



Sweet Dreams: The Power of Sleep

It happens every day, and we spend nearly a third of our lives doing it, but how much do we really know about sleep? When you nod off at the end of the day, what happens to your brain? And what happens to your body? Why exactly do we fall asleep?

What Is Sleep?

Sleep is our body's chance to rest. When we fall asleep, our brain goes into 'low energy' mode: it stops being as alert to external stimuli, and it uses this time to recharge. Scientists believe we may actually be cleaning our brains while we are unconscious. We also know that, during sleep, our brain 'banks' memories for us, so we can remember what has happened during the day.

Sleep is divided into two main states: non-REM and REM. When we fall asleep, we first enter non-REM sleep, where our body temperature falls and our heart slows. We rarely dream during non-REM sleep, and we can still move around – our muscles all work. This state lasts about 90 minutes, and at the end we are in a deep sleep.

We then move into REM (or rapid-eye-movement) sleep. This state lasts about ten minutes before we go back to

non-REM sleep, although REM sleep can get longer as the night progresses. In this state, our muscles become paralysed and our eyes move around quickly. This is when we have dreams. Usually, when we wake in the morning it is during or just after a round of REM sleep.

Sweet Dreams

Dreams can be extremely vivid and realistic, but no one knows exactly what their function is. Some believe that dreams are your brain's way of expressing your subconscious, and some think that it is just random information from your brain as it goes through REM sleep. Sigmund Freud, a famous 19th century Austrian psychoanalyst, believed that interpreting people's dreams could help us to understand their subconscious fears and desires.

Sleep Deprivation

We need differing amounts of sleep as we grow.





A newborn baby will sleep for up to 19 hours a day, while a primary school pupil usually needs around 11 hours' sleep, and a teenager needs up to ten hours. An adult generally needs around eight hours a night. Getting enough sleep is really important: if we haven't had enough, we can become unhappy, disorganised, confused, and find it hard to concentrate.

Sometimes, we don't know that we're not getting enough sleep. Sleep apnoea is a condition where the sufferer stops breathing in their sleep. Their brain wakes them up to start them breathing again – but they often don't become sufficiently awake to notice the change in sleep pattern. They just know that they feel exhausted all the time. A clue that sleep apnoea might be occurring is frequent snoring – people with the condition will often snore very loudly! The good news is that sleep apnoea can be managed with the help of a doctor.

Some people are all too aware they are not getting enough sleep, though. Insomnia is a condition where people find it hard to fall asleep or to stay asleep for long. There can be many reasons for this: stress, anxiety, irregular schedules, and the wrong kinds of food and drink before bed can all be factors. It's also really important to avoid stimulation such as computer screens, phones or TVs just before trying to sleep. The light they emit can confuse our circadian clock – the inbuilt system which tells us when to sleep and wake up – so our body doesn't realise it is time to go to sleep. If you believe you're suffering from insomnia, it's important to tell a doctor, who can help you to get your rhythms back on track.

Sleep Disorders

Some people have long-term conditions associated with sleep which can make life very difficult. Sleepwalking is perhaps the most well-known of sleep disorders. When a person sleepwalks, they can get up and perform everyday functions while being asleep. This could be anything from getting dressed and making a cup of tea, to driving a car or climbing out of a window. Because the sleepwalker themselves is fast asleep, they can wake in the morning with no knowledge of what they have done during the night.

Scientists believe that sleepwalking is caused when our body 'forgets' to paralyse our muscles during REM sleep – so we become free to act out our dreams. If you discover someone sleepwalking, it's best to gently guide them back to bed! Sufferers of the condition find ways to manage it, sometimes with the help of medication,



but sometimes simply by making lifestyle changes.

Another sleep disorder which can be very distressing is night terror. Night terrors are like waking nightmares: the sufferer will wake to find themselves in the middle of a terrifying situation, but find themselves unable to move or make a sound – they are completely paralysed. They are actually in an REM cycle of sleep, but their body has woken them up, so their dream appears

completely real. Night terrors can be extremely upsetting and, once again, doctors can help people to manage the condition.

Although insomnia is a fairly common condition, some people suffer from the opposite: an inability to stop falling asleep. Narcolepsy is a condition where a person can become incredibly sleepy with very little warning. Narcoleptics often find themselves falling asleep at inopportune times, and can sometimes find this state is triggered by a particular emotional reaction, such as laughing. Narcolepsy is often accompanied by a loss of muscle strength, so the person may collapse at the same time.

There's also an unpleasant condition called Restless Leg Syndrome. Here, the sufferer finds themselves unable to keep their legs still – they are forced to move them around and sometimes feel like something is crawling all over them. Often, there is nothing they can do but get out of bed and wait for the condition to pass, although doctors are able to offer medication to help in some cases.

The Key to a Good Night's Sleep

There are many reasons to strive for a good night's sleep. When we have had enough good-quality sleep, we find ourselves more alert, more positive, and more responsive. There are many studies which link poor sleep to an increased risk of various health problems, too.

So what can you do to ensure you sleep well? Firstly, experts recommend making sure you keep to a routine:



try to go to bed at the same time every night. Next, make sure you wind down so that you are ready for bed – perhaps take a warm bath, or read a book. Avoid screens like phones, computers or TVs, as these will all confuse your circadian rhythm and wake your body up. Also avoid stimulants like caffeine or chocolate. Finally, make sure your bedroom is a sleep-friendly environment. Keep it quiet, dark and tidy, and between 18 and 24 degrees Celsius.

Sleep well!