



# GUIDE TO A GOOD NIGHT'S SLEEP



## Everything you ever wanted to know about sleep but were too tired to ask

### Why do we sleep?

Put simply, we sleep in order to allow for vital brain development. Sleep is essential for maintaining normal levels of cognitive skills such as speech, memory and innovative and flexible thinking.

Without sleep our brain's ability to function is seriously impaired. In fact, sleep deprivation affects our ability to concentrate, respond to rapidly changing situations and make rational judgements. Lack of sleep also impacts upon our emotional and physical health.

'Sleep and Health are strongly related: Poor sleep can lead to poor health, and poor health can lead to poor sleep'<sup>5</sup>

### What happens when we sleep?

Sleep occurs in a recurring cycle of 90 to 110 minutes and is divided into two categories: non-REM and REM sleep.



### Non-REM sleep

During non-REM sleep brain activity is quiet but the body may move around. Hormones are released into the bloodstream and our body repairs itself after the wear and tear of the day. Non-REM sleep is split into four stages:

#### Stage one: light sleep

Our muscle activity slows down and slight twitching may occur. This is a period of light sleep, meaning we can be awakened easily at this stage.

#### Stage two: true sleep

The breathing pattern and heart rate start to slow down.

#### Stages three and four: deep sleep

During stage three, the brain begins to produce delta waves, a type of wave that is large (high amplitude) and slow (low frequency). Breathing and heart rate are at their lowest levels.

Stage four is characterised by rhythmic breathing and limited muscle activity.

### Quick fact

We spend a third of our lives asleep.<sup>1</sup>

### REM sleep

Rapid eye movement (REM) sleep comes and goes throughout the night and makes up about one fifth of our sleep time. The first REM period usually begins around 70 to 90 minutes after we fall asleep.

During REM sleep the brain is very active, our muscles are relaxed, our eyes move quickly from side to side and we dream. During this stage of sleep our breathing rate and blood pressure rise.

#### How much sleep is required?

Different people need different amounts of sleep. Most need 6-8 hours of sleep per night, although some people function well and are not tired during the day with just 3-4 hours sleep a night. The important thing is that the amount of sleep you get is sufficient for you and that you usually feel refreshed and not sleepy during the daytime.



### Sleep disorders - a hard night's sleep

Explained below are some of the most common disorders keeping us awake at night: shift work, snoring, sleep apnoea, insomnia and restless leg syndrome.

### Shift Work Sleep Disorder (SWSD)

SWSD is a sleep disorder that affects people who frequently rotate shifts or work at night or early in the morning. The schedules that these people work conflict with the body's natural circadian rhythm and individuals have difficulty adjusting to this different schedule. (Circadian rhythms relate to our internal body clock. 'Circadian' means to occur in twenty four hours and these rhythms make us feel sleepy or alert at regular times every day, effectively telling us when to go to sleep and when to be awake). SWSD consists of a constant or recurrent disruption of this rhythm that results in insomnia or excessive sleepiness.

Other symptoms may include difficulty concentrating, headaches and lack of energy.

Sleep problems from shift work affect both male and female workers of all age groups and can lead to an increased number of accidents in the workplace, increased work-related errors and increased sick leave.

### Can SWSD be treated?

Not every shift worker suffers from shift work sleep disorder and the length and severity of the problem varies from person to person. If you are a shift worker and experience any of these symptoms, you should talk to your doctor.

Here are some simple ways to help combat SWSD:

- make sleep a priority and prepare your body and mind for sleep
- wear dark, wraparound sunglasses on your way home from work to help prevent sunlight from activating your internal 'daytime clock'
- keep to a regular sleep schedule
- sleep as soon as possible after work
- at home, ask family and friends to help create a quiet and peaceful setting during your sleep time – have family members wear headphones to listen to music or watch television and encourage them to avoid other noisy activities such as vacuuming
- put a 'do not disturb' sign on the front door to prevent people from disturbing you
- if possible, decrease the number of night shifts worked in a row
- avoid extended work hours
- avoid long commutes
- try to avoid rotating shifts more than once a week
- avoid reliance on stimulants as these only fool the body into thinking it's functioning properly and don't allow it to rest and recover as well as it otherwise might.

### Snoring

Snoring affects around 3.5 million people in the UK. It is an anatomy problem that occurs when the soft palate tissue at the back of the throat relaxes too much, obstructing the entrance to the throat. As air tries to pass through, the soft palate vibrates and produces the snoring sound.

One of the main causes of snoring is body size and shape. Overweight people with short wide necks are most prone to snoring because the muscles around their windpipe can't support the fat around it when the person is asleep. Other causes can include alcohol (which increases the risk of snoring due to the relaxing effect it has on the throat).

### Can snoring be treated?

In the vast majority of cases, snoring is treatable. Weight is usually the main cause of snoring so shedding excess body fat should help stop extra pressure being put on the airways. Other treatments depend on diagnosis so an examination by a doctor will be useful.

Consider these self-help remedies:

- avoid sleeping pills and alcohol before bedtime
- avoid heavy meals at least four hours before bedtime
- sleep on your side rather than your back
- rub a few drops of eucalyptus or olbas oil into the pillowcase to help clear your nose.

### Sleep apnoea

Sleep apnoea affects the sleep of around 180,000 people in the UK and is caused by the same muscles that cause snoring. It occurs when the muscles of the soft palate at the base of the tongue and the uvula (the small fleshy piece of tissue that hangs at the back of the throat) relax, partially blocking the opening of the airway.

Sleep apnoea is more dangerous than snoring in that it alters normal breathing patterns.

While asleep, sufferers may stop breathing for between 10 to 25 seconds at a time, reducing oxygen supply to the bloodstream and brain. The brain then suddenly sends an emergency signal, telling the person to wake up and take in a big gulp of air.

In one single night, sufferers may experience up to 350 'apnoeic events' and usually find themselves waking up sweaty, with a dry mouth and headache. These frequent interruptions of deep sleep lead to excessive daytime fatigue and sleepiness.

### Can sleep apnoea be treated?

Sleep apnoea is a potentially life-threatening condition associated with strokes, heart attacks and high blood pressure and therefore requires medical attention.

A sleep test called 'polysomnography' is usually carried out to diagnose sleep apnoea. Treatment varies according to severity of symptoms. Mild cases can be effectively treated through behavioural changes such as losing weight, cutting down on alcohol or sleeping on your side. However, more severe cases may require further medical treatment.

### Quick fact

The current world record for the longest period without sleep is 11 days, set by Randy Gardner in 1965. <sup>2</sup>



### How much sleep do children need?

- Toddlers sleep for approximately 12 hours by the age of three.
- Children aged four to six need between 10.5 to 11.5 hours at night.
- Children aged six to twelve will sleep for around 10 hours a night.
- Teenagers need around 8 – 9 hours per night.

### Insomnia

One third of the UK population suffers from insomnia<sup>1</sup>, a prolonged and usually abnormal inability to obtain adequate, uninterrupted sleep. Symptoms may include having trouble falling asleep, staying asleep or waking up too early in the morning, feeling unrefreshed. The consequences are unpleasant, leaving sufferers feeling exhausted, irritable and unable to concentrate on simple tasks.

#### Can insomnia be treated?

It is often hard to determine the cause of insomnia, making it difficult to treat. Chronic sufferers may be treated through cognitive behavioural therapy involving relaxation and reconditioning. One of the best ways to prevent insomnia is to maintain a healthy lifestyle. Try to relax your body and mind and avoid going to bed feeling stressed and worried. It can also help to try and make your bedroom environment more conducive to sleep.

Just remember, the more you worry about getting to sleep, the less likely you are to achieve the perfect slumber.

You are not alone – The insomnia helpline run by the British Sleep Council aims to advise and reassure. Contact them on 0208 994 9874. Monday to Friday 6pm to 8 pm.

### Restless Leg Syndrome

Around 5-10% of the UK population suffers from restless leg syndrome (RLS)<sup>4</sup>, which causes a tingling, itching sensation and unexplained aches and pains in the lower limbs.

RLS can disturb sleep as people often have a strong urge to move the legs and to relieve the discomfort by stretching, rubbing the legs or getting up and pacing around.

#### Can RLS be treated?

In mild cases, it might be just a matter of cutting out caffeine and alcohol, both of which aggravate the symptoms. Having a warm bath, massaging the legs or using a heat or cold pack will also help to alleviate the symptoms.

For more severe cases, there are a number of pharmacological treatments. Consult your doctor for further advice.

### Help yourself to sleep better

Here are some simple tips to help you sleep better:

- Make sure that your bed and bedroom are comfortable - not too hot, not too cold and of course, quiet.
- Make sure that your mattress supports you properly. Generally, you should replace your mattress every 10 years to get the best support and comfort. You should also turn your mattress over every month or so to maintain it's structure and support.
- Get some exercise. The best time to exercise is in the daytime - particularly late afternoon or early evening.
- Take some time to relax properly before going to bed.
- If something is troubling you, and there is nothing you can do about it right away, try writing it down before going to bed and then tell yourself to deal with it tomorrow.
- If you can't sleep, get up and do something you find relaxing. After a while you should feel tired enough to go to bed again.
- Don't go without sleep for a long time - go to bed when you are tired and stick to a routine of getting up at the same time every day, whether you still feel tired or not.

- Stop drinking tea or coffee by mid-afternoon.
- Don't drink a lot of alcohol. It may help you fall asleep, but your sleep will not be as good quality and you will almost certainly wake up during the night.
- Don't eat or drink a lot late at night.
- If you've had a bad night, don't sleep in the next day - it will make it harder to get off to sleep the following night.

**If you try these tips and you still can't sleep, consult your doctor.**

### Quick fact

Up to a third of the UK population suffers from some sort of sleep disorder. <sup>1</sup>



## Further help and advice

### Sleep Council

Web: [www.sleepcouncil.org.uk](http://www.sleepcouncil.org.uk)

### Sleep Matters

A nurse run information line operated by the Medical Advisory Service.

Tel: 020 8994 9874 (Each evening 6pm to 8pm)

### British Snoring and Sleep Apnoea Association

Tel: 01737 245638

Web: [www.britishsnoring.co.uk](http://www.britishsnoring.co.uk)

### National Sleep Foundation

[www.sleepfoundation.org](http://www.sleepfoundation.org)

There are a number of Sleep Disorder Clinics, but referral to one of them should be made through your doctor. Patients cannot refer themselves.

## Links

[www.bbc.co.uk](http://www.bbc.co.uk)

[www.sleepfoundation.co.uk](http://www.sleepfoundation.co.uk)

[www.rcpsych.ac.uk](http://www.rcpsych.ac.uk)

## References

<sup>1</sup> <http://www.bbc.co.uk/science/humanbody/sleep/articles>

<sup>2</sup> [http://en.wikipedia.org/wiki/Randy\\_Gardner\\_\(record\\_holder\)](http://en.wikipedia.org/wiki/Randy_Gardner_(record_holder))

<sup>3</sup> <http://www.tigweb.org/express/panorama/article.html?ContentID=2069>

<sup>4</sup> <http://www.nhs.uk/Conditions/Restless-leg-syndrome/Pages/Introduction.aspx>

<sup>5</sup> [http://www.howdidiyou.sleep.org/media/downloads/MHF\\_Sleep\\_Matters\\_Report.pdf](http://www.howdidiyou.sleep.org/media/downloads/MHF_Sleep_Matters_Report.pdf)

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