

Claude Bernard long ago observed that chloroform narcosis continues a long time in animals who previously received a dose of opium. Goujon and Labbé have had repeated opportunity of making similar experiments, and they published the interesting fact that the combination of small doses of morphia and chloroform secured a complete insensibility for several hours without sleep. Another French observer, Rabuteau of Paris, performed the following experiment. He gave a dog 5<sup>th</sup> cgt. narcein, and then subjected him to chloroform narcosis. On awakening, the animal was totally devoid of sensation. He went about the room, recognised the voice of his master, but was void of any trace of sensation. He was stuck, pinched, his feet trodden on, but he expressed not the least manifestation of pain. This condition lasted many hours. It was only on the next day that sensation returned.

The union of morphia and chloral thus is of the the greatest benefit in practice, and we call especial attention to its efficacy in the treatment of biliary and renal colic and the various neuralgias.

#### OBSERVATIONS ON THE CAUSES AND TREATMENT OF CERTAIN FORMS OF SLEEPLESSNESS BY DYCE DUCKWORTH, M.D., F.R.C.P.

ASSISTANT PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL, AND  
DEMONSTRATOR OF SKIN-DISEASES.

In this communication I am desirous to direct attention to some causes of sleeplessness, which, I think, are hardly sufficiently recognised or adequately met by the resources of practical medicine. The remarks I have to make have reference more especially to causes of insomnia acting in persons who are either in apparently good health, or who, at any rate, are not decidedly ill. Some of the conditions which I shall mention as leading to loss of sleep will, however, be shown to occur in persons who cannot be said to be in good health. Systematic writers on the practice of physic only incidentally allude to the subject of insomnia and more especially when they treat of certain cerebral affections, of delirium tremens, early phases of insanity, and stages of acute inflammations and fevers.

There are naturally idiosyncracies with regard to sleep; but I have nothing to say about these, further than they must be so far considered in every case of insomnia that comes under observation. It should be remembered that many persons, apparently healthy, declare that they have hardly slept during a night, and believe what they aver, when they have really only lost two or three hours of a long night's rest; not that such a loss is unimportant by any means. So-called bad nights exert a very harmful influence upon the sufferers; and much subsequent bodily and mental enervation, much nervous irritability, and even, I believe, misdirected appetite, are due to this partial loss of rest.

Much light has been thrown upon the physiology of sleep during the last fifteen years; and the teaching of those who have best investigated the subject requires us to believe that the cerebral condition is

essentially one accompanied by a feebler and diminished circulation of blood in its vascular system. It is also within the reach of capable observers to assure themselves that the most constant (physiological) cause, and certainly the most frequent accompaniment, of sleeplessness is an opposite condition, or one of active and increased circulation of blood in the brain. These views are the reverse of those that were formerly taught upon the subject. The statement that Boerhaave, published in 1708 (*Institutiones Med.*), "Motus arteriarum, venarumque et cordis, fit fortior, lentior, æquabilior, plenior, idque per gradus diversos augendo, prout augetur somnus," and again—"In somno augetur motus cordis," were corrected, as were also many doctrines of the same illustrious physician, by the acumen of Cullen, who taught that "an increased impetus of the blood in the vessels of the brain was the principal cause whereby the waking state of it was supported" (*Institutiones of Medicine*, 1770.) The more recent researches of Durham and Hammond have clearly shown that the brain is in a comparatively anæmic condition during sleep, and that the blood thus removed from the head is more freely supplied to the viscera and integuments. We have in this latter statement an explanation of the commonly observed fact, that perspiration is present in inordinate amount during sleep as compared with the state of wakefulness.

I believe that one of the most common causes of sleeplessness in persons otherwise not in bad health, is dyspepsia in some of its forms; and, although most observers would be prepared to agree to this view, I think the subject has not received sufficient attention. As Sir Henry Holland has remarked (*Medical Notes and Reflections*, page 218), "no rules are more important than such as apply to the relation between digestion and sleep," and he proceeds to show that all such rules are exceedingly scanty and incomplete, "notwithstanding the perpetual experiment which life affords upon the subject." I aver then, that dyspepsia is not only one of the commonest, but also one of the least recognised of the causes of the loss of sleep; and amongst reasons for this statement are the facts that the symptoms of digestive disturbance are sometimes, indeed frequently, not appreciable, or not at all prominent, at the time of retiring to rest: and also, that the diurnal digestion may be in a comparatively vigorous state. Most persons are familiar with acute dyspepsia as occurring in the night, and supervening upon errors of diet; and in such cases a disturbed sleep is rudely broken by an attack of cardialgia or acid vomiting. The dyspeptic symptoms to which I specially allude as interfering with sleep, are less severe than those just enumerated. The patient retires to rest and sleeps; it may be calmly, for a short period, but he then awakes, and forthwith secures no more sleep for several hours. To such a form of dyspepsia Cullen alludes, and he was the victim of it himself. He writes, "Persons who labour under a weakness of the stomach, as I have done for a great number of years past, know that certain foods, without their being conscious of it, prevent their sleeping." Sol