

## SLEEP APNEA

### Overview:

*Sleep apnea* refers to a condition that temporarily leads to the cessation of breathing or to episodes of shallow breathing, interrupting normal sleep cycles. Periods of breathing cessation of 10 seconds or more are called *apneas*. Periods of shallow breathing lasting 10 seconds or more with a resultant decrease of oxygen saturation of the blood are called *hypopneas*. Sleep apnea is most commonly observed in older men, many of whom are overweight, heavy snorers. While only 1% of men aged 30 to 50 are affected by sleep apnea, as many as 30% of men over age 60 are affected. Failure to breathe properly triggers the brain to reinitiate breathing. This leads to restless sleep and drowsiness during the day.

The key diagnostic tool for any sleep disorder is a sleep study (*polysomnogram*). It evaluates respiratory effort, breathing patterns, air flow through the nose and mouth, oxygen saturation of the blood, and sleep stage patterns. A polysomnogram will confirm a diagnosis of sleep apnea and establish its severity with an *Apnea Index*. This index measures the number of apneas per hour. A sleep study will also measure the oxygen saturation level of the blood throughout the night.

The polysomnogram also diagnoses the type of sleep apnea involved: obstructive, central, and mixed. By far the most common version is *Obstructive Sleep Apnea (OSA)*. Specifically, OSA refers to the collapse of tissue of the upper airway onto the back of the tongue, cutting off the air flow to the lungs, decreasing available of oxygen. In *Central Sleep Apnea (CSA)* the airway remains open but the diaphragm and chest muscles fail to work properly. Snoring is not typically observed for this condition. The cause for CSA appears to be a disturbance in the brain's regulation of breathing during sleep. Many individuals with sleep apnea suffer from *Mixed Sleep Apnea (MSA)*. An episode of MSA typically begins with a brief episode of CSA, followed by a longer episode of OSA. Snoring is common for MSA.

Weight loss, abstinence from alcohol prior to bed time, and non-use of sleeping pills are the first recommendations by many physicians. The most successful form of direct treatment is via a mechanical device that insures *Continuous Positive Airway Pressure (CPAP)*. The CPAP device consists of an air pump that forces air into the sleeping individual who is connected to the device via a mask. Sometimes the air supplied is enriched with oxygen. Success of this treatment program depends to a large degree on the adaptability of the patient to get used to the noise generated by the compressor driving the device. Thus patient compliance, especially for those who travel a lot, can be a problem. Surgical treatments, such as *uvulopalatopharyngoplasty (UPPP)* or *tracheotomy* are typically reserved for the most severe cases only. None of these treatments are uniformly effective for all individuals. A *repeat polysomnogram* is usually required to show the effectiveness (or lack thereof) of any prescribed treatment.

### Impact on Life Underwriting:

Although there are cardiovascular concerns with sleep apnea, the major risk factor with sleep apnea are car crashes and other accidents. Thus, any mention of sleep apnea is viewed with caution during underwriting. Many times a casual comment by a personal physician about sleep apnea in an APS can derail an otherwise uneventful case. Recent APS comments regarding sleep apnea without sleep study are usually postponed until further investigation via sleep study. Once the sleep study becomes available, underwriting will be heavily based on the Apnea Index and oxygen saturation levels (see table below). Cardiovascular risk factors, such as build or high blood pressure, lead to additional concerns & ratings. The best underwriting results, usually standard rates, can be obtained only with a follow up sleep study, following successful treatment, and showing that normal restful sleep patterns are obtained with few apneas and normal oxygen saturation levels. SB 04/05/2001

Apnea	Symptoms	Treatment	Underwriting Action
Unspecified	Reports of snoring or day-time drowsiness.	None	Postponed until diagnosis/treatment.
Mild	Apneic Index 5 - 20 Oxygen saturation 85% +	Medical therapy	Standard
Moderate	Apneic Index 21 - 40 Oxygen saturation 70 - 80%	Non-surgical with follow up study showing improvement/compliance <i>Non-surgical with follow up study showing no improvement</i> Surgical treatment showing improvement with repeat sleep study <i>Surgical treatment without follow up sleep study.</i>	Standard to Table 2  <i>Postponed or moderately rated.</i>  Standard to Table 2  <i>Table 4 to Table 8 and up</i>
Severe	Apneic Index 41 + Oxygen saturation < 70%	None that is successful so far.	Postponed until treatment improves condition; simplified/guaranteed issue.
Any of the above complicated by cardiovascular disease.	Vary	Vary	Individual consideration.