**Obstructive Sleep Apnea**

Obstructive sleep apnea (OSA) is a sleep-related breathing disorder that involves a decrease or complete halt in airflow despite an ongoing effort to breathe. It occurs when the muscles relax during sleep, causing soft tissue in the back of the throat to collapse and block the upper airway. This leads to partial reductions (hypopneas) and complete pauses (apneas) in breathing that last at least 10 seconds during sleep. Most pauses last between

10 and 30 seconds, but some may persist for one minute or longer. This can lead to abrupt reductions in blood oxygen saturation, with oxygen levels falling as much as 40 percent or more in severe cases.

The brain responds to the lack of oxygen by alerting the body, causing a brief arousal from sleep that restores normal breathing. This pattern can occur hundreds of times in one night. The result is a fragmented quality of sleep that often produces an excessive level of daytime sleepiness.

Most people with OSA snore loudly and frequently, with periods of silence when airflow is reduced or blocked. They then make choking, snorting or gasping sounds when their airway reopens.

TREATMENTS

Sleep apnea must first be diagnosed at a sleep center or lab during an overnight sleep study, or “polysomnogram.” The sleep study charts vital signs such as brain waves, heart beat and breathing.

• **Continuous positive airway pressure (CPAP):**

CPAP is the standard treatment option for moderate to severe cases of OSA and a

good option for mild sleep apnea. CPAP provides a steady stream of pressurized air to patients through a mask that they wear during sleep. This airflow keeps the airway open.

• **Oral appliances:**

An oral appliance is an effective treatment option for people with mild to moderate

OSA who either prefer it to CPAP or are unable to successfully comply with CPAP therapy.

• **Surgery:** Surgery is a treatment option for OSA when noninvasive treatments such as CPAP or oral appliances have been unsuccessful.

• **Behavioral changes:**

Weight loss benefits many people with sleep apnea, and changing from back- sleeping to side-sleeping may help those with mild cases of OSA.

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