

What Parents Should Know about Obstructive Sleep Apnea in Children



What is Sleep Apnea?

There are two types of sleep apnea, *obstructive sleep apnea* and *central sleep apnea*.

Obstructive Sleep Apnea

OSA occurs when the tissue in the back of the throat collapses and partially or completely blocks the airway during sleep. This keeps air from getting into the lungs. This is a very common sleep disorder. It happens because the muscles inside the throat relax as you sleep. Blockage of the airway can happen a few times a night or several hundred times per night.

Central Sleep Apnea

CSA occurs when the brain fails to tell the lungs to breathe during sleep. As this signal is lost, the lungs do not take in the oxygen that your body needs. This condition is less common than OSA.

Medical professionals and insurance carriers recognize sleep apnea as a life-threatening condition requiring prompt diagnosis and treatment. Typically, snoring is no more than an inconvenience and is not life-threatening. However, it can be a prime symptom of sleep apnea.

For a person with sleep apnea, breathing stops from 10 to 60 seconds at a time, and these attacks can occur up to 120 times an hour during sleep. As a result, oxygen levels in the bloodstream fall, which in turn may lead to high blood pressure, stroke, heart attack and/or abnormal heart rhythms. It is estimated that as many as 18 million Americans suffer from sleep apnea, yet up to 95% of these cases go undiagnosed and untreated. Although it is most common in overweight men, both adults and children of either gender can be affected.

What is the risk of untreated sleep apnea for your child?

According to the National Institutes of Health, untreated sleep apnea can increase the risk for hypertension, hyperactivity, and may lead to irreversible neurological problems, learning disabilities, and aggressive behavior.

Some of the symptoms or risk factors of sleep apnea are:

- Loud, irregular snoring
- Daytime sleepiness
- Morning headaches
- Weight gain
- Frequent nocturnal urination
- Obesity
- Hypertension
- Irritability
- Craniofacial Abnormalities
- Bed-wetting
- Diabetes
- Hyperactivity
- Poor School Performance

What are the characteristics for children at risk for OSA?

Children with the following anatomical characteristics:

- Smaller than normal jaws
- Large tongues
- Enlarged tonsils or adenoids

- Tissues that partially block the upper airway
- Deviated nasal septum
- Chronic sinusitis & allergies
- Obese children
- Children with Downs Syndrome

Should you be concerned about your child's snoring?

About 10% of children snore. Of those children, 20-30% will have OSAS. Daytime symptoms for these children may be subtle, such as hyperactivity, trouble concentrating, poor school performance, daytime sleepiness or fatigue.

Statistics

- Approximately 10% to 12% of children snore during sleep.
- 20% to 30% of children and adolescents who snore have OSA.
- OSA is a serious condition that occurs in 1% to 3% of otherwise healthy children.
- OSA is most prevalent in children ages 2 to 7, but can affect infants and adolescents as well.
- Sleep deprivation or sleep fragmentation can cause disorders during the day that may mimic ADD or ADHD.
- Children frequently get insufficient amounts of sleep. OSA can worsen this problem.
- The American Academy of Pediatrics recommends evaluating all snoring children; this may frequently include a polysomnogram.

Diagnosis and Treatment

To determine if your child does have OSA, your pediatrician may refer your child for an overnight sleep study performed in a professional sleep center. This test is a non-invasive procedure that will monitor the following areas during sleep:

- Brain waves
- Eye movements
- Muscle movements
- Heart rate
- Leg movements
- Breathing patterns and noise
- Oxygen/carbon dioxide levels
- PH monitoring

After your child's overnight stay, the sleep physician will interpret the data collected and discuss management options with the family.

Obstructive Sleep Apnea can be treated! Your physician will recommend the best treatment plan for your child. The most common treatments are the following:

Tonsillectomy & Adenoidectomy surgery is usually curative in children for removing the airway obstructions.

Continuous Positive Airway Pressure (CPAP) is used primarily to treat obstructive sleep apnea, although there is evidence it may be helpful in children suffering from central apnea as well. CPAP involves the placement of a mask over the nose during sleep. An air compressor creates pressure that forces the air through the nasal passages, thereby keeping the airway open, preventing snoring, airway obstruction and drops in the oxygen levels in the blood. This allows the patient to cycle normally through the stages of sleep, and once again awaken refreshed and remain alert during the day.

Bi-level Therapy is similar to nasal CPAP except that it delivers two pressures; the higher one while breathing in, and a lower pressure while breathing out. Bi-level pressures are often required to control central apneas. Children with COPD are often candidates for Bi-level therapy; it also may help minimize CO₂ retention during sleep.

Weight Loss is strongly encouraged. There is a strong correlation between weight gain and the development of obstructive sleep apnea. Even modest increases of weight gain can greatly increase the severity of apnea and associated pressure requirements and conversely, weight loss of as little as 20 pounds can substantially affect the severity of the apnea and associated pressure requirements. Therefore, children with obstructive sleep apnea should be strongly encouraged to pursue weight loss. Once the quality of sleep improves with treatment of nasal CPAP therapy, weight loss becomes a more realistic goal for these children.