

If these remarks should elicit one useful idea in behalf of our noble profession, I shall feel satisfied.—*New York Journal of Medicine and the Collateral Sciences.*

ORGANIC AND PHYSIOLOGICAL CHEMISTRY.

[REFERENCE was made in this Journal, some weeks since, to a pamphlet, by Dr. Bennet Dowler, of New Orleans, containing remarks on Prof. Carl Lowig's work on Organic and Physiological Chemistry. Prof. Sanford, of Iowa, who has lately visited Dr. Dowler at his home in New Orleans, has also noticed his pamphlet, in the *Western Medico-Chirurgical Journal*, of which he is editor, and has taken occasion to allude at the same time to some of the mental characteristics of Dr. D. We copy, below, what he says on these topics, and we venture to express the hope that Dr. D.'s literary labors may in due time yield some adequate pecuniary compensation to himself, while they benefit his professional brethren and the public generally.—ED.]

One of the most profound and extensive contributions to organic and physiological chemistry has recently resulted from the labors of an eminent German philosopher, who, with more than a common share of the patient and persevering toil for which his countrymen are famous, has pushed his researches into the most remote recesses of the great field whose rich fruits and prolific soil have lately invited the attention of so many illustrious investigators. The characteristics of an original mind, which never realizes its ambition or happiness by simply treading in the footsteps of those who have gone before, are deeply impressed upon the pages of Prof. Lowig's great work, not only as it respects the complex and difficult problems whereby the mutual relations of the elementary world are maintained, but also as it regards the articulate or vocal sounds, or combination of sounds, by which an apprehension of abstract truths is conveyed. If the expression of Hegel that "words are crystallized thoughts" be true, the laws of mental crystallization must run riot in a German philosopher's brain, and give asperities and angularities to those elementary aggregations, which are unknown in the domain of physics. We can easily recognize in the lustre and combinations of the diamond or cornelian an appropriate type of such thoughts as came forth in metrical harmony from the brain of Milton or Byron; but when we invert the illustration, and seek for something in the vast science of crystallography to typify the cryptological nomenclature of Prof. Lowig, as quoted by Dr. Dowler, we feel an instant impression that, not all the mountains or mammoth caves of America could furnish a physical form which in the extraordinary inequalities and angularities of its surface would equal the "crystallized thoughts" which Lowig has, with so much patience and artistic skill, delineated upon the pages of his ponderous tomes. But with all the labor which Lowig has bestowed upon his work, to fortify it