

Sleep Disorder

Prescriptions for sleeping-pills account for 10% of all prescriptions in Britain¹ and for 13% in Australia.² In Czechoslovakia³ prescriptions of barbiturates doubled between 1958 and 1965, while in the U.S.A.,⁴ "from 1952 to 1963, the retail sales of sedatives and tranquillizers increased by 535%." Evidently many people think their natural sleep is not good enough.

Sleep requirements vary considerably, and many parents worry unnecessarily if their child sleeps less than convention decrees. Some adults will happily sleep 10 hours nightly, while rare individuals need less than a nightly three hours, which electroencephalographic studies⁵ show is in more concentrated form than usual. Recently G. S. Tune⁶ described the changing pattern of sleep from the 20s to the 70s. Sleep decreased from the 20s to the 50s, after which midday naps and broken nocturnal sleep increased, especially among women.

A great number of complaints about sleep by women and by older people in general were described in a survey of 2,446 adults in Glasgow and Dundee.⁷ Complaints of poor sleep were closely related to "nervous disposition" and have been found as much among neurotic and psychopathic patients as among those suffering from depressive illness.⁸

Poor and restless sleepers as a class may be specially vulnerable to the stresses of life. In contrast to good sleepers their abilities have been shown to be more easily impaired if they are compelled to undergo a period without sleep.⁹ Complaints may often be exaggerated, but studies carried out in Chicago¹⁰ show that healthy young people who consider themselves to be poor sleepers, when compared with healthy young people who consider themselves to be good sleepers, have higher heart rates both before sleep and during sleep, have more body movements during sleep, but have a lesser fall of rectal temperature during sleep and get a lesser proportion of the paradoxical phase of sleep characterized by rapid eye movements.

There are now known to be two kinds of sleep which alternate about five times nightly, and both of them are needed. At the beginning of the night orthodox sleep with

large E.E.G. slow waves comes first. After about an hour paradoxical, or rapid-eye-movement, sleep appears. It is accompanied by paralysis of major bodily muscles (especially during eyeball jerks) caused by descending impulses acting on the spinal anterior horn cells,¹¹ by penile erections,¹² a large increase in flow of blood to the brain,¹³ and by dreaming. Mental life reported after deliberate awakening from orthodox sleep is usually mundane and subjectively categorized as thinking.

Sleepwalking has been found to occur only in the orthodox and never in the dreaming phase of sleep.¹⁴ The child's movements begin during sleep, and the E.E.G. fails to attain the patterns of wakefulness despite major, though purposeless, movements and open, glazed eyes. There is subsequent total amnesia. Sleepwalking seems to run in families, tends to disappear as the child grows older, but is made worse by anxiety. Treatment includes reassurance of the parents, attempts to lessen anxiety in the child, and preventing the child from running into such dangers as a stairway or a large window. The sudden awakenings in a state of terror known as *pavor nocturnus* also occur only in orthodox sleep.^{14 15} Again there is always subsequent amnesia, so that the alarmed parents, who try to soothe the disoriented child, perhaps suffer more than their child.

Enuresis can occur in paradoxical sleep, but is usually a feature of the orthodox phase,¹⁵ and is not generally accompanied by a dream of going to the lavatory. Children of about 18–24 months of age or older may rock themselves to sleep or rock during sleep itself. Sometimes the banging of the head is so violent that the cot vibrates across the room, and the whole household and flat-neighbours are disturbed. The rocking interrupts either phase of sleep,¹⁶ and in the infant is no more pathological than thumbsucking.¹⁷

Freud wrote of the paralysis sometimes experienced in dreams and nightmares, a paralysis which can now be understood as a characteristic feature of paradoxical or dreaming sleep. Most, though not all, reports of nightmares indicate that they arise in paradoxical sleep, and that they can be caused by withdrawal of sleeping-pills.^{18 19} Sleeping-pills, as well as amphetamine-like drugs such as diethylpropion,²⁰ suppress paradoxical sleep but, on withdrawal, cause a rebound increase in its duration and in the intensity of its features, including the dreams. Complaints of alarming dreams before awakening can often be attributed to sleeping-pills themselves, since a withdrawal rebound occurs as they wear off at the end of the night. The paralysis during paradoxical sleep has cast new light on sleep paralysis and on cataplectic attacks, both common occurrences for narcoleptic patients, who are specially prone to be overcome by the paradoxical phase of sleep.²¹

Reports that patients with duodenal ulcer secrete most nocturnal acid during paradoxical sleep,²² and that nocturnal anginal attacks are also most likely²³ in that phase of sleep, have been confirmed, and it is from this dreaming phase of sleep that the elderly patient with advancing dementia is most likely to awaken, clamber out of bed, and start wandering around or out of the house.²⁴ Barbiturates are contra-indicated for such patients, for whom thioridazine is more useful. I. Feinberg's extensive E.E.G. studies²⁴ have shown sleep to be a sensitive indicator of organic disease of the brain. Old men and women woke oftener from sleep, but patients with dementia even more frequently. Psychological tests of decaying abilities correlated with the frequency of awakening—and it is salutary to note that the process was apparent as early as the thirties.

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