The importance of sleep

'Welcome little stranger' wrote my grandmother when I was born. But I was not welcome for long. I was a 'difficult baby', as I was reminded half a century on. The problem was that I would not sleep. Keeping your mother awake is not the best start to a relationship. We all know the importance of sleep. Or do we?

A third of our lives – perhaps 20 years or more – is spent in bed asleep, yet most of us will have received little or no teaching on sleep as students (Stores and Crawford, 1998). Historically, sleep was thought of as a passive process or an absence of wakefulness and consequently attracted little attention. It still does not receive the attention it deserves. Even today, few could argue with the 18th century physicist, Georg Lichtenberg, who took the view that 'our entire history is only the history of waking men'. But that does not mean that sleep is unimportant.

The study of sleep

The mistaken concept of sleep as a shutdown of the nervous system and a period when time is wasted may account for the slow scientific progress in this area. Furthermore, studying sleep requires observations to be made through the night when researchers would themselves much prefer to be in bed. Until relatively recently, even simple observations in sleep went unreported. For example, it was not until 1944 that nocturnal penile erections, familiar to all healthy men, were described in scientific literature. And it was much later that these intermittent erections were shown to be related to rapid eye movement (REM) sleep, itself not discovered until the 1950s.

Normal sleep

Most adults sleep 7–8 hours each night, and in some societies a siesta is common. The underlying circadian rhythm makes it more difficult to sleep at other times. The less we sleep the more we become sleepy. The pressures of modern life and the electric light constrain many of us into sleeping less than we need. Just how much sleep we need is unclear and varies from one individual to another. But one thing is clear: if you do not get enough sleep the inevitable consequence is excessive sleepiness. And many of us do not sleep enough.

Sleep and society

Society does not recognize the importance of sleep – least of all in the world of medicine. Until recently junior doctors were required to work extraordinarily long hours, snatching sleep when they could. Sleepy doctors make mistakes. But moving to poorly organized shift work also has its problems (Murray et al, 2005). Junior doctors are not alone. In the jargon of today, everything is 24/7. To support this 24-hour world, increasing numbers of employees have to work at night. In the UK more than 22% of employees work at least occasionally at night – more than in most other European countries (Paoli and Merllié, 2001).

Complete adaptation to shift work is unusual. Some 10% find such difficulty adapting that they may fall into the category of shift work sleep disorder. But could we be medicalizing a problem that is really one of lifestyle? And, if these workers require prescription drugs, is this really an appropriate use of medicines? Perhaps the illness is rooted within a society that fails to recognize the importance of sleep. After all is it really necessary for quite so many people to work at night?

Disorders of sleep

Sleep-related complaints take a variety of forms. Patients may be too sleepy, not sleepy enough, or their sleepiness may occur at the wrong time of day. Abnormal behaviours may occur in sleep. Sleep disorders include the broad categories of insomnias, sleep-related breathing disorders, hypersomnias of central origin, circadian rhythm disorders, parasomnias and sleep related movement disorders. In addition, several medical and psychiatric disorders may cause sleep-related symptoms.

Many of these conditions are common. Most of us have at some time suffered from insomnia, and 3.5 million people in the UK are believed to suffer from excessive sleepiness. Up to 2–4% of middle-aged men have daytime somnolence as a result of the sleep disruption caused by obstructive sleep apnoea syndrome (OSAS).

The impact of sleep disruption

Inadequate or poor quality sleep is sometimes seen as just annoying. However, it can be much more serious than that, even contributing to death. Twenty per cent of accidents on motorways are caused by sleepiness (Horne and Reyner, 1995). Each year an estimated 300 people are killed as a result of drivers falling asleep at the wheel; many more are seriously injured.

Patients with OSAS have more than just sleepiness to contend with. Neuropsychological difficulties can interfere with relationships and performance at work may suffer. Simulated driving ability may be worse than the performance of a driver above the legal alcohol limit (George et al, 1996). Yet many lorry drivers are believed to have undiagnosed sleep apnoea (Howard et al, 2004). Sleep apnoea as the cause of other symptoms such as nocturia and heartburn may also go unrecognized. Increased accidents, strokes, hypertension and myocardial infarction are all associated with OSAS. Death rates in middle-aged men with OSAS have been reported to be as high as 35% at 8 years (He et al, 1988).

Sleep and the bed partner

Problems during sleep may be important to the bed partner as well as the patient. In cases of loud snoring it is the bed partner who complains. And while snoring is often regarded as something of a joke, very loud snoring is important because it can disturb whole households, neighbours and may contribute to the breakdown of relationships. Apnoeas may also alarm bed partners who may lie awake worrying whether their loved one will ever breathe again. Abnormal movements and behaviours in sleep may also fragment a partner's sleep.

Where are the sleep physicians?

Sleep medicine is important. Quite apart from the distress caused to individuals, symptoms such as daytime sleepiness may damage relationships, cause poor performance at work and increase the risk of car crashes. Many patients with these symp-

toms will be suffering from common treatable disorders such as OSAS. They deserve prompt investigation and treatment. Treatment of OSAS with nasal continuous positive airway pressure reduces car crashes and is highly cost effective (Douglas and George, 2002). Some sleepy patients may just require simple advice on sleep habits. Cognitive behavioural therapy needs to be accessible to those with insomnia. New drug treatments are becoming available. A number of medicines is likely to be licensed soon for narcolepsy and for more common conditions such as periodic limb movements in sleep. The wakefulness drug modafinil is already licensed for sleepiness in a range of conditions.

To manage sleepy patients there is a need for experts in sleep medicine with access to diagnostic facilities. Sleep, although consuming one third of our lives, does not fall in the bailiwick of any particular specialty. As a result, in the UK, there is a lack of structured training for sleep physicians, and without sleep physicians, who can we expect to lobby for the diagnostic and treatment facilities patients need? We must address these deficiencies. It is time to wake up to the importance of sleep and sleep medicine. BJHM

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KEY POINTS

- Society fails to recognize the importance of sleep.
- The pressures of modern life mean that many of us do not get enough sleep.
- Inadequate sleep affects the performance of doctors.
- Sleep disorders such as obstructive sleep apnoea are common.
- Treating obstructive sleep apnoea reduces motor vehicle crashes and is cost effective.
- Experts in sleep medicine are needed to diagnose and treat sleep disorders.