# Snoring and sleep apnea

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Patients suffering from sleep apnea literally choke on their own tissues within the throat when sleeping and the resultant fragmented nightly rest can lead to serious medical conditions if left untreated.

It is always a wry joke amongst friends, and even spouses, when stuck with the fate of having to share the bedroom room with someone who snores throughout the night in various melodies.

The mere thought of sleeping with a high decibel snorer is not amusing, it could in fact be quite distressing and often very frustrating for the partner as the culprit – the snorer – is completely unaware of the nuisance caused.

Snoring is the sound produced during sleep by the vibration of our soft palate and the loose tissue surrounding. The snoring could cease suddenly and the entire breathing process could abruptly stop; this alarming situation is scientifically known by the Greek term apnea.

Once apnea occurs, the jokes on the snorer should stop as this could indicate the potential for high morbidity and even early mortality.

## Apnea types

Obstructive apnea is common in most patients. Its other two variants, central and mixed apnea, are less prevalent. All the three types of apnea will have similar symptoms of multiple episodes of breathing cessation in sleep lasting for seconds to minutes. These may number in the hundreds during a six-hour sleep.

Patients with obstructive apnea would literally choke on their own tissues within the throat and the brain would briefly arouse the person to resume breathing. Consequently, sleep is extremely fragmented and of poor quality.

Central apnea occurs less often in most populations but this condition is purely neurological, whereby the brain fails to signal the muscles to breathe. It is more challenging when patients suffer from both central and obstructive apnea.

### Who has apnea?

Persons prone to apnea will indicate certain tell tale signs.

The common indications of apnea would be daytime sleepiness despite of sleeping well at night; falling asleep during the day while waiting for someone, looking at the computer, at meetings, even when talking to a friend and during driving.

Snoring loudly with various tones and multiple sounds are more prominent in obstructive apnea and spouses/friends will observe that these patients cease to breathe while asleep.

Many patients are woken up by coughing with a choking sensation and sometimes complain of a dry throat in the morning. These patients are unable sleep as they choke as soon as they fall asleep and thus remain awake throughout the night.

### Risks factors

Scientific data has proven that patients with excessive weight around the neck with circumference of more than 17.5 inches (44cm) may have obstructed breathing. It is also known that not all sleep apnea patients are overweight.

Airway is sometimes narrowed by enlarged tonsils, adenoids or due to a large tongue. A naturally narrowed airway could be due to inheritance and males are twice likely to suffer of apnea than females. Overweight and menopause females seem to have a higher rate obstructive apnea.

Mayo clinic.com mentions that sleep apnea is two to three times more common in adults over 65 years


and the family history of apnea increases the risk of developing one.

Smoking, alcohol consumption and sedatives are known to further increase the episodes of apnea at night and it is highly recommended that such substances be avoided.

### Testing for apnea

Doctors would be able to know that your symptoms are suggestive of apnea based on the medical history.

However, to determine its severity and proving it scientifically, a sleep study would be conducted. Today, there are various types of studies available – which ranges from home study to a full sleep study done in a lab within a hospital.

The sleep study would monitor the oxygen levels in your blood, respiratory rate, movement of your chest, arms, legs and sometimes it will monitor your heart and brain activity during sleep. Results of the sleep study will show the severity of the apnea.

ENT surgeons most commonly see obstructive sleep apnea and referrals to the cardiologist and neurologist are made in the event of possible cardiac abnormalities and neurological causes.

### Treating apnea

In milder condition, doctors will recommend life

style change such as losing weight and quitting smoking. There are many over-the-counter remedies such as special snoring sprays and nasal plasters but all these have been proven to have very little success.

When simple measures do not improve the apnea symptoms, there are devices and surgical options that could assist.

Continuous Positive Airway Pressure (CPAP) is a good option recommended, as it will push air in at positive pressure, preventing airway collapse while sleeping. It solves the snoring and apnea in patients but CPAP usage requires a lot of will and compliance.

Oral appliance such as special dentures and mouth guards are sometimes helpful to bring the tongue down and bringing the jaw forward, thus opening the throat for an unobstructed airway. However, these appliances may cause discomfort in some patients.

Surgical methods for apnea and snoring are options when every other method fails. The principle of the surgery is to remove excess tissue within the nose and throat thus opening the airway.

A simple surgery on the septum or turbinate within the nose may solve the problem. Surgeries on the soft palate, tongue, and removal of tonsils and in more complex situation may require maxillomandibular advancement; where the upper and lower jaws are moved forward surgically.

Surgery may give good results but in some conditions it may need further assistance of a CPAP despite of surgery.

Patients with central apnea will not benefit with surgery. It will require consultation with the neurologist to investigate and treat other medical ailments. These patients will require special medication with controlled pressure regulated airway equipment.

### Long-term effects

Patients who deny having apnea and refuse treatment will likely have serious medical problems such as hypertension and cardiac problems. Sudden drop of oxygen during apnea will increase blood pressure and causing a strain on the heart. Sudden cardiac event during sleep can result in death.

Lack of sleep at night contributes to poor quality of life with constant irritability and fatigue during the day. Many patients with apnea have behavioural and social problems.

Marital relationship could be disrupted due to snoring and constant irritability of an apnea partner will further complicate the relationship.

Most of these patients are accident-prone while working with heavy dangerous machines and pose a danger while driving.

Sleep apnea is also a risk during surgeries under general anesthesia and may require ICU care post-operatively.

Other possible complications are memory problems, morning headaches, and frequent urination at night, impotence, gastro esophageal reflux and attention deficit/hyperactivity disorders in children Sleep apnea is painless and snoring is disturbing but if left untreated, it will cause heart problems with other difficult complications in the future. OH!