

Let's Talk About...

Oxygen use at home

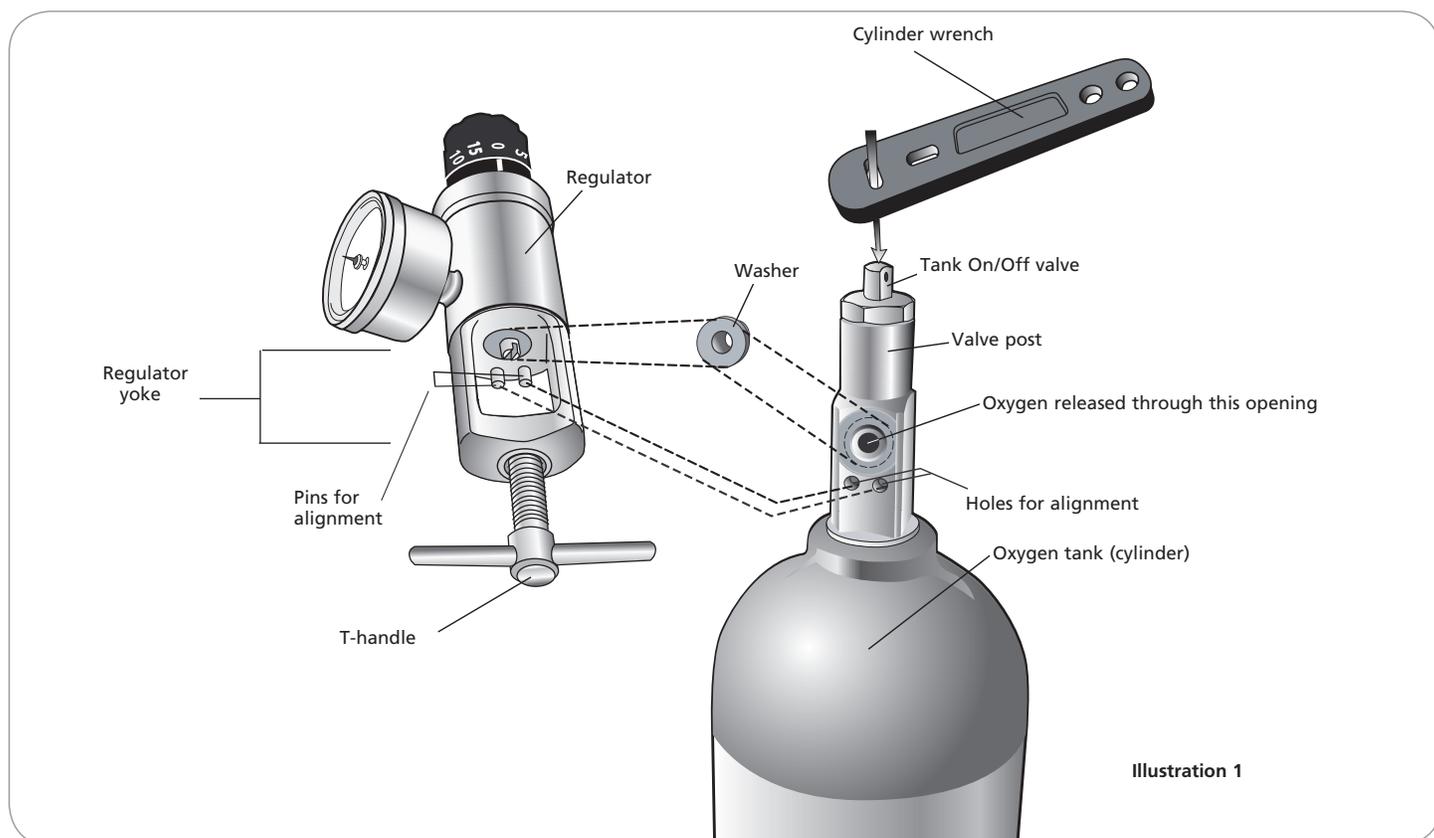


Illustration 1

Some children with respiratory or heart problems have a hard time getting enough oxygen when they breathe. The goal of oxygen therapy is to boost or maintain the level of oxygen in the body. Children's bodies need different amounts of oxygen during exercise, rest, and sleep. The doctor will prepare an oxygen prescription for your child that takes into account your child's needs.

What is an oxygen prescription?

The doctor may use a test called pulse oximetry (ox-IM-it-tree) to find out how much oxygen your child needs during sleep, rest, and exercise.

The doctor will write an oxygen prescription that includes one or more of the following:

- The oxygen doses (in liters per minute) during exercise, rest, and sleep.
- The number of hours per day that your child will need to use the oxygen.
- The way your child will receive the oxygen (nasal cannula, mask, etc.).
- The type of oxygen supply system you will use. Compressed gas is prescribed most often and comes in a cylinder or tank. It is described below.

How do I use a compressed oxygen tank?

It is very important to understand that oxygen can be dangerous if not used correctly. Oxygen is flammable.

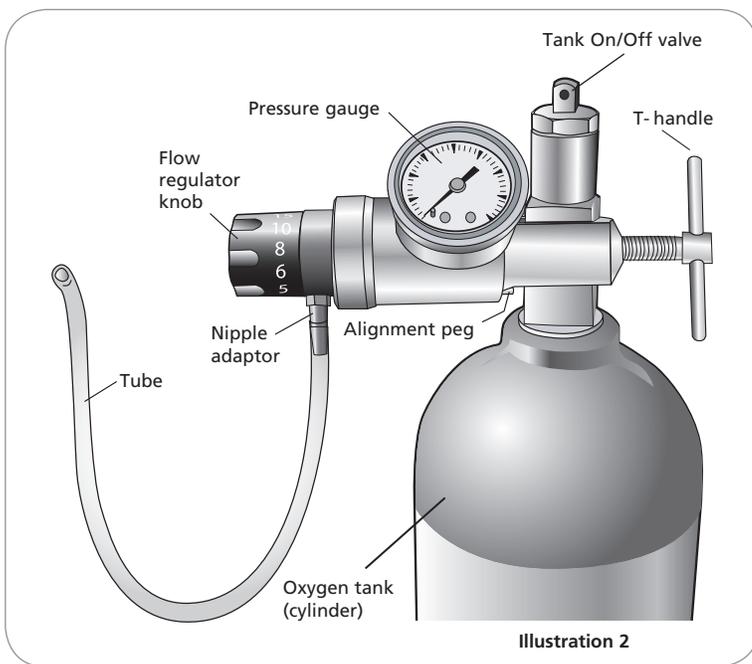


Illustration 2

This means it can make things burn easily or it can even explode. Follow these safety rules:

- Keep your oxygen tank away from all heat sources, including radiators, heat ducts, stoves, fireplaces, matches and lighters.
- Do not permit open flames or burning tobacco in the room where oxygen is being used.
- Keep the tank your child is using in the stand, and keep any other tanks lying on their sides and block them so that they do not roll around. This is important because if the valve post were to break off of a tank, it could cause considerable harm to anything in its path.
- Follow the directions below to use compressed gas.

Attaching the regulator to the tank

- 1 Remove the plastic wrap from the valve post on the tank (see illustration 1). It may contain a washer.
- 2 Attach the regulator to the tank by slipping the regulator over the valve post of the tank. Align the pegs located on the inside of the regulator yolk with the holes in the valve post. Slide the regulator forward so the pegs go into the holes.
- 3 To fasten the regulator to the tank, turn the T-handle on the regulator until it is tight. If the

handle is not tight enough or if the washer is not in place, the tank will leak when the valve is opened meaning you will lose oxygen from the tank faster than normal (see illustration 2 for proper placement). You will know if you have an oxygen leak if you hear a whistling sound or air escaping where the regulator meets the valve post. If you identify there is a leak first make sure the T-handle is tight and secure. If this does not solve the leak you may need to change the washer on the regulator. Inside the regulator is a small, black and gold washer. You should have been given a spare washer or it may be attached to a regulator on a small ring. Remove the old washer and replace it with a new washer. Then replace the regulator, turn on the oxygen and see if the leak is fixed. If these 2 steps do not fix your leak you will need to contact your homecare company for a new regulator.

Turning on the oxygen

- 1 Be sure that the flow regulator knob (see illustration 2) on the regulator is at zero. This knob is different for each kind of regulator, but is usually marked with numbers. Ask your oxygen supplier to show you how to use their product.
- 2 Make sure the t-handle is tight to prevent leaks.
- 3 Place the cylinder wrench (see illustration 1) on the tank's on/ off valve, located at the top of the tank. Open the valve by turning it counter-clockwise one full turn. As the valve opens, the pressure gauge on the regulator will show the amount of pressure in the tank. A full tank will read about 2000 psi (pounds per square inch).
- 4 Adjust the flow knob on the regulator until the gauge reaches the flow rate your doctor has prescribed.
- 5 Attach the tubing to the nipple adaptor on the regulator.

Turning off the oxygen

- 1 You should turn off your oxygen tank whenever the tank is not in use. Using the small cylinder wrench, turn the tank on-off valve clockwise until it is fully closed (unable to turn). To get rid of the pressure in the regulator turn the flow regulator knob to its highest setting (often 8 L) until you no longer hear any oxygen coming out of the regulator.
- 2 When the pressure gauge reads zero, turn the flow regulator knob to zero.
- 3 If you are changing the cylinder, remove the regulator by loosening the T-handle. Slide the pegs out of the holes on the valve post and lift the regulator off of the valve post.

When should I change the oxygen tank?

It is important to watch the oxygen supply so that your child does not run out of oxygen. Your oxygen supplier will tell you about how long the tank should last. Call your oxygen supply company to get a new tank before your supply gets too low, so you will have a reserve. It is important to change tanks before the pressure drops below 500 PSI. Below this level, the gauge's accuracy is not as reliable. Remember that in order to read cylinder pressure, the cylinder valve must be open.

Using oxygen delivery systems

An oxygen delivery system is a way for your child to receive oxygen. There are several oxygen delivery systems:

- **Nasal cannula:** A narrow tube with soft prongs that are placed in the nostrils to deliver oxygen. When placing the cannula, place the prongs with the curve facing down. For children who are mobile an extension can be added to the end of the tubing to increase the length of the tubing. Your child may require some kind of adhesive to help the nasal cannula stay in place. The homecare company may provide you with small stickers or you can use medical tape. You may find that the stickers or tape cause skin irritation

or a rash. Silicone tape can be a useful alternative and is gentle on the skin. You can find this tape at many drugstores.

- **Simple face mask:** A device worn over the nose and mouth. An elastic band holds it in place around the head. Holes on the sides of the mask allow exhaled air (air you breathe out) to escape and room air to enter. Some children take a while to adjust to wearing this device. Oxygen flow must be more than 5 liters.
- **Non-rebreather mask.** This mask also fits over the nose and mouth. It has an attached oxygen reservoir oxygen bag. This bag prevents the child from breathing back exhaled air, which contains lots of carbon dioxide. This device is usually used for children who need 12–15 liters of oxygen.
- **Bag-valve mask with oxygen reservoir.** This device delivers the highest concentration of oxygen. The mask fits more snugly over the nose and mouth, and has an attached oxygen reservoir oxygen bag. This bag helps keep a high oxygen level in the mask.

Some children need help adjusting to an oxygen delivery device. Here are some tips to help them:

- Invite your child to explore the cannula or mask. Practice having it over your child's face or pretend to give it to a doll or parent.
- Encourage your child to participate when putting the device on when they are able.
- Provide a small incentive or distraction.

Traveling with the oxygen tank

- Oxygen tanks must be laid flat and secure when being transported, so they do not roll or bump against other tanks or objects.
- You should crack a car window when driving with an oxygen cylinder.
- Do not allow others to smoke around the oxygen cylinder.
- Keep cylinders out of direct sunlight.

- Do not store cylinders in the trunk of a vehicle.
- Ensure there is plenty of oxygen in the tank for your travel time.

Call your doctor if...

- Your child has trouble breathing.
- Your child can't sleep, has unexplained anxiety or agitation, is pale, overly upset, or cries a lot.
- You have questions about the oxygen dose your child is receiving.
- Your child has trouble breathing during exercise.

Call 911 if...

- Your child has a bluish color to the lips or tongue.
- Your child is unusually sleepy.
- Your child can't breathe.