



### **What is Obstructive Sleep Apnea?**

Most people don't fully understand how vital a good night's sleep is to our health and well being. Sleep apnea can occur in infants and in every age group up to the elderly. Adult sleep apnea most often occurs in middle aged adults 30-60 years of age. Frequently, the development of obstructive sleep apnea is preceded by a history of 10 or more years of notable snoring and other symptoms. Men are approximately 3 times more likely than women to develop OSA. Daytime alertness, performance, mood and productivity are all affected by OSA. Signs of poor sleep can include snoring, excessive daytime drowsiness, morning headaches, poor memory, irritability, personality changes and depression. Although the person who snores appears to be sleeping peacefully, their sleep may actually be interrupted by apnea, and brief awakenings, which prevents them from getting enough time in the deepest stages of sleep that our bodies require. People who suffer from OSA often become accustomed to chronic fatigue and drowsiness and unconsciously modify their daily activities because of their lack of energy.

When we are awake, the soft, pliable muscles which surround the upper airway keep the air passages open, allowing air to move in and out of our lungs freely. When someone who has OSA reclines and falls asleep, the muscles relax and the tongue drops towards the back of the throat. In this relaxed state, the simple effort of breathing is enough to pull the tissues of the soft palate and tongue together, causing a total collapse of the airway. This airway blockage reduces or stops the flow of air into the lungs. If the breathing stops for more than 10-15 seconds, it is called *APNEA*. Increased nasal congestion, body position during sleep and alcohol or sedatives can all make apnea episodes worse. Apnea leads to a drop in the blood oxygen saturation. The lack of sufficient oxygen in the bloodstream signals the brain to increase the effort to breathe. The OSA sufferer makes increasingly forceful efforts to get air into the lungs until finally, the obstruction is broken, and normal breathing resumes. It is usually during such efforts to breathe that the patient has a brief awakening, usually without realizing it, and then returns to sleep. This struggle to breathe is repeated throughout the night, depriving the patient of the beneficial effects of deep sleep.

## **Glossary of Terms**

**Apnea:** A period of time during which breathing stops. It can be normal when it is short (less than 20 seconds) and is abnormal when it lasts longer than 20 seconds or is accompanied with bradycardia and/or oxygen desaturation.

**Bradycardia:** Abnormally low heart beat; less than 60 beats a minute.

**CPAP:** Continuous Positive Airway Pressure. CPAP devices deliver air at a specific pressure in order to help maintain pressure within the airway to eliminate apnea events caused by obstructive sleep apnea.

**Hypopnea:** A partial obstruction of the airway which permits the movement of only a very small amount of air in and out of the lungs. This type of breathing may be associated with normal sleep or part of an irregular breathing pattern. Chest movement is decreased and may or may not be associated with oxygen desaturation.

**OSA:** Obstructive Sleep Apnea, a form of disordered breathing occurring during sleep, resulting from intermittent total obstruction of the airway.

**Oxygen Desaturation:** Abnormally low oxygen supply in the bloodstream; less than 90%