

Things to **avoid** if you have sleep apnea:

- **Alcohol** – its muscle relaxing properties may worsen this condition.

Mild sleep apnea can become severe after three to four standard drinks.

- **Sleeping tablets** may also worsen sleep apnea by depressing the drive to breathe.
- **Sleep deprivation**
- **Caffeine**
- **Eating** late at night



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Woolcock Institute of Medical Research

via post to
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We have research groups in areas such as physiology, imaging, cell biology, molecular medicine, epidemiology, sleep and upper airway disorders, circadian rhythms and chronobiology, insomnia, restless legs, chronic obstructive pulmonary disease (COPD), asthma, allergy, cystic fibrosis, and a clinical trials unit.

The Woolcock also has engineering capabilities, utilising the latest technology in electronics, software, and analysis to make devices in support of research.

The Woolcock Institute of Medical Research is a non-profit organisation which relies on funding from competitive grants, government, industry and public donations.

**To learn more about this disorder
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Sleep Apnea

- Do you regularly snore loudly disturbing your bedroom companion?
- Do you feel tired and unrefreshed on awakening?
- Do you have a dry mouth, sore throat or headache in the morning?
- Do you experience sleepiness and fatigue during waking hours?
- Are you overweight?
- Have you been observed to choke, gasp or hold your breath during sleep?

If you answered “yes” to any of these questions, then there is a possibility that you may have sleep apnea.

You should discuss your symptoms with your health care provider.

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What is sleep apnea?

The Greek word apnea literally means 'want of breath'. Sleep apnea is the medical name for interruptions in breathing during sleep. There are **two types** of sleep apnea:

The most common and most severe form is **obstructive or upper airway sleep apnea**, caused by the obstruction of the airway resulting from the relaxation of tissue in the airway. The consequent difficulty in breathing causes the blood oxygen levels to fall, which in turn causes the brain to arouse and briefly wake up the person to breathe. The usual response is a big breath in, often a snore, and then to fall back to sleep again. This cycle repeats itself, sometimes hundreds of times a night.

The same breathing difficulties during sleep are observed in **central sleep apnea**, but in this rarer form the difficulty is a consequence of the brain failing to send the appropriate messages to the diaphragm and chest muscles to inhale.

What are the symptoms of sleep apnea?

The symptoms of sleep apnea are more likely to be noticed by the partner than by the person with sleep apnea. It is usually indicated by snoring and accompanied pauses in breathing which may last between 10 – 60 seconds. Each pause ends with a very deep gasping or snoring noise and a brief awakening as the person struggles to breathe. Mostly these brief arousals are not remembered, but some may remember waking with the sensation of choking.

Often the person with untreated sleep apnea wakes up feeling like they are hungover, possibly with a headache, a dry mouth and a sore throat. The daytime sleepiness that may result from **poor quality sleep** may give rise

to difficulty in concentrating and functioning during the day, forgetfulness, irritability, anxiety, depression and other personality changes.

It can also have **dangerous consequences** if you fall asleep or lose concentration while driving or using heavy machinery. Research has shown that people with sleep apnea are 2 – 5 times more likely to have a motor vehicle accident.

Other symptoms that can occur in untreated sleep apnea are impotence or reduced libido, high blood pressure, heart disease, stroke, excessive perspiration during sleep, increased frequency of urination at night and a dry mouth and sore throat upon awakening.

Who gets sleep apnea?

Sleep apnea can occur in people of **all ages**. It is most common, though, in middle aged males who are **overweight**, particularly with large necks. In people who are not overweight, it is likely that they have been born with a **narrow airway** or a facial structure which leads to a narrow airway. The incidence of sleep apnea in women increases after menopause. In childhood, apnea most commonly occurs as a result of enlarged tonsils or adenoids, or from some facial bone abnormality.

Diagnosis of sleep apnea

Symptoms such as snoring, obesity, observed apnea and sleepiness in the day may suggest that a person has sleep apnea. The diagnosis can be confirmed by an overnight **sleep study** where brain waves, muscle activity, leg movements, heart rhythms, eye movement, respiration, and blood oxygen levels are monitored in the sleeping individual. The monitoring devices are comfortable and will not restrict your ability to move while asleep.

Treatment of sleep apnea

There are a number of potential treatment options for sleep apnea:

- Lifestyle changes
- Continuous Positive Airway Pressure (CPAP) Therapy
- Dental Devices
- Surgery

Lifestyle changes such as weight loss through improved diet and exercise. In some cases sleeping on your side may help.

Continuous Positive Airway Pressure (CPAP) Therapy involves a pump that blows air through a mask worn over the nose. The air pressure keeps the airway open by preventing the collapse of soft tissue into the upper airway. The pump only needs to be used during sleeping hours and the treatment is effective at controlling the symptoms of sleep apnea.

Dental devices that fit in the mouth and hold the jaw forward, elevate the soft palate or retain the tongue from falling back into the airway can also help to control the symptoms of sleep apnea.

Surgical treatments can remove excess tissue to clear the airway, moving the tongue forward, and moving the upper and lower jaw forward.

Some of these treatments are not suitable for everyone. Your health care provider can discuss these options with you and recommend a suitable treatment option.

There is **no effective drug** for treating sleep apnea.

As all individuals are different, the Woolcock strongly urges you to consult with your physician to discuss any sleep problems and for professional medical advice. The Woolcock Institute of Medical Research accepts no liability for loss or damage arising from information provided within this document – the information presented here is of a general nature only and is not intended as a substitute for the advice of a qualified healthcare professional. Your doctor can help.

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