

Getting a good night's sleep

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Pain and Sleep

Many people living with chronic pain report difficulties sleeping since their pain began. Pain makes getting comfortable in bed harder and can delay falling asleep. It can also reduce sleep continuity increasing the amount of times you wake at night and waking you early in the morning.

Understandably, people might assume that while their pain persists sleeping problems will also continue. Fortunately, this is not necessarily the case – it is possible to get a decent night's sleep despite ongoing pain.

Although your sleep problems might have started because of pain, if you have had sleeping difficulties for a long time (more than three months), pain is unlikely to be the only thing affecting your sleep. Unhelpful thoughts, emotional reactions and coping strategies developed as a response to the initial sleep problems can all disrupt sleep even when the pain itself is well managed and no longer a trigger of insomnia.

Sometimes people with chronic pain speak of their insomnia as 'having its own life'. This is a fitting description of the way in which other things beyond pain can become more and more disruptive of sleep.

This leaflet highlights these factors beyond pain that may be disrupting your sleep and provides tips on how you may be able to get a better night's sleep. Some medicines for pain and mood can also interfere with or even benefit sleep. Speak to your GP about whether making changes to your medications could help.

Thoughts or beliefs about pain and sleep

Many people with insomnia and chronic pain have symptoms of anxiety and depression. Depression is often accompanied by a sense of helplessness. Anxiety activates the fight or flight response in our body and often leads to arousal, which is the opposite state of sleep. Low mood and arousal can affect our thinking. In fact, many sleepless nights are preceded by excessive worrying and rumination.

If your pain is severe and your sleep has been poor, thoughts or beliefs about sleep and pain

may reinforce the sense of helplessness, dampen your mood and make you anxious as you try to fall asleep. Let's look at some examples:

'It is essential for me to get eight hours of sleep per night in order to feel refreshed.'

Different people have different sleep needs. 'Normal' adult sleep durations can be anywhere between five and ten hours a night.¹ Eight hours is an average figure, not necessarily the amount of sleep you need. The amount of sleep you get also varies with age and context. Sleeping too much can be just as unwholesome as sleeping too little.

'When I sleep poorly I can hardly function the next day.'

When we sleep poorly we often feel like we are much less efficient and unproductive the next day. However, poor sleepers are often found to perform just as well in tests as good sleepers.² It may be that you are functioning better than you think.

'Unless I get rid of the pain, I won't sleep well.'

Whilst insomnia is common among people with chronic pain, a small but substantial proportion of pain clinic patients sleep fairly well.³

People often think insomnia is mainly a consequence of pain and assume that nothing can be done about sleep troubles as long as the pain is still there, or that the insomnia will automatically go away as soon as the pain is under control. However, recent research has shown that this is not true: people with chronic pain respond well to treatment for insomnia despite ongoing pain⁴, while those who have completed pain management programmes (that do not have an emphasis on sleep) continue to have problems sleeping.⁵ So you do not have to wait until you get rid of your pain to improve your sleep.

'When I am in pain I simply can't get to sleep no matter how hard I try.'

Pain may not always be the culprit. The problem may lie in the fact that you try too hard to get

¹ Groeger, J. A., Zijlstra, F. R. H., & Dijk, D. J. (2004). Sleep quantity, sleep difficulties and their perceived consequences in a representative sample of some 2000 British adults. *Journal of sleep research*, 13(4), 359-371.

² Riedel, B. W., & Lichstein, K. L. (2000). Insomnia and daytime functioning. *Sleep Medicine Reviews*, 4(3), 277-298.

³ Tang NKY, Wright KJ, Salkovskis PM. 2007. Prevalence and correlates of clinical insomnia co-occurring with chronic back pain. *JOURNAL OF SLEEP RESEARCH*, vol. 16(1), 85-95.

⁴ Jungquist, C. R., O'Brien, C., Matteson-Rusby, S., Smith, M. T., Pigeon, W. R., Xia, Y., Lu, N., & Perlis, M. L. (2010). The efficacy of cognitive behavioral therapy for insomnia in patients with chronic pain. *Sleep Medicine*, 11, 302e3.

⁵ Williams, A. C., Christopher Eccleston, and Stephen Morley. "Psychological therapies for the management of chronic pain (excluding headache) in adults." *Cochrane Database Syst Rev* 11 (2012).

to sleep – the harder you try to get to sleep the more worked up you will become. Anxiety, frustration and bodily tension are not good for sleep. The key is not to *try* to fall asleep. Let yourself relax and sleep will come when body and mind are ready.

Eating, drinking and smoking

Certain factors of your lifestyle may also be perpetuating your sleep problems. Here are a few lifestyle factors that you may want to consider:

Caffeinated food and drinks

If you have had a bad night's sleep it can be tempting to consume large quantities of caffeine in the day to try and keep you awake. Some examples of caffeinated food and drinks are: coffee, tea, chocolate, cola and energy drinks. Note that the stimulating effects of caffeine can last for at least three to four hours after consumption.⁶ Too much caffeine consumed too close to bedtime can, therefore, increase the time it takes you to get to sleep and can make sleep lighter and more restless.

Smoking

Nicotine is also a stimulant. Although smokers may experience a sense of relaxation, the overall effect of nicotine is similar to that of caffeine. Night-smoking can lead to arousal, making it harder to fall asleep and stay asleep. Smoking is also associated with poor quality sleep and disordered breathing, increasing the risk of developing sleep apnoea⁷.

If you are a smoker and are not prepared to stop altogether, you may want to reduce your smoking in the hours before bedtime. You may also want to avoid smoking when you wake at night, otherwise you may inadvertently 'train' your body to wake up during the night for a cigarette, reinforcing the vicious circle of nicotine dependence and poor sleep.

Heavy meals/too much liquid before bed.

A small amount of food (e.g. a snack or a milky drink) can help promote sleep. However, a heavy meal at bedtime can keep you awake by making your digestive system active. Consuming large amounts of liquid before bed is not advisable as it can mean being woken during the night

⁶ Lippincott Williams & Wilkins. Physician's Drug Handbook. 2003; p 236.

⁷ Wetter DW, Young TB, Bidwell TR, Badr MS, Palta M. Smoking as a risk factor for sleep-disordered breathing. Arch Intern Med 1994; 154: 2219–24

by the need to go to the toilet.

Physical activity and daily routine

Physical activity and your daily routine (for example, bed and meal times) are further aspects of your lifestyle that you can change to help you sleep.

Sleep is regulated by two key processes; the circadian rhythm and sleep/wake homeostasis. These two processes work together to determine the timing and duration of sleep.

Circadian rhythms

The circadian rhythm is the internal biological rhythm. It regulates many biological functions including sleep. It promotes wakefulness and sleepiness at different times each day, going up and down in a rhythm.

Like all other clocks the circadian rhythm needs to be 'set' from time to time to keep it running in sync with the world around us. This is done through exposure to sunlight and social and physical activities during the day. Inactivity and social withdrawal are common consequences of chronic pain which may be disrupting your circadian rhythm.

Homeostasis

The idea of sleep homeostasis is simple. Think of our ability to fall asleep as 'sleep pressure'. The sleep pressure is lowest on waking after a good night's sleep, but it gradually increases over the day along with the number of hours spent awake. The longer the period of continuous wakefulness, the greater the sleep pressure and higher the likelihood of falling asleep.

Keeping these key sleep regulatory processes in mind, the following suggestions may help you to improve your sleep:

Keep to a regular routine

This includes bed-times and getting up times as well as meal times and exercising. Keeping a regular routine each day helps maintain your natural circadian rhythm making your sleep more predictable. Whilst it can be tempting to have a lie-in, especially if you have been sleeping poorly, this can be detrimental to the next night's sleep by disrupting your circadian rhythm and sleep/wake homeostasis system.

Avoid napping

If you have had a bad night's sleep, you may feel the need to nap in the day to try to make up for lost sleep. However, in the long-term, napping in the daytime is likely to make it harder to sleep at night. It will not only disrupt your circadian rhythm, it will also reduce your accumulated sleep drive. If you really feel you must nap, try to keep it short – no more than 15–20 minutes.

Do not go to bed unless you are sleepy

When you suffer from pain, resting in bed can be very tempting and sometimes necessary. However, spending excessive time in bed is likely to worsen your sleep. The inactivity will upset your circadian rhythm and dilute the association of bed/bedroom with sleep. The more time you spend in bed not sleeping, the more your body will respond to bed with arousal and wakefulness.

Stay active

It is important to be active in the day as much as possible. This increases your sleep drive later in the evening. Even going for a brief walk is more beneficial than staying in the house. This also increases the amount of daylight you are exposed to helping to keep your circadian rhythm in sync with the dark/light cycle.

When you have chronic pain, getting active can be difficult to begin with. But the good news is that the pain won't be as bad once you have built up strength and stamina. Try to find an activity that suits your personal goals. Talk to your GP or a physiotherapist to identify a suitable physical activity.

Too much physical activity close to bedtime is not always a good idea. Physical activity makes the body aroused and alert and so can actually prevent sleep. Make sure you have at least two hours' wind-down time doing a restful activity before bed.

Is your bedroom a good environment for sleep?

It is important to make your bedroom as calm and comfortable as possible in order to facilitate sleep.

Keep your bedroom temperature comfortable

Avoid an excessively hot or cold bedroom. Although there is no ideal room temperature for

everyone, high room temperatures (24°C and above) and excessively low room temperatures (16°C or below), interfere with normal sleep.

Minimise noise and light in the bedroom

To minimise external noise, close your windows, purchase ear plugs or move into a quieter room. If you are disturbed by a partner's snoring, then you could discuss sometimes sleeping separately.

Lighting conditions can affect sleep in almost anyone. It is particularly important to have a well-darkened bedroom with curtains or blinds that keep out street lights or daylight.

Keep your bedroom mainly for sleeping

Bedrooms work best when they are associated with calmness and sleep. Try not to make your bedroom into an office or a recreational area. Avoid having entertainment media (television, DVD, stereo, radio, etc.) or doing any activity that is not sleeping or sex (such as snacking, worrying, planning, paying bills) in your bedroom.

Further information and help

1. If your sleep problems are severe and negatively impacting your life, you may want to look up the following websites for more information:

www.sleepfoundation.org

www.sleepcouncil.org.uk

2. If your sleep problem is mainly caused by difficulties in breathing during sleep or muscle cramps and involuntary limb movements, inform your GP and ask to be referred to a hospital sleep clinic for assessment.

3. If you live in England and want to receive cognitive behavioural therapy for your insomnia (CBT-I), ask your GP for a referral to a local improving access to psychological therapies (IAPT) service, where you may be able to receive CBT-I. Elsewhere you could ask your GP to refer you to a Primary Care Mental Health Team.

4. If this is not possible or you do not wish to complete CBT-I in person, the 'Sleepio' website (www.sleepio.com) offers an online CBT-I programme.

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