

## Medical Guidelines

### Obstructive Sleep Apnea

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#### How to cite this:

Malik S A ,Obstructive sleep Apnea. J Acad Faml Phys, vol 12 (1) 36-38, Pak. 2019

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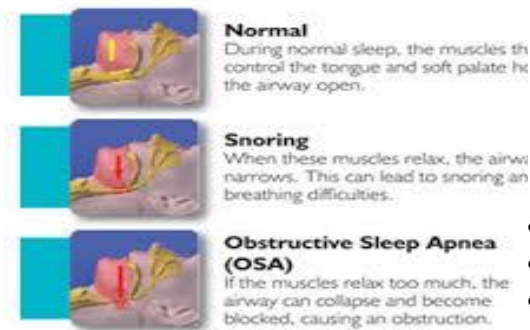


Obstructive sleep apnea (OSA) -- also called obstructive sleep apnea syndrome -- occurs when there are repeated episodes of complete or partial blockage of the upper airway during sleep. During an obstructive sleep apnea episode, the diaphragm and chest muscles work harder to open the obstructed airway and pull air into the lungs. Breathing usually resumes with a loud gasp, snort, or body jerk. These episodes can interfere with sound sleep. They can also reduce the flow of oxygen to vital organs and cause irregular heart rhythms

#### Who Gets Obstructive Sleep Apnea?

1. Sleep apnea is more common in men than in women
2. It is also more likely to develop in African-Americans, Hispanics, and Pacific Islanders than in Caucasians
3. The likelihood of developing the condition increases with age.
4. For women, the condition is more likely after menopause.
5. More common among people with thick or large necks
6. More common among people who have smaller airways in their noses, throats, or mouths. The small airway could be related to the actual size and shape of the airway, or to obstructions or other medical conditions that are causing obstructions.
7. Babies and small children may have sleep apnea that is caused by swollen tonsils. Adults may also have enlarged tonsils causing obstruction
8. A larger than average tongue can also block the airway in many people

9. People having deviated septum in the nose.

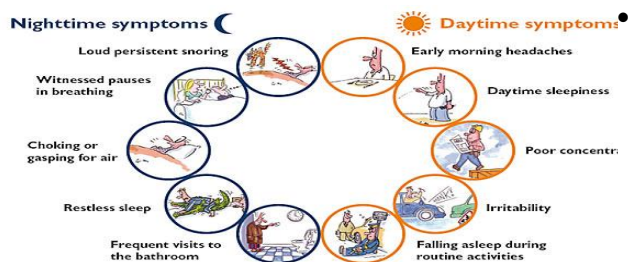


also ask people who live with you about your sleeping habits.

A sleep test called a **polysomnogram**, or PSG is performed. It is performed in a sleep lab and is supervised by a trained technologist. The test will measure various body functions, including:

- Air flow
- Blood oxygen levels
- Breathing patterns
- Electrical activity of the brain
- Eye movements
- Heart rate
- Muscle activity

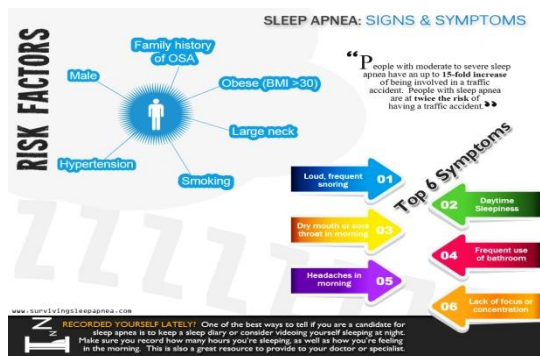
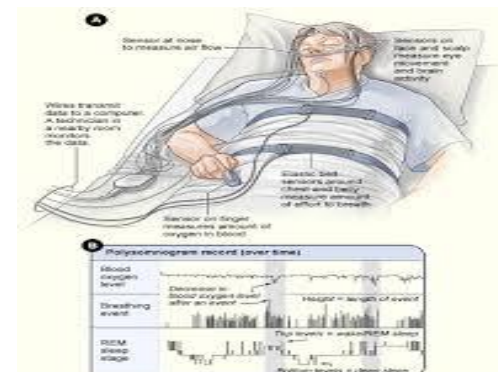
### Symptoms of obstructive sleep apnea



After the study is completed, the technologist will tally the number of times your breathing was impaired during sleep and grade the severity of sleep apnea.

### Risk Factors for Obstructive Sleep Apnea

1. Being overweight and getting older
2. Smoking
3. High blood pressure
4. Having risk factors for heart failure or stroke



### Treatment

The aim of treatment is to open the airway and restore normal breathing during sleep and to alleviate the bothersome symptoms, such as daytime fatigue and snoring. Treatment may also help lower blood pressure and decrease risks for stroke, diabetes, and heart disease.

### Diagnosis

The doctor will perform a physical exam and take a medical and sleep history. He may

### Conservative treatments

1. Overweight individuals can benefit from [losing weight](#)
2. In some patients who have mild sleep apnea, breathing pauses occur only when they sleep on their backs. In such cases, using pillows and other devices that help them sleep in a side position may be helpful.
3. People with [sinus](#) problems or nasal congestion, can try nasal sprays to reduce snoring and improve airflow for more comfortable nighttime breathing.
4. Avoiding [sleep deprivation](#) is important for all patients with sleep disorders



### Mechanical therapy

Continuous positive airway pressure ([CPAP](#)) is the preferred initial treatment for people with mild to moderate obstructive sleep apnea. With [CPAP](#), patients wear a mask over their nose and/or [mouth](#). An air blower forces constant and continuous air through the nose and/or [mouth](#). The air pressure is adjusted so that it is just enough to prevent the upper airway tissues from collapsing during sleep.



### Mandibular advancement devices

For patients with mild sleep apnea, dental appliances or oral mandibular advancement devices that prevent the tongue from blocking the throat and/or advance the lower jaw forward can be made.

### Surgery

Surgery is reserved for people who have excessive or malformed tissue that is obstructing airflow through the nose or throat. For example, a person with a deviated nasal septum, markedly enlarged tonsils, or small lower jaw and a large tongue that causes the throat to be abnormally narrow might benefit from surgery. These procedures are typically performed after sleep apnea has failed to respond to conservative measures and a trial of CPAP.

