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## What are CPAP and BiPAP?

CPAP and BiPAP are machines that push air or oxygen into the lungs. They help to keep the lungs filled with air (inflated). They are used to help children who have breathing or lung problems.

- CPAP stands for continuous positive airway pressure. It provides a constant pressure when your child breathes.
- BiPAP stands for bilevel positive airway pressure. It provides 2 different pressures when your child breathes in and out.

These machines are used in the hospital for short-term treatment of breathing problems. Sometimes, children also need them at home.

- CPAP and BiPAP work by pumping air through a long hose. The hose connects to a mask that fits over the nose or over the nose and mouth.
- The mask is held in place by either straps that go around the head or by a cap worn on the head.

## Why does my child need CPAP or BiPAP?

Children who need CPAP and BiPAP need help keeping their lungs or windpipe open, even though they can breathe on their own. These machines are often used for children who have:

- Weak breathing muscles.
- Problems with the breathing center in the brain.
- Problems with breathing during sleep (sleep apnea).
- Trouble getting enough oxygen in their bloodstream.
- A hard time working to breathe.
- A collapsed lung.

## CPAP and BiPAP in the hospital

### What are CPAP and BiPAP settings?

Settings on the machines control how much breathing support your child receives.

- Settings are ordered by your child's doctor. The doctor will check your child's chest X-rays, oxygen levels and blood gases to know when the settings need to change.
- The respiratory therapist then adjusts the settings as needed.

### When can my child come off CPAP or BiPAP?

- Your child can come off CPAP or BiPAP when they can breathe well enough on their own to support their body's oxygen needs.
- Sometimes, they will need this support at home as well.

**In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.**

# CPAP or BiPAP, continued

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## CPAP and BiPAP at home

Your child's case manager will help arrange for the supplies you need to care for your child at home. You will order them from a home health company. Call the same company when you need more supplies or if you have any problems with the machine.

### What supplies do I need?

You will need these supplies at home:

- A CPAP or BiPAP machine and hose
- The correct size head gear, straps or cap
- The correct size mask
- A pulse oximeter (also called pulse ox) and probe, if ordered by your child's doctor

### What can I do to help prepare my child?

To help prepare your child, tell them that:

- They will have a mask placed on their face.
- The mask will push air into their mouth or nose.
- After a while, it can help them breathe better.
- It should not hurt.

### What steps should I follow?

Follow these steps when using CPAP or BiPAP:

- Clean your hands well. You may use:
  - Soap and water to wash your hands well for at least 20 seconds. Rinse and dry them well.
  - An alcohol-based gel or foam if you do not see dirt or grime on your hands.
- Gather supplies.
- Put the mask, cap and straps on your child.
  - When it fits your child well, there is no need to take the straps or the cap apart again.
  - Ask the respiratory therapist to show you how to put it on and take it off without taking it apart.
- Turn on the machine. The settings and pressures should be preset by your home health company based on a doctor's order.
- Connect the hose to your child's mask.

If your child also uses a pulse ox machine:

- Turn on the pulse ox machine.
- Place the probe on your child's finger. Check for a wavy line on the monitor (waveform).

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# CPAP or BiPAP, continued

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- Your child’s doctor will decide on limits for the alarms. Check the alarm limits to make sure they are set correctly.

## What else do I need to know?

Talk with your child’s respiratory therapist, doctor or home health company about:

- How much pressure to use.
- When and how often to use the CPAP or BiPAP machine

Some other things to know include:

- Do not let your child eat or drink a lot while CPAP or BiPAP are in place. This could cause vomiting (throwing up).
- Adjust the straps and mask for a better fit if your child has any skin redness, irritation or soreness from them. Call the doctor if this does not help. Your child may need another size or type of mask.

## How do I clean the CPAP or BiPAP supplies?

Keep your child’s supplies clean to help decrease infections.

- Wash the head gear in the washer as needed. Use warm water and regular detergent.
- Wash the mask with warm soapy water, and air dry. Do this 1 time each week and also when it looks dirty.
- Wipe down the machine with a damp cloth 1 time each week.

## When should I call the doctor?

Call the doctor if your child has:

- Red, irritated eyes. This is a common side effect of using CPAP or BiPAP. It happens when there is an air leak around the mask. It does not affect how the machine works.
- Redness of the skin between the eyes. This happens when the mask is too tight or if your child’s skin is very sweaty. It can sometimes cause a pressure sore on the skin between the eyes.
- Skin redness or irritation that does not go away in 30 minutes after you adjust the mask and straps.
- Signs of a cold or sinus infection, such as:
  - Runny or congested nose
  - Cough
  - Sore throat
  - Fever of 100.4°F or higher

## When should I call 911?

Call 911 **right away** if your child is having severe (very bad) breathing problems, such as they:

- Are so weak and tired that they hardly respond to you.

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## **CPAP or BiPAP, continued**

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- Are working **very** hard to breathe or finds it hard to take a breath.
- Grunts when they breathe.
- Have chest retractions (skin pulling in around the ribs and chest when breathing).
- Have a blue or dark purple color to the nails, lips or gums.
- Stop breathing for more than 10 seconds.
- Cannot talk while trying to breathe.
- Have any breathing problem that needs care **right away**.

**This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.**

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