

Positive Airway Pressure (PAP) for the Treatment of Obstructive Sleep Apnea in Children

What is obstructive sleep apnea?

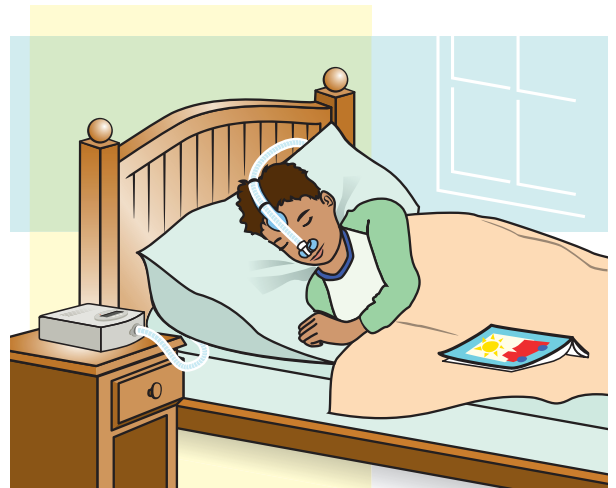
Obstructive sleep apnea (OSA) is a problem that affects your child's breathing during sleep. With OSA, your child's airway becomes partly or completely blocked while sleeping, which makes it difficult to breathe and results in poor quality sleep.

Symptoms of OSA include snoring, gasping, frequent awakenings, or pauses in breathing during sleep (see ATS Patient Series on Obstructive Sleep Apnea in Children at www.thoracic.org/patients).

Poor sleep at night from obstructive sleep apnea (or other problems) can cause difficulties during the day. These difficulties can include being very sleepy (excessive sleepiness), morning headache, problems paying attention, hyperactivity, and behavioral problems (being moody or irritable). If not treated, sleep apnea can also lead to serious health problems, including high blood pressure (hypertension) and heart disease later in life.

What is the treatment for obstructive sleep apnea?

The treatment for obstructive sleep apnea may include removing your child's adenoids and tonsils, taking medications and losing weight. If these treatments do not improve your child's OSA or are not appropriate for your child, positive airway pressure (PAP) may be recommended. This treatment is the same as used in adults with OSA (see ATS Patient Series



on Obstructive Sleep Apnea at www.thoracic.org/patients).

How does positive airway pressure work?

PAP is delivered by a device that blows air (under pressure) into your child's airway through a mask that covers their nose and mouth. Positive airway pressure helps keep your child's airway from closing or narrowing when they sleep. This pressure acts like a "splint" to keep the breathing passages from narrowing. This is done by having two different sets of pressures to breathe: 1) CPAP, which is continuous pressure when they breathe in and out, and 2) Bilevel PAP (BiPAP), which is bilevel positive airway pressure that allows for separate pressures when breathing in and breathing out.

The CPAP or BiPAP device is connected to your child by a mask that is fitted to your child's face. The mask is held on with straps that reach around the back of the head. Your child will wear this mask while they are sleeping to receive the continuous air from the device. For most children, the air that blows is not additional oxygen.

What happens if PAP is recommended for my child?

First, your child may be given a mask and headgear to take home to use for short periods during the day. This will help them get used to using the mask at night. Have your child wear the mask while awake and doing an enjoyable activity such as watching a movie or television, or listening to a story.

Once your child has already had a sleep study in order to diagnose their sleep apnea, a second study will be done to set the pressure on the PAP device. The second overnight sleep study will allow for any adjustment needed to improve breathing during sleep and will work much the same way as the first one, except a sleep technologist will adjust the pressure of the PAP device while your child is sleeping.

Your child's health care provider will be able to provide you with the results of the sleep test and all the information that you need so that your child can have PAP in your home to wear every night during sleep.

How can I help my child get comfortable with PAP at home?

Most children take time to become comfortable with PAP after a few weeks. Have your child go to sleep at the same time each night. This bedtime routine will help them adapt better to using the PAP device. Talk to your equipment provider if the mask isn't comfortable. There are likely several options available.

You may also find it helpful to create a reward system for each night your child wears the mask. For younger children, this may include a sticker chart. Older children may benefit from other rewards. A member of the healthcare team will monitor your child's progress.

Does my child need to use the PAP device during naps, sleep overs and traveling?

Yes, like medication, it is important to use the PAP device regularly. PAP is most successful in treating your child's OSA when used every night for the entire sleep time. Generally we would

recommend that PAP be worn during all sleep periods, but these recommendations should be discussed with your sleep doctor.

Will my child need to do any other sleep study once PAP therapy is started?

Your child may be scheduled for another sleep study after starting PAP. Your child's sleep specialist may decide that another study is needed. A repeat study may be done if your child's symptoms do not go away or are not controlled by the initial setting.

How long will my child need to use PAP?

Some children may need to use PAP as a long-term treatment. Your sleep medicine team will continue to follow your child and re-evaluate the need for PAP therapy.

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Rx Action Steps

If your child needs treatment for sleep apnea:

- ✓ Talk with your health care provider about seeing a sleep specialist.
- ✓ Talk to your child's sleep medicine team if your child is having problems using PAP and you wish to discuss the treatment options for your child.
- ✓ Help your child get used to wearing a PAP mask.
- ✓ Make sure your child uses PAP with sleep every night and if needed during other sleep periods.

Doctor's Office Telephone:

Resources:

American Academy of Pediatrics

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

American Academy of Sleep Medicine

<http://www.sleepeducation.com/essentials-in-sleep/cpap>

Pediatric Society of New Zealand

<http://www.kidshealth.org.nz/continuous-positive-airway-pressure-cpap>

American Sleep Apnea Association

<http://www.sleepapnea.org/treat/treatment-options.html>