

What is Sleep Apnea?

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There are two types of sleep apnea, *obstructive sleep apnea* and *central sleep apnea*.

Obstructive Sleep Apnea

OSA occurs when the tissue in the back of the throat collapses and partially or completely blocks the airway during sleep. This keeps air from getting into the lungs. This is a very common sleep disorder. It happens because the muscles inside the throat relax as you sleep. Blockage of the airway can happen a few times a night or several hundred times per night.

Central Sleep Apnea

CSA occurs when the brain fails to tell the lungs to breathe during sleep. As this signal is lost, the lungs do not take in the oxygen that your body needs. This condition is less common than OSA.

Medical professionals and insurance carriers recognize sleep apnea as a life-threatening condition requiring prompt diagnosis and treatment. Typically, snoring is no more than an inconvenience and is not life-threatening. However, it can be a prime symptom of sleep apnea.

For a person with sleep apnea, breathing stops from 10 to 60 seconds at a time, and these attacks can occur up to 120 times an hour during sleep. As a result, oxygen levels in the bloodstream fall, which in turn may lead to high blood pressure, stroke, heart attack and/or abnormal heart rhythms. It is estimated that as many as 18 million Americans suffer from sleep apnea, yet up to 95% of these cases go undiagnosed and untreated. Although it is most common in overweight men, both adults and children of either gender can be affected.

Who is a candidate for each type of Sleep Apnea?

People with Obstructive Sleep Apnea are more than likely to be:

Middle aged, overweight men and women

People with the following anatomical characteristics:

- smaller than normal jaws
- large tongues
- enlarged tonsils or adenoids
- tissues that partially block the upper airway
- deviated nasal septum
- nasal polyps
- chronic sinusitis & allergies
- children with large tonsils and adenoids

People with Central Sleep Apnea are more than likely to be:

Elderly

Patients with heart disease

Stroke patients

Should you be concerned about snoring?

If you have snoring problems, you are not alone. Snoring is literally heard all over the world and occurs in all age groups, in both genders. Snoring usually is a natural part of sleep, but it may also be a symptom of a potentially lethal condition known as obstructive sleep apnea (referred to as OSA or sleep apnea). Untreated sleep apnea is associated with stress, irritability, increased risk of industrial accidents, traffic accidents, high blood pressure, cardiovascular strain and other factors that can contribute to disability or death.

Are there any consequences?

Untreated sleep apnea may cause high blood pressure, stroke, heart attack and abnormal heart rhythms. The National Commission on Sleep Disorders attributes 38,000 cardiovascular deaths a year to sleep apnea.

Statistics

Approximately 10% to 30% of adults snore and have hypertension.

For 30% of adults, snoring is the first indication of obstructive sleep apnea.

25% of people 50 years or older experience restricted breathing during the night.

Approximately 60% to 80% of people who have tried continuous positive airway pressure (CPAP) to relieve sleep apnea have been able to continue its use.

Some of the symptoms or risk factors of sleep apnea are:

Loud, irregular snoring

Frequent nocturnal urination

Falling asleep while driving

Daytime sleepiness

Obesity

Loss of energy

Morning headaches

High blood pressure

Anxiety or depression

Weight gain

Diagnosis and Treatment

If you are concerned about how you sleep, tell your family doctor and let him/her determine if you need a sleep study or referral to a sleep specialist.

Continuous Positive Airway Pressure (CPAP) is used primarily to treat obstructive sleep apnea, although there is evidence it may be helpful in patients suffering from central apnea as well. CPAP involves the placement of a mask over the nose during sleep. An air compressor creates pressure that forces the air through the nasal passages, thereby keeping the airway open, preventing snoring, airway obstruction and drops in the oxygen levels in the blood. This allows the patient to cycle normally through the stages of sleep, and once again awaken refreshed and remain alert during the day.

Bi-level Therapy is similar to nasal CPAP except that it delivers two pressures; the higher one while breathing in, and a lower pressure while breathing out. Bi-level pressures are often required to control central apneas. Patients with COPD are often candidates for Bi-level therapy; it also may help minimize CO₂ retention during sleep.

Weight Loss is strongly encouraged. There is a strong correlation between weight gain and the development of obstructive sleep apnea. Even modest increases of weight gain can greatly increase the severity of apnea and associated pressure requirements and conversely, weight loss of as little as 20 pounds can substantially affect the severity of the apnea and associated pressure requirements. Therefore, patients with obstructive sleep apnea should be strongly encouraged to pursue weight loss. Once the quality of sleep improves with treatment of nasal CPAP therapy, weight loss often becomes a more realistic goal.

Oral Appliances open the airway by bringing the tongue and jaw forward. These devices may help reduce snoring and mild apnea in certain individuals.

Surgery is the most effective treatment for snoring, but is a less effective treatment for sleep apnea in adults. Following surgery, which may control the volume of the snoring but not the obstruction, the apnea becomes "silent", as the site of the obstruction often differs from the site of the snoring. Specific anatomic problems that may be corrected with surgery include: enlarged tonsils or adenoids, nasal polyps, a deviated nasal septum, and malformation of the jaw. In the case of children, tonsil and adenoid surgery is generally curative.

Radio Frequency Ablation (Somnoplasty) is an outpatient procedure uses low power, low temperature radio frequency energy to shrink tissues that may be obstructing the nasal or oral airway. This may include the turbinates for those with chronic allergies, or the soft palate, uvula and base of the tongue for snoring and mild apnea.

Laser Assisted Uvulopalatoplasty is an out patient laser procedure that may reduce the volume of snoring for people who have a large uvula or long soft palate.

Uvulopalatopharyngoplasty (UPPP) is a surgical technique that is appropriate for a small percentage of people. During this procedure, excess tissue at the back of the throat is removed, enlarging the airway of the patient. Some negative side effects to the procedure have been reported such as nasal speech and transient nasal reflux.