



# PAIN AND SLEEP

- Pain and disturbed sleep have a two-way relationship
  - Pain disturbs sleep
  - Disturbed sleep worsens pain
- Sleep loss increases the sensitivity of brain pathways to pain
- Treating sleep problems helps reduce pain
- There are things you can do to better manage pain at night
- Pain treatments usually improve sleep quantity and quality, however
  - Short-term opioid pain relief increases risks in those with sleep disordered breathing
  - Long-term opioid pain relief can cause abnormal breathing during sleep

Note: All words that are underlined relate to topics in the Sleep Health Foundation Information Library at [www.sleephealthfoundation.org.au](http://www.sleephealthfoundation.org.au)

## Pain disturbs sleep

The sleep-disturbing effects of pain are well known to most of us. Pain can make your sleep lighter, increase the number of times you wake up or prevent you from returning to sleep once awoken. Chronic back pain is known to be often associated with decreased sleep duration and quality. Over half of those with chronic back pain have clinically significant insomnia. Most pain clinic patients have at least one sleep complaint.

Almost all patients with fibromyalgia (a chronic condition associated with widespread musculoskeletal pain) report sleep problems.

## Disturbed sleep increases pain

If your amount of sleep is less than your normal sleep needs your pain may increase. This is because inadequate sleep makes us more sensitive to unpleasant stimuli.

## Pain and sleep have some common mechanisms

Poor, fragmented sleep reduces the brain's capacity to deal with the effects of unpleasant stimuli, such as pain.

In conditions like fibromyalgia, nerve pathways within the brain are more sensitised. Thus, there is a heightened reaction to touch and pain, which can lead to unstable sleep which, in turn, worsens pain.

## Treating sleep problems helps manage pain

Longer sleep can decrease sensitivity to pain. Thus sleeping tablets can be used to decrease daytime pain in conditions such as cancer and after operations.

Treating a sleep disorder, such as insomnia or sleep apnea, can lead to better pain control in people with these problems.



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## Tips to manage pain at night to help sleep

There are things you can do, either with or without pain medication, to increase the chances of good quality sleep.

- Use relaxation strategies to reduce tension in the body that may increase pain (e.g. have a warm bath, try YouTube for a relaxation recording or deep breathing exercises)
- Learn mindfulness skills and practice mindfulness meditation (e.g. Smiling Mind App)
- Practice distraction techniques that are also relaxing. You could try listening to a relaxation recording using guided imagery, listening to music or a podcast or use other forms of mental distraction
- Be aware that anxiety can increase the way you experience pain (see [Anxiety and Sleep](#)) and manage any anxiety at night as well as possible
- Use appropriate medication as prescribed by your doctor (with consideration of the negative effects of opioid medication - see below)
- Use heat packs if recommended by your health professional
- Use pillows under legs, hips or knees to improve comfort in bed
- Be sure you have [good sleep habits](#)

## Pain medications and sleep

Obviously, relief of pain benefits your sleep. However, some of the drugs used to treat pain can cause sleep problems. For example, opioid-based pain medication can increase or cause breathing problems during sleep (see below) and antidepressant drugs may increase leg restlessness (see [Restless Legs Syndrome](#)).

## Opioid use and breathing problems during sleep

Opioid medications (e.g., codeine, oxycodone) can depress normal breathing and also make it harder to wake up if you have breathing issues during sleep. These drugs should be used cautiously in people with known sleep-related breathing problems such as sleep apnea.

This is an important issue following surgery, where high short-term opioid use may be prescribed. It is also an important issue for those using opioids outside of the prescription/medical setting where an overdose can cause asphyxia or other forms of breathing failure.

Breathing irregularities during sleep are common in people who use opioids on a long-term basis. They are present in up to 80% of people who are chronic opioid users and are severe in 40%. They may take the form of [obstructive sleep apnea](#), although other types of sleep-related breathing problems are also often seen.

## How can risk be minimized?

Care should be taken when using opioids, using the lowest dose possible. Where these drugs are taken, both the doctor and patient should be aware that they may cause or increase breathing problems during sleep.

## How can I find out more?

"The association of sleep and pain: an update and path forward" by P. H. Finan and colleagues. Found at:

[www.ncbi.nlm.nih.gov/pmc/articles/PMC4046588](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4046588)

For information on over 70 different sleep related topics, written by professionals, visit the Sleep Health Foundation Information Library at [www.sleephealthfoundation.org.au](http://www.sleephealthfoundation.org.au). The underlined topics in this article are covered in detail there.



## Sleep Health Foundation

114/30 Campbell Street, Blacktown NSW 2148  
T: +61 (0) 2 8814 8655 F: +61 (0) 2 9672 3884



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This information is produced by:

**Sleep Health Foundation** ABN 91 138 737 854

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Version 1: February 2020