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OBSTRUCTIVE SLEEP APNEA

Obstructive sleep apnea is a serious medical condition seen more commonly in men than in women. Unfortunately, it is frequently overlooked as "normal" snoring. This disorder occurs when obstruction in the nose and/or throat blocks one's ability to breathe. One's bed partner may notice him/her gasping for air during sleep and/or breathing pauses of 10 seconds or more often followed by a loud "gasp" for air. Symptoms of obstructive sleep apnea include the following:

- Waking up feeling tired and unrefreshed, even after a full night of sleep
- Feeling excessively sleepy throughout the day, especially at work, at school, or while driving
- Irritability or short temper
- Problems with concentration or memory

What is obstructive sleep apnea (OSA)?

Obstructive sleep apnea occurs when there is obstruction/blockage of airflow, resulting in limited air entry into the lungs. This usually occurs during deep sleep when the muscles of the throat that keep the airway open during the day are relaxed and collapse. The body senses the inability to breathe and attempts to open the airway by arousing the brain out of deep sleep in order to restore muscle tone to the airway. Given the choice between deep, restful sleep and oxygen, the body chooses oxygen resulting in sleep interruption throughout the night. As sleep is significantly disrupted by this process, the brain craves sleep during the day resulting in feeling overtired, irritable, and possibly even falling asleep during quiet periods throughout the day.

What are the health consequences of untreated OSA?

If left untreated, obstructive sleep apnea can lead to serious health and safety consequences. One study demonstrated that over 50% of men with untreated obstructive sleep apnea suffer a serious health condition or death within 10 years. These serious health and safety consequences include:

- Heart attack (3-4 times increased risk)
- Stroke (5 times increased risk)
- Motor vehicle accident due to excessive daytime sleepiness (7 times increased risk)
- High blood pressure in both the systemic and pulmonary circulations
- Heart arrhythmias
- Cor pulmonale (right heart failure due to right heart strain)
- Polycythemia (elevated red blood cell concentration)

How can I treat OSA?

- Lifestyle changes including weight loss via diet and exercise, avoidance of sedatives (e.g. alcohol, antihistamines, and sleep aids), and avoidance of sleeping on one's back. Although this is the simplest treatment option, it often does not significantly improve the problem.
- Continuous Positive Airway Pressure (CPAP) device. This involves wearing a mask attached to a machine that blows air into the nose and/or mouth during sleep to keep airway structures from collapsing and prevent obstructed breathing. The pressure is customized to each patient's needs, but CPAP must be used every night to be effective. CPAP offers a high degree of success in treatment and allows patients to avoid surgery.
- Oral appliances can be used to keep the tongue and/or the jaw forward to prevent airway collapse. Consulting with a dentist who specializes in fashioning these appliances may be appropriate, depending on the severity of one's sleep apnea.
- Surgical intervention to improve and open the airway of the nose and/or throat may be recommended. The most common nasal procedures include septoplasty, during which a deviated nasal septum is straightened, and inferior turbinate reduction, during which soft tissue and bone on the side wall of the nose are reduced. These procedures result in an increased diameter of the nasal air passages and improved airflow. The most common throat procedures are tonsillectomy, during which the tonsils are removed, and uvulopalatopharyngoplasty, during which tissue of the soft palate is "trimmed." These procedures enlarge the breathing passage at the back of the throat and improve airflow in this location. While these procedures do cause post-operative pain for about two weeks, they may eliminate the need for further treatment in many patients. Additional procedures include tongue base reduction, hyoid advancement, tracheostomy, and neurostimulation of the hypoglossal nerve.