

More than 18 million American adults currently have sleep apnea; The best preventive steps center on treating underlying causes by maintaining a healthy lifestyle.

Sleep Apnea

What Is Sleep Apnea?

Sleep apnea is a sleep disorder characterized by abnormal pauses in breathing during sleep. The word “apnea” means “the absence of breath.” An episode of apnea is a single pause of more than ten seconds between breaths; a diagnosed condition of apnea means that you have 15 or more episodes of apnea per hour of sleep. Sleep apnea harms the body by lowering levels of blood oxygen and by preventing sufferers from receiving the full benefit of normal sleep. A similar condition, sleep hypopnea, describes a pattern of unusually shallow breathing during sleep.

There are three forms of sleep apnea: obstructive (OSA), central (CSA), and mixed apnea, which includes episodes of both other forms. In OSA, the most common form, the sufferer’s respiratory effort is normal, but soft tissues temporarily collapse into the airway and obstruct breathing. In CSA, the pause in breathing results from a lack of respiratory effort: the brain fails to properly control breathing during sleep.

Sleep apnea is a significant public-health problem in part because it affects the sufferer’s waking hours as well: he or she may become conditioned to the fatigue and malaise that results from serious sleep disturbance. Sleep apnea is also a public-health problem because it affects so many people. More than 18 million American adults currently have sleep apnea; and estimates suggest that as many as 25% of adults are at risk for developing obstructive sleep apnea as they age. A third public-health ramification of sleep apnea is its role in many accidents, including automobile accidents:

sleep-deprived people lose alertness while they drive. People with untreated sleep apnea are approximately seven times at more risk of having motor-vehicle accidents.

What Causes Sleep Apnea?

The direct cause of most sleep apnea is one of two mechanical problems. The first, a cause of OSA, is the presence of unusual masses of tissue, such a large tongue or large tonsils, in the airway. The other mechanical problem is a loss of muscle tone in the muscle that dilates the upper airway. These problems, while directly producing sleep apnea, have other causes in your overall physical condition and family history. The next section (“Who Is at Risk of Sleep Apnea?”) lists these factors.

Who Is at Risk of Sleep Apnea?

OSA occurs in all age groups and both sexes. However, you are at increased risk of developing sleep apnea if you have any of the following features of head-and-neck anatomy:

- ❖ A small upper airway
- ❖ A large tongue, tonsils or uvula
- ❖ A recessed chin, small jaw, or large overbite
- ❖ A circumference of 16 inches (female) or 17 inches (male) around the neck

You are also at risk of developing sleep apnea if your life patterns include any of the following traits:

- ❖ Smoking
- ❖ Taking sedative medications
- ❖ Being overweight
- ❖ Consuming significant levels of alcohol
- ❖ Being over 40 years of age
- ❖ Being of African-American, Hispanic, or Pacific-Islanders descent
- ❖ Having a family history of sleep apnea or snoring

What Are the Signs and Symptoms?

The following signs and symptoms can indicate sleep apnea:

- ❖ Chronic snoring
- ❖ Daytime sleepiness
- ❖ Difficulty concentrating
- ❖ Depression or irritability
- ❖ Sexual dysfunction
- ❖ Learning difficulties
- ❖ Problems with memory

How Is Sleep Apnea Diagnosed?

If you consult your doctor about sleep apnea, he or she is likely to develop a profile of your medical history, including medications, use of alcohol, history of smoking, and current symptoms of sleep apnea. To obtain a positive diagnosis, your doctor may order a sleep study, in which you sleep for one night in a monitored setting (sleep center). The sleep study monitors a variety of functions during sleep including sleep state, eye movement, muscle activity, heart rate, respiratory effort, airflow, and blood oxygen levels. The recording of these factors is called a polysomnogram.

Your doctor is likely to diagnose sleep apnea if you have 15 or more episodes of apnea per hour of sleep, each involving a pause between breaths of ten seconds or longer. The findings may include other, milder respiratory disturbances. During the sleep study, your doctor may also evaluate you using the Respiratory Disturbance Index, which reveals breathing disturbances other than apnea and hypopnea.

What Are Common Treatments?

Available treatments for sleep apnea include devices or appliances, self-management (behavioral step), medication, and airway surgery.

Devices and Appliances

If you have been diagnosed with sleep apnea, your doctor may prescribe a continuous positive airway pressure (CPAP) device. The CPAP is considered the best available treatment for OSA. The CPAP is a mask that fits over the nose and/or mouth and gently blows air into the airway to help keep it open during sleep. This method of treatment is highly effective. If your doctor has prescribed the CPAP, it is important to use it as directed. Your doctor may alternatively prescribe the use of certain dental appliances, which reposition the lower jaw and tongue.

Self-management

Lifestyle changes are effective ways of mitigating symptoms of sleep apnea. The following behavioral steps reduce the severity of sleep apnea:

- ❖ Experiment with sleeping on your side instead of on your back
- ❖ Lose weight
- ❖ Avoid alcohol
- ❖ Quit smoking

Medications

If conventional treatments fail, your doctor may prescribe a medication called modafinil (Provigil®). This medicine can be useful in treating sleep apnea, in combination with self-management and other treatments.

Surgery

Obstructive sleep apnea also can be cured by airway surgery to remove tissue that can obstruct the airway.

Can Sleep Apnea Be Prevented?

The best preventive steps center on treating underlying causes of sleep apnea by maintaining a healthy lifestyle. The following steps can be helpful in reducing sleep apnea:

- ❖ Achieving and maintaining a healthy weight
- ❖ Ceasing to smoke
- ❖ Consuming alcohol only in moderation
- ❖ Avoiding alcohol during the hours before sleep
- ❖ Getting regular exercise

Should I Call My Doctor?

Make an appointment with your doctor if you find that you have any of the following symptoms:

- ❖ Excessive sleepiness during daytime
- ❖ Lack of concentration
- ❖ Impaired cognitive function
- ❖ Reports of excessive or loud snoring
- ❖ Evidence or reports that your breathing pauses unusually for more than a few seconds while you sleep

For More Information

For more information, refer to the following medical resources:

<http://www.mayoclinic.com/health/sleep-apnea/DS00148>

<http://www.sleepfoundation.org/category/article-type/sleep-related-problems>

<http://www.nlm.nih.gov/medlineplus/sleepapnea.html>

The content in this document is neither intended nor recommended as a substitute for seeking professional medical advice, diagnosis or treatment. It is recommended that you seek the advice of your physician or other qualified healthcare professional regarding any medical questions related to the topics contained within this document, your health or conditions.