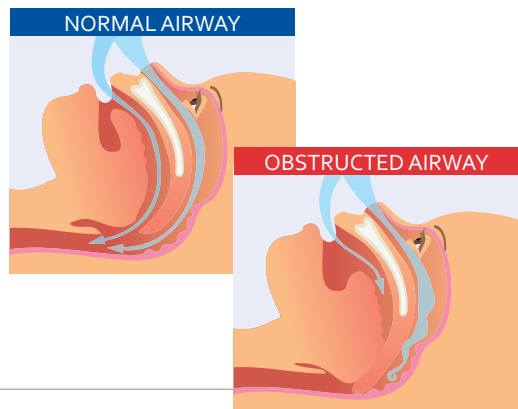


Obstructive Sleep Apnea In Children

Obstructive sleep apnea (OSA) is a problem that affects your child's breathing during sleep. An obstruction is a blockage of airflow into the lungs. Apnea (Ap-nee-uh) means a pause in breathing. These pauses in breathing occur off and on during sleep and can result in poor quality sleep. With time, untreated sleep apnea can result in serious health problems.



What causes OSA in children?

Several conditions cause OSA in children, including:

- **Large Tonsils and/or Adenoids:** These are the most common causes for OSA in children. Tonsils and adenoids are lymph nodes. Tonsils are found on each side in the back of the throat. The adenoids are high in the throat, behind the nose. Both of these can grow very large, causing blockage in the back of the throat. Medical conditions such as allergies, acid reflux, sickle cell disease, or frequent infection can cause the tonsils or adenoids to grow larger. Many children have large tonsils or adenoids, but not all will have sleep apnea.
- **Obesity/Overweight:** Children who are very overweight and have a high body mass index (BMI = weight for height).
- **Poor muscle tone:** Children with poor tone such as those with muscular dystrophy or cerebral palsy can have more relaxed muscles during sleep.
- **Genetic syndromes** such as Down syndrome (Trisomy 21) and Prader-Willi syndrome.
- **Abnormal Face or Throat:** Children with a small chin or throat, a large tongue, or a cleft palate (hole in the roof of the mouth).
- **Prematurity**
- **Problems with Breathing Control:** Some problems in the brain can affect a child's breathing during sleep.
- **Family history:** Sleep apnea can run in families.

How do I know if my child has OSA?

There are many clues that your child may have sleep apnea:

- Snoring at least 3 nights a week.

- Gaspings, choking, or noisy breathing that may be worse when your child is on his or her back.
- Pauses in breathing often with a "snort".
- Labored breathing.
- Mouth breathing while awake or asleep.
- Restless tossing and turning.
- Unusual sleep position (seated position, arched back, head tilted back).
- Frequent awakenings from sleep.
- Bedwetting, particularly if your child has not usually been wetting the bed at night.
- Poor sleep at night can cause difficulties during the day.

Daytime problems:

- Attention problems or poor performance in school.
- Hyperactivity and other behavior problems.
- Personality changes such as being moody, cranky or irritable.
- Sleepiness—falling asleep in school or napping at unusual times.
- Fatigue or extreme tiredness.
- Headaches upon waking up from sleep.
- Speaking with a nasal sounding voice.

What problems can occur with untreated OSA?

Left untreated, sleep apnea can cause serious problems sooner or later. Sleep apnea can affect your child's growth and quality of life, learning behavior and mood.

Sleep apnea can also cause or worsen other medical conditions such as high blood pressure (hypertension), heart disease, and diabetes.

How do I find out if my child has OSA?

First, your child's healthcare provider will do a history and physical exam to look for signs and symptoms of OSA. You may want to make a video recording of your child sleeping to show your healthcare provider. Sleep apnea is usually diagnosed by doing a polysomnogram (a study done in a sleep laboratory at night). During this sleep study, your child's breathing, oxygen levels, heart beat, and electrical activity of the brain are recorded. Your healthcare provider can then determine the treatment options and plan of care for your child. Other tests may be done depending on your child's condition and risk factors.

How is obstructive sleep apnea treated in children?

Children with mild OSA and without associated conditions may require close monitoring and follow-up only. For those who require treatment, options are available.

1. Adenotonsillectomy: Surgery to remove the tonsils and/or adenoids is the first line of treatment for most children with OSA. Symptoms of OSA usually improve after surgery. Those with severe OSA or with other risk factors will need another sleep study 2-3 months after surgery.
2. Continuous or bilevel Positive Airway Pressure (CPAP/ BPAP): Positive airway pressure is the second line of treatment. It is indicated for those children whose OSA cannot be corrected by surgery.
3. Medications: Some medications such as a steroid nasal spray or medications for allergies may help. Allergies can cause swelling and congestion in the nose which can worsen or cause OSA. Talk to your child's healthcare provider if you think your child would benefit from medication.
4. Weight loss: If your child is overweight, talk to his or her healthcare provider about a safe, effective weight control program.
5. Sleep position: Sleep apnea is usually worse when lying on one's back. Have your child sleep on his or her side. A pillow behind your child's back may keep them from rolling from their side onto their back. Using pillows to help your child sleep sitting more upright may also help.

What is CPAP or BPAP?

The CPAP or BPAP device is an air compressor that pushes air into a mask that is worn snugly over the nose or mouth during sleep. The pressure pushes the air through the nose and throat to prevent the air passages from collapsing during sleep. The goal is to keep the air passages open and keep your child breathing during

sleep. With BPAP (short for bilevel positive airway pressure) there is a higher pressure level when breathing in and a lower pressure level when breathing out. The amount of pressure that is given can be tested during a sleep study to see that it controls your child's apnea.

What other types of surgery can be done for sleep apnea besides adenotonsillectomy?

Depending on your child's risk factors, other specialized surgeries involving the throat, mouth and/or tongue may be needed. A tracheotomy is done in children with severe, life-threatening sleep apnea. In this procedure, a small hole is made in the windpipe and a tube is inserted into the opening.

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Rx Action Plan

Talk to your child's healthcare provider:

- ✓ If you notice symptoms of OSA in your child.
- ✓ To see if your child should have a sleep study.
- ✓ To find out what treatment is best for your child.
- ✓ To safely help your child reach a healthy weight.

Healthcare Provider's Contact Number:

Resources:

American Thoracic Society

www.thoracic.org/patients

- Sleep Studies in Children
- Positive Airway Pressure (PAP) for OSA in Children
- OSA in Adults
- Use of Tracheostomy in a Child

American Academy of Pediatrics

<https://www.healthychildren.org/English/ages-stages/baby/sleep/Pages/Sleep-Apnea-Detection.aspx>

Academy of Sleep Medicine

<http://www.sleepeducation.org/sleep-disorders-by-category/sleep-breathing-disorders/child-sleep-apnea>

National Sleep Foundation

<https://sleepfoundation.org/sleep-news/could-my-child-have-sleep-apnea>

American Sleep Apnea Association

<https://www.sleepapnea.org/children-and-sleep-apnea/>

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