

WAKE UP TO SLEEP: UNDERSTAND THE BASICS

A Basic Need

Sleep is one of our most basic needs. We all know that good sleep is needed after the activities of the day to feel refreshed, restored and able to face the next day's challenges satisfactorily. Other important functions occur during sleep including processing of information ("sleeping on the problem") and consolidating memory. However exactly how the brain accomplishes this during sleep remains unclear.



An Active Process

The brain is certainly active during sleep, as is demonstrated by the electrical signals (the Electroencephalograph, or EEG) that are generated while asleep. These signals are very different to those of wakefulness, reflecting the different nature of this activity as rest and information processing take place. During healthy sleep blood pressure, heart rate, breathing and body temperature all decrease compared to wakefulness.

Inadequate Sleep

Inadequate sleep can result from insufficient duration (often because insufficient time in bed has been allowed for), inappropriate timing (as can occur with shift work or jet lag) or inadequate quality (as occurs with sleep disorders). The consequences of inadequate sleep include: tiredness and lethargy; impaired memory and concentration; disturbed ability to perform tasks requiring attention, vigilance and complex thinking; and mood changes including increased irritability.

Length of Sleep

Adolescents require around 9 hours of sleep. The average adult sleep requirement is approximately 8 hours sleep in 24 hours. However there can be a wide variation in individual need around these averages with some requiring less than the average and others more. Most adults need between 6.5 hours to 8.5 hours. With ageing there is a decrease in the proportion of sleep spent in deep (slow wave) sleep and in dreaming (rapid eye movement) sleep. A sustained increase in sleep requirement in an individual can indicate he or she has an evolving sleep disorder.

Individual Requirements Differ

Most adults know their own sleep requirements from their life's experience which informs them of the number of hours they need, on average, to feel refreshed the next day. Less sleep than this can be sustained for short periods only as a sleep debt accumulates that eventually needs to be repaid by longer sleep than normal. Mistakes occur when individuals assume that all people need the same amount of sleep, transposing their own requirements onto those of others. As a result some people with relatively short sleep needs may regard others with longer needs as "lazy". In adult life an individual's average sleep requirement is relatively stable. A sustained increase in sleep need suggests a problem with sleep quality, such as a developing sleep disorder.



CAPS acknowledges information provided by the following organisations:

Sleep Health Foundation

ABN 91 138 737 854

www.sleephealthfoundation.org.au

A national organisation devoted to education, advocacy and supporting research into sleep and its disorders

Australasian Sleep Association

ABN 32 172 170 561

www.sleep.org.au

The peak national association of clinicians and scientists devoted to investigation of sleep and its disorders

Sleep Disorders Australia

ABN 98 075 427 459

www.sleepoz.org.au

A voluntary group offering assistance and support to people and their families living with sleep disorders