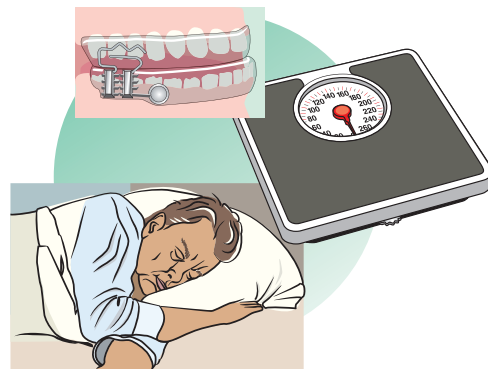


## Other Therapies for Sleep Apnea

Treatment is needed for obstructive sleep apnea (OSA) because untreated OSA can result in serious health problems. Continuous positive airway pressure (CPAP) therapy is the most common treatment used for obstructive sleep apnea (OSA). For those who cannot use CPAP or want to try another option, there are other therapies that can work for people with OSA.



For many people with moderate to severe OSA, CPAP is the main treatment. CPAP improves the symptoms of OSA like sleepiness, poor concentration, lack of energy and may improve blood pressure and other heart related problems. However, some people find it difficult to use CPAP, so other therapies may be prescribed. These same therapies are often the treatment of choice for those with mild OSA.

### What are non-CPAP therapies for sleep apnea?

While CPAP therapy is often the preferred treatment, some patients will not or are not able to use this device. Other treatments that may help improve breathing during sleep and reduce the risk of complications from OSA include: oral appliances, weight loss, positional therapy, surgery, implantable nerve stimulator, nasal expiratory resistance, oral negative pressure devices, and mouth and throat exercises. There are currently no medications that are recommended or approved for the treatment of OSA.

### What are oral appliances?

There are a number of different oral appliances used for OSA. These include tongue retaining devices and mandibular advance devices. The purpose of an oral appliance is to keep your airway open while you sleep, by positioning your lower jaw forward. This prevents blockage of your airway when your tongue relaxes during sleep. You may need a sleep study with the device in place to check that your OSA is completely controlled. Some of the devices appear to be as good as CPAP in improving breathing during sleep and preventing daytime symptoms in people with OSA. The devices do not work in everyone. There may be one device that works better for you than others.

### How does weight loss work to help OSA?

Your healthcare provider can discuss if weight loss might help improve your sleep apnea. Obesity is one of the major risks

for OSA. Losing weight, especially reducing fat deposits in the neck and tongue, can improve sleep apnea. Even though weight loss may not get rid of sleep apnea completely, there are many other health benefits from having a normal weight. Safe weight loss also takes time, so you may decide to use weight loss along with other therapies that act more quickly. You may need a follow up sleep study to show that your weight loss has improved your OSA.

### How does positional therapy work?

How your sleeping position affects your breathing can be evaluated with a sleep study. Some people only have OSA when they sleep on their back. For others, OSA may be much worse when they sleep on their back. In these cases, trying to get a person to only sleep on his or her side can be a useful treatment. This can be done in several ways.

- Pillows supporting the back usually do not provide enough support or are easily tossed on the floor during sleep.
- Devices that provide an alert, such as a vibration, so that the user shifts position.
- Devices, such as specialized belts or shirts that make it uncomfortable to sleep on one's back, so the user will tend to sleep in another position.

For some people, the OSA and snoring go away completely when they sleep on their sides, but as with all treatments, not everyone gets the same benefit from positional therapy. Some people are not able to stay in these positions each night for long periods because of other conditions which make it uncomfortable such as arthritis or hip pain. You can talk with your healthcare provider about how well positional therapy works for you. You might need a sleep study to check that positional therapy is working well.

### What kind of surgery can I have for OSA?

Surgery is not frequently used to treat OSA in adults because it doesn't work very well for most adults. However, in some cases upper airway or throat surgery may be helpful to improve airflow into your windpipe. For example, if you have large tonsils or adenoids, it may help to take them out as they can block air flow in the nose and throat. This is more commonly done in children with OSA than adults. If you have any nasal blockage, an operation may help clear the blockage in your nasal passages. Other surgical approaches may be helpful in rare cases. Your healthcare provider can discuss if surgery may help you. You might need a sleep study 8-12 weeks after surgery to check to see that your OSA is improved.

### What is hypoglossal nerve stimulation?

A more recent surgical procedure implants a small battery pack into the upper chest that connects to a wire that attaches to the nerve controlling the tongue muscles (such as brand Inspire). During sleep, gentle electrical pulses stimulate the tongue muscles to contract and pull forward, keeping the airway open. This may be used by itself or in combination with other therapies.

### What are other therapy options?

Other options have been developed for patients with OSA.

- Nasal expiratory resistive devices (such as brand Provent®) are disposable adhesive devices placed over the nostrils. This device limits a full exhale during sleep. This results in air staying in your airway and keeping your airway open. Studies show mixed results, with the best results usually seen in people with milder (less severe) disease. These devices typically will not fully cure your OSA.
- Another option is a device placed in your mouth, connected to a machine called an oral negative pressure device (such as brand Winx®). This device works by causing negative pressure in the mouth area. This keeps your tongue and soft palate at the front of your mouth so they don't relax and block your airway. Studies over a short time have shown this device to be helpful for some people. It typically will not fully cure your OSA and may be uncomfortable to use.
- Muscle training exercises (oropharyngeal exercises and myofunctional therapy) may also be used in combination with other therapies to improve your OSA. Working to strengthen the muscles of your tongue, face and throat may reduce airway narrowing or closing during sleep. They typically will not be fully successful on their own.
- Regular exercise and avoiding alcohol, tobacco, and opioid medications ("painkillers") is also recommended.

### How can I get these therapies?

Your healthcare provider can refer you to a sleep specialist. The sleep specialist will evaluate if any of these approaches will be useful in treating your sleep problem. They will usually

begin by finding out how bad your sleep apnea is by doing an overnight sleep study. After the sleep study, you will have a follow up appointment with your sleep specialist to talk about the results of the sleep study and to discuss possible treatment options.

### How do I know if my therapy is working?

When a therapy is working well, you should have little or no snoring. You may notice you sleep more restfully. You may see improvement in daytime sleepiness and fatigue. A good way to find out if you are getting full control of your OSA is to have a repeat overnight sleep study with the device in place, after weight loss or the surgical procedure. If symptoms of snoring or sleep apnea return (for example, your tiredness returns during the day), it is important to have a follow up appointment with your healthcare provider or sleep specialist. Sometimes a therapy may seem to work at first but does not continue working over time. You should always pay attention to your sleep quality and watch for symptoms.

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## Rx Action Steps

Other therapies besides CPAP are available for sleep apnea and may be helpful in treating OSA in some people.

- ✓ Speak with a sleep specialist or your healthcare provider to find out if any of these therapies may help you
- ✓ If you are obese or overweight, consider a safe weight loss program even if you are using other therapies.
- ✓ If you still have symptoms despite using the therapy, see your sleep specialist.
- ✓ Keep follow-up appointments and discuss if and when you need a repeat sleep study.

**Healthcare Provider's Contact Number:**

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## Resources

### WebMD

- <http://www.webmd.com/sleep-disorders/sleep-apnea/tc/sleep-apnea-oral-devices-topic-overview>

### American Thoracic Society

[www.thoracic.org/patients/](http://www.thoracic.org/patients/)

- CPAP
- Oral Appliances
- Sleep Studies

This information is a public service of the American Thoracic Society. The content is for educational purposes only. It should not be used as a substitute for the medical advice of one's healthcare provider.

