



Sleep

WHY IS SLEEP IMPORTANT?

Sleep is a biological necessity and yet many of us get less than we need. Getting adequate sleep has a vital role in alertness, attention, judgement and decision making, affects how well we perform at our jobs, and lack of sleep may ultimately compromise both our own safety, and the safety of those around us. Research has found an association between circadian and sleep disturbances and disruption to the immune, inflammatory and cardiovascular system. Thus, regularly getting less sleep than we need has been linked to increased risk of a range of health disorders, including Type 2 diabetes, gastrointestinal disorders, and some cancers.

Our sleep occurs in different stages:

- Light sleep (about 55% of total sleep time)
- Deep sleep (about 20% of total sleep time)
- Dreaming sleep (about 20-25% of total sleep time)

When we are asleep, we cycle between these phases, moving from light sleep, to deep sleep, back to light sleep, and then into dreaming sleep, before finishing in light sleep. This cycle takes about 90 minutes (although can be up to 110 minutes), and occurs four or five times during the night. All phases of sleep are important – light and deep sleep play a role in our memory, while dreaming sleep helps with processing of emotions and deleting unwanted information. For a 'restorative sleep', a full sleep cycle should be completed. If you are woken from deep sleep, which can happen if you nap for between approximately 20 and 90 minutes, this can leave you feeling groggy (known as sleep inertia), and your work performance after waking could be affected.

HOW MUCH SLEEP DO I NEED?

Most people need between seven and nine hours sleep per day, but everyone is different. You can work out your personal sleep need when you next have a block of days off from work. Don't set an alarm, just sleep and wake up naturally. After a few nights to recover from existing sleep loss, make a note of your daily sleep over three or four days: the average is a good indication of your personal sleep need.

HOW CAN I IMPROVE MY SLEEP?

Have a routine

Keep to a consistent wake-up time and get up when your alarm goes off; the snooze button is not your friend! Try to get lots of light exposure during the day to help improve daytime alertness and regulate the production of melatonin – the 'sleep hormone' – making it easier to fall asleep at night.

Keep a consistent bedtime; try setting an alarm for 30 minutes before your bedtime, to remind you to wind down and start preparing for bed. Set your bedtime to make sure that you can obtain your sleep need – if you know you need seven hours of sleep a night, aim for at least seven hours and 30 minutes in bed to minimise the chances of sleep loss. We find it more difficult to sleep in a single block as we get older, and having a set routine may help reduce this difficulty.

A routine also helps when it comes to meal times. Eating well-balanced meals at regular times is best – from both a wider health point of view, and to avoid either too much food, or lack of food, disrupting your sleep.

Sleep



To see how well you are sticking to your routine, and get an indication of the amount of sleep you get each night, you could try one of the wide-range of wearable devices that are available. These devices use your movement during the night to give an indication of the amount and quality of sleep we get each night.

Avoid caffeine, nicotine and alcohol

Avoid caffeine within four hours of bedtime, ideally longer, as it remains in the body for four to six hours, and can reduce sleep quality significantly. Alcohol before bedtime affects the natural sleep cycle, resulting in disturbed sleep, more awakenings and leaving you unrefreshed, so should also be avoided. Avoid nicotine before bed too – it is a stimulant and will disturb your sleep.

Get the environment right

No matter where you are sleeping, the ideal sleep environment is cool, quiet, dark and comfortable. Blackout blinds / eyeshades can prevent light disturbing your sleep, while suitable earplugs (e.g., those that filter rather than block out noise, so you can still hear important sounds like the fire alarm) or a source of white noise (e.g., a fan) can help attenuate noise. Technology (phones, tablets, computers, TVs) should ideally be kept out of the place you are sleeping; as well as being potential sources of stress, they emit blue-light that is particularly alerting, and phone calls / messages in the night will disturb your sleep. Most mobile devices (phones and tablets) now come with a blue light filtering option, or 'night mode' – this reduces the blue light exposure in the evening, which can help with sleep. If your phone does not have this feature, there are several applications you can install which will add this feature. Keep the temperature cool and comfortable – the ideal temperature is different for everyone, but we struggle to sleep if we are too warm.

If you are sleeping in an environment that does not reach this level (for example in a truck, or in temporary company-provided accommodation), do what you can – for example carry your own eye-shade and ear plugs with you so that you can always create a dark, quiet environment to sleep in. However, please be aware that your sleep may not be optimal, so you may be at elevated risk of fatigue the next day.

What if I still can't sleep?

If you are following all the above advice, but still can't sleep, or wake-up feeling as if you aren't rested enough, then you may be experiencing symptoms of a sleep disorder. Sleep disorders are varied, from insomnia to obstructive sleep apnoea and restless leg syndrome. If you have on-going difficulty sleeping, or your partner says you snore loudly, or stop breathing in your sleep, it is best to seek advice from a medical professional. They can recommend varied investigations, and treatments, for example by referring you to a sleep clinic.

As well as speaking to a medical professional, you should discuss your lack of sleep with your supervisor, who may be able to rotate you to lower risk tasks until your sleep improves.

Will sleeping tablets help me?

Taking sleeping tablets is not recommended, unless they have been prescribed and monitored by a doctor. Sleeping tablets containing benzodiazepines can be helpful for treating insomnia in the short term, but tend to worsen sleep in the long term. They also disrupt the make up of your sleep – you have less deep sleep, and it takes longer to reach dreaming sleep. Stopping taking these drugs is also difficult, you can experience re-bounce insomnia, anxiety and agitation – if you currently take sleeping tablets, speak to your doctor about whether you need them. Work with your doctor to see if there is anything you can do to reduce the dose or if you can stop taking them in a safe manner. If you are taking, or are considering taking, any sleeping tablets, please also refer to the Company Drug and Alcohol policy.

HOW CAN I KEEP ALERT DURING A NIGHT SHIFT?

Increasing alertness at night all starts with the preparation – try and make sure you get enough sleep during off-work periods to minimise the impact of any sleep debt. If you can't sleep for 7 to 9 hours in one block, then a nap in the afternoon (it is easiest to nap in the 'after lunch dip' in alertness between 13:30-15:30) may well help you. To increase the chances of getting as much sleep as possible, make sure you are following the environment advice above, day time sleep is much more likely to be disturbed by light and noise, so your ear plugs and eye shade are important. If you are returning home between night shifts, try to educate your family about your need to sleep during the day. If your shift timing allows, having a family meal either straight after work, before going to bed, or before leaving to go to work, can help reduce the isolation of working nights, but make sure that you are not sacrificing your sleep time.

During the shift, try to work in bright light – this improves alertness as light reduces the production of melatonin (the 'sleep hormone'). Caffeine can also help you, particularly during the dip in alertness that occurs between 02:00-06:00. Those who drink the most caffeine (from tea, coffee, energy drinks, etc.), may not benefit as much, as we build up a tolerance to caffeine over time. Finally, teams should aim to take regular breaks and to rotate tasks in order to reduce the impact of fatigue that can be caused by spending a long time on a task.



WHAT CAN THE COMPANY DO?

Provide adequate sleep breaks

- Ensure breaks between work periods are long enough to enable workers to obtain sufficient sleep, particularly between night shifts, as daytime sleep is usually shorter, of poorer quality and more difficult to achieve
- Longer breaks are also important, as they give the opportunity to recover from cumulative sleep loss between working weeks

Promote sleep and alertness across the workforce

- Use the Company Fatigue Management Plan to mitigate against the elevated risks if employees are not able to obtain sufficient sleep
- Survey the workforce to find out how much sleep people typically obtain before and after different types of shift
- Provide education about the importance of sleep and tips on how to get good sleep between different shift types, and to promote alertness during shifts, especially night shifts
- 'No contact' out of hours, turn off work emails for office workers / managers to prevent work interrupting sleep
- Where possible, match work schedules with individual physiology ('morning types' will cope better with early starts, while 'late types' perform better on shifts that start in the afternoon or evening)

Create a healthy sleep environment

- Encourage employees to seek light during their waking hours, particularly for those working in offices with minimal windows, or working at night.
- In company-managed sleep environments, for example on camps or platforms, develop a company standard for the sleep rooms, for example the provision of blackout blinds, particularly where employees work regular night shifts, making rooms as quiet as possible (e.g., location isolated from operations, as far as practical), and providing comfortable beds and bedding

Key references

- Parkes KR. "Work environment, overtime and sleep among offshore personnel". *Accident Analysis and Prevention* 99. 2017. p383-388.
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