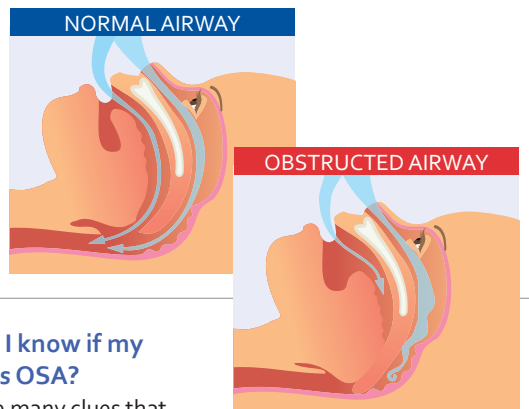


# Obstructive Sleep Apnea In Children

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 airflow occur off and on during sleep and can result in poor quality sleep. With time, untreated sleep apnea can result in serious health problems. About 1 to 5 percent of children have OSA. (For information on OSA in adults see the ATS Patient Information Series "What is Obstructive Sleep Apnea in Adults" at [www.thoracic.org/patients](http://www.thoracic.org/patients)).

## What causes OSA in children?

Several conditions make a child more likely to have OSA. These conditions are called risk factors. A child can have more than one risk factor for OSA. The more risk factors your child has, the greater the chance of having sleep apnea. Risk factors for OSA in children include:

- **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, and are not easily seen through the mouth. Both of these can grow into large amounts of tissue, 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:** Children who are very overweight and have a high body mass index (BMI = weight for height).
- **Problems with muscle tone:** Children with poor tone such as those with muscular dystrophy or cerebral palsy can have trouble breathing during sleep because the throat muscles relax and block the airway.
- **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, so a child's risk for OSA may be increased if another family member has sleep apnea.

## How do I know if my child has OSA?

There are many clues that your child may have sleep apnea. During sleep, your child can 2:

- Snoring at least 3 nights a week.
- Gasping, 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.
- Problems breathing through the nose, so the child needs to keep his or her mouth open to breathe while asleep. This may also occur during the daytime.
- 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.

During the day, children with sleep apnea can have:

- 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, especially in the morning 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 quality of life. Some children can have their growth affected.

It can affect your child's learning, behavior, and mood. Sleep apnea can also worsen other medical conditions. Over time, sleep apnea can cause high blood pressure (hypertension) and increase the risk of heart disease and diabetes.

### How do I find out if my child has OSA?

To see if your child may have sleep apnea, begin by having your child's health care provider do a history and physical to look for signs and symptoms of OSA. You may want to make a video recording of your child sleeping to show your health care 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. (For more information, see the ATS Patient Information Series: "Sleep Studies" at [www.thoracic.org/patients](http://www.thoracic.org/patients)). Your health care 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, many treatments can be used to control your child's OSA. Often, several treatments have to be tried alone or in combination to find the one that works best for your child. Treatments might include:

1. Adenotonsillectomy: Surgery to remove the tonsils and/or adenoids is the first line of treatment for most children with OSA. Many children can benefit from surgery to remove the tonsils and adenoids (called adenotonsillectomy). 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 Positive Airway Pressure (CPAP): CPAP 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 health care provider if you think your child would benefit from medication.
4. Weight loss: If your child is overweight, talk to his or her health care 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 other types of surgery can be done for sleep apnea?

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. (For more information, see ATS Patient Information Series: "Use of a Tracheostomy with a Child" at [www.thoracic.org/patients](http://www.thoracic.org/patients)).

### What is nasal CPAP?

Nasal CPAP is the most common and effective treatment for children whose OSA cannot be corrected by surgery. The CPAP device is an air compressor that pushes air into a mask that is worn snugly over the nose 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. Your child will have little or no snoring when wearing CPAP. A similar type of device is called biPAP (short for bilevel positive airway pressure). This type of device supplies 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. (For more information, see ATS Patient Information Series: "Positive Airway Pressure (PAP) for the Treatment of Obstructive Sleep Apnea in Children" at [www.thoracic.org/patients](http://www.thoracic.org/patients))

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## Rx Action Plan

Talk to your child's health care 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:

For more information contact the following websites:

**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 Family Physician**

[www.aafp.org/afp/20040301/1159ph.html](http://www.aafp.org/afp/20040301/1159ph.html)

**American Sleep Apnea Association**

<http://www.sleepapnea.org/treat/childrens-sleep-apnea.html>

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