

## CPAP Therapy for Sleep Apnea

Sleep apnea is a fairly common sleep disorder and is characterized by interrupted breathing during sleep. It can be serious because it starves the brain of essential oxygen, and in rare cases, it can cause respiratory failure. It is a progressive condition, which means it often gets worse as you age.

Complications and risks of sleep apnea include a link to high blood pressure and increased chances of heart disease, stroke and irregular heart rhythms (arrhythmias). In addition, continual lack of quality sleep can cause depression, irritability, loss of memory, decreased concentration, lack of energy and can increase the risk of accidents. In rare cases, sleep apnea can be fatal.

There are three types of sleep apnea. The first, obstructive sleep apnea (OSA) is the most common type. It is caused by an obstruction in the airway during sleep and individuals with OSA will often snore with anywhere from 10 to 60 seconds between loud snores. The narrowing or obstruction of the airway can be a result of physical characteristics, such as excess tissue, large tonsils or tongue, or an obstruction in the nasal passages. The airway can also be narrowed due to excess weight. The second type, central sleep apnea (CSA), is much rarer. It is caused by a dysfunction in the thalamus area of the brain and the mechanism that controls breathing. Unlike individuals with OSA, people with central sleep apnea don't usually have problems with snoring. Possible causes of central sleep apnea include:

- poliomyelitis – an acute infectious disease caused by the polio virus and characterized by fever, motor paralysis and atrophy of skeletal muscles often with permanent disability and deformity and marked by inflammation of nerve cells in the anterior gray matter in each lateral half of the spinal cord — also called infantile paralysis
- encephalitis (acute inflammation of the brain)
- neurodegenerative diseases (e.g., Alzheimer's, multiple sclerosis, narcolepsy, Parkinson's and schizophrenia, to name a few)
- complications from cervical spine surgery
- cervical spine radiation treatments
- stroke

The third type is mixed sleep apnea (MSA). This occurs when the person suffers from both of the previously listed types of sleep apnea.



### Treatment

The initial step in the management of sleep apnea is diagnosing and deciding which patients need treatment. The severity of the condition is measured by the number of apneas (cessations of airflow) or hypopneas (reductions in airflow) that cause sleep arousal. Your doctor and a possible visit to a sleep laboratory will confirm the diagnosis and measure the severity.

In the case of OSA, family physicians are able to diagnose and manage this relatively common disorder. Moderate to severe cases of OSA and some forms of CSA are often treated with a CPAP (continuous positive airway pressure) machine that blows air into your nose via a nose mask, keeping the airway open and unobstructed. It increases air pressure in your throat so that your airway does not collapse when you breathe in. The machine is used every night and includes a mask that covers both the nose and mouth. This therapy is considered the most effective non-surgical treatment for obstructive sleep apnea. Regular use has proven to decrease daytime sleepiness. It often takes individuals a little time to get used to the CPAP machine, and there are different types of masks available if discomfort is an issue. Problems that may occur when using a CPAP machine include:

- Dry nose, nosebleeds and sore throat
- Nasal congestion, runny nose and sneezing
- Eye and skin irritation on the face
- Abdominal bloating
- Headaches

## CPAP Therapy for Sleep Apnea *continued*

Rare complications may include bacterial infection in the lining around the brain and spinal cord (meningitis) and severe nosebleeds.

The most common reason for CPAP therapy not being successful is sporadic use. Individuals on this therapy that do not use the machine every night or those that take off the mask during use because of discomfort will not see consistent results. Even one night of not using the machine can make you sleepy the next day.❖

### *References:*

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*The American Academy of Otolaryngology – Head and Neck Surgery (AAO-HNS); Continuous Positive Airway Pressure (CPAP)*  
<http://www.entnet.org/healthinfo/snoring/cpap.cfm>

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