

# Obstructive sleep apnoea (OSA)

Your treatment options. Your second opinion.



## What is Obstructive sleep apnoea (OSA)

Your breathing may be interrupted during sleep by a medical condition called obstructive sleep apnoea (OSA). Commonly symptoms include snoring, feeling tired, falling asleep inappropriately during the day and poor concentration. It may also increase your risk of accidents, heart and vascular disease, in part due to the strain on heart muscle when you snore and stop breathing during sleep.

OSA occurs when muscles of the tongue and throat relax with sleep. Breathing may become difficult because of a partial or total collapse of the throat, usually at the back of the tongue. This leads to snoring, choking episodes and often long pauses between breaths and repeated up to hundreds of times a night. These events are often worse when sleeping on one's back. Many sufferers of OSA may be completely unaware of these events during sleep but their partners or room-mates frequently complain bitterly about the disruption to their sleep!

OSA is most common in middle-aged and older people but may occur at any age. Risk factors include:

- > Weight gain
- > Evening alcohol intake
- > Smoking
- > Low thyroid hormone levels
- > Sleeping tablets and any muscle relaxing medication
- > Unusual throat, mouth and face structure, such as large tonsils or tongue and an undershot jaw

## Diagnosis

Sleep apnoea can often be predicted well from symptoms and examination of the throat. However the severity and pattern of OSA are best detected during an overnight sleep recording which monitors breathing patterns, brain waves, heart rate, and oxygen levels. This may be performed at home or in a sleep centre.

## Treatment

Treatments may be provided for a specific cause, such as low thyroid hormone production and large tonsils, or measures such as airflow to prevent the throat from collapsing during sleep.

## Lifestyle changes

Lifestyle changes alone such as weight loss, limiting alcohol intake, not smoking and not sleeping on the back may improve OSA, particularly if it is mild. For example, losing weight may reduce excess soft tissue around the neck to decrease strain on throat muscles. Limiting alcohol, especially in the evening, may help because alcohol can relax throat muscles and reduce protective reactions to breathing problems during sleep.

## Continuous Positive Airways Pressure (CPAP)

CPAP may often improve the common symptoms of OSA, regardless of the cause, and is regarded as the treatment of choice for most sufferers of significant OSA.

CPAP involves wearing a small face or nose mask that is connected to an air flow device or pump. CPAP is effective when the increased air flow creates a splint of low pressure, holding the throat structures open, reversing snoring and cessation of breathing events.

Some people may find CPAP hard to tolerate and others take to it easily. Modern CPAP machines are very quiet and mask styles have improved significantly in recent years. Trained staff assist to make adjustments and help to overcome problems to improve adherence especially in the first few weeks. CPAP treatment often becomes easier with time and the benefits are worthwhile.

## Help for CPAP users

CPAP may feel loud, uncomfortable and peculiar to start with and you may be tempted to abandon it. However, people who persevere and obtain help from trained staff frequently adjust well and their symptoms improve. CPAP is usually the best treatment for most people with OSA. Newer pumps and improved mask styles, including nasal pillows have helped many more people to use CPAP well. Here are some suggestions:

- > CPAP delivery can be adjusted individually to improve comfort, e.g. wearing a different size or style of mask and starting with a lower air pressure and gradually building up as you fall asleep.
- > Try newer models, which are smaller and less noisy than older ones and include humidifiers.
- > Older models of CPAP were noisier and sometimes caused nasal dryness, nosebleeds or a sore throat. However, the latest versions include a humidifier (an attachment that increases moisture), which may help to reduce these side effects.

*Always consult a medical expert before commencing or changing a course of treatment for any medical condition.*





### Oral appliances

Oral appliances, or mandibular advancement splints as they are also known, may be effective in improving OSA for many people as well. These devices look like mouthguards and are worn during sleep. They work by advancing the lower jaw, which can help the throat to stay open as the tongue is pulled forward with the jaw. Oral appliances however are generally not suitable unless there are a reasonable number of healthy teeth. They are more often recommended for snoring and milder sleep apnoea.

### Surgery

If CPAP and oral appliances are not helping to improve your OSA, including if CPAP is hard to tolerate, surgery may be an option for some individuals.

Different types of surgery are available to correct different anatomical abnormalities which may be contributing to OSA. Part of the challenge of deciding on a surgical approach is to identify the structure or abnormality in the airway causing the OSA. Some operations performed include:

- > Maxillomandibular advancement (MMA): Moves jaw bones forward to prevent throat collapse.
- > Palatal implant: Inserts tiny polyester rods to prevent the throat collapsing.
- > Enlarged tonsil and/or adenoid removal: Opens out the throat
- > Uvulopalatopharyngoplasty (UPPP): Removes tissue in the mouth and throat to open them out.
- > Radiofrequency ablation: Removes tissue, for example, to reduce tongue size.
- > Multi-Level or step-wise surgery (MLS): Surgery on multiple structures is either done in one operation or over time.

### Surgery and medical research

When evaluating surgery or other treatments for OSA, your treating medical specialist will take into account many complex factors, including the latest medical research.

While research on different surgery types has found some may help to improve OSA, more studies are needed to recommend them with greater confidence.

Some of the studies have also compared surgery to other OSA treatments and found that surgery is no more effective than CPAP and oral appliances for improving the common symptoms of OSA.

As a result, surgery is often regarded as a 'last resort' treatment that may be considered if CPAP or oral appliances have not been successful or if there is a specific abnormality which is surgically correctable. The best example is enlarged tonsils where tonsillectomy may be very beneficial. Other surgical procedures may be less clear cut in their benefit, especially where the risks are high.

### Surgery and risks

Complications vary according to the surgery type. For example, for MMA they may include dental and nerve problems, and for UPPP, difficulty swallowing and voice changes. Complications may be temporary or longer lasting.

Understanding the risks is important, particularly given the possibility that surgery may be no more effective than CPAP and oral appliances.

### Surgery and OSA – the main points

- > Surgery may be considered for treating OSA as a 'last resort' if CPAP or oral appliances haven't been successful. It may also be considered for a severe blockage due to an unusual structure that is correctible.
- > If CPAP or oral appliances are not helping your OSA and you are considering surgery, take into account the medical studies showing surgery may be no more effective than CPAP and oral appliances and the risks involved with surgery.
- > If you're finding it hard to tolerate CPAP, discuss the issues with your doctor to consider what can be done to overcome any problems.

### Would you like a second opinion?

Deciding on a treatment path for a medical condition can be a difficult, complex and stressful question.

Would you like the benefit of an expert second opinion to help you to decide on your treatment options?

**If you want to know more about GPS<sup>2</sup> or have a general enquiry, please contact us on 1800 477 246 or email via [contact@gps2.com.au](mailto:contact@gps2.com.au)**

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