

USING OXYGEN



Oxygen is essential for life. When heart conditions or chronic lung diseases such as asthma, emphysema, or COPD (chronic obstructive pulmonary disease) make it difficult for a person to breathe, a health care provider will often recommend using oxygen at home. (Other common therapies, such as inhalers or nebulizers, are described in separate videos in this series. To view the videos, go to www.aarp.org/nolongeralone.)

This video shows you how to help your family member or friend use oxygen equipment and get the important benefits oxygen provides—breathing more easily, being more active, and sleeping better. The video covers three main areas:

- > How to use oxygen equipment
- > How to safely store oxygen
- > When to contact the person's health care provider

This resource guide reviews the main points in the video and provides additional information about insurance coverage and online resources.

Since safety is paramount in using oxygen, let's review the safety rules first. The basic rule to remember is that oxygen makes things burn more easily and more quickly. To prevent a fire, follow these three basic rules:

- 1. No smoking allowed.** If anyone who lives in or visits the household is a smoker, make sure he or she does not smoke indoors. If the person is smoking outdoors, make sure he or she stays at least six feet away from the person who is using oxygen and the oxygen equipment.
- 2. Keep oxygen away from open flames.** Flames can come from many sources; common examples are candles, stovetops, wood-burning fireplaces, and barbecue grills. Make a list of all the potential flame hazards in the home and do not use the oxygen within six feet of any of them. Never use an aerosol spray or air freshener anywhere near oxygen, because these too are fire risks.
- 3. Be prepared for an emergency.** Inform the local electric company, fire department, and police department that oxygen is being used in your family

member and friend's home. If an electrical outage or fire occurs in your neighborhood, the electric company, fire department, and police department will put your family member or friend on the priority list for help.

Oxygen Equipment

Now let's turn to the oxygen therapy itself. The oxygen and equipment will be provided by a specialized company recommended by your family member's health care provider. Ask if the company participates in (i.e. accepts the rates set by) your family member's insurance plan. The person who comes to the home to set up the equipment may be a technician from the equipment's company or a nurse from a home health care agency. In the video, it is a technician. You should be present when the technician arrives. Even if you are familiar with oxygen therapies, the equipment your family member receives may be somewhat different. The technician will guide you through the process of setting up and using the oxygen equipment; make sure you have an opportunity to practice and ask questions while being supervised.

The basic equipment needed for using oxygen includes the following systems that provide oxygen:

- > **Cylinders** (or **tanks**) hold compressed oxygen. Cylinders come in different sizes: some are large and not meant to travel; smaller versions are portable and can be used while outside of the home for activities such as shopping or visiting. Tanks can last up to several days, depending on the **flow rate**. The flow rate is the rate at which the cylinder delivers oxygen, and is measured in liters per minute. It is important to set the equipment at the prescribed rate so that the right amount of oxygen is delivered. Too much or too little oxygen can be harmful.

A *regulator* is attached to the top of the tank to allow oxygen to flow at the prescribed rate.

- > *Concentrators* are machines that take oxygen from the air and concentrate it. They never run out of oxygen. They are powered by electricity or batteries and are often used when oxygen is needed at home for a long period of time. They may be used when going out for extended travel or outdoor excursions. If using a concentrator, make sure a backup tank is available in case of a power outage. Up to 50 feet of tubing can be attached to a home oxygen concentrator to allow the person to move freely around the home without having to move the concentrator. If long tubing is used, make sure that it is placed so that no one trips over it. Small, portable concentrators, which are carried like a shoulder bag or purse, are another option. For extended travel, such as by airplane, a portable concentrator is usually the best option. Consult your health care provider and the airline for instructions and policies on oxygen equipment.
- > Masks, *nasal cannulas* (tubes that go into the nose), and related accessories deliver the oxygen from the tank or concentrator and allow the person to breathe it in.

How to Use the Regulator

1. Wash your hands thoroughly before handling oxygen equipment. Dry your hands with a clean towel.
2. To use a small tank, connect the regulator by sliding it down over the neck of the tank and matching the prongs on the regulator with the holes on the side of the neck of the tank.
3. Push the prongs into the holes and tighten, using the handle.
4. To turn on the oxygen, connect the tubing to the connector and attach the cylinder key or wrench to the top of the neck. Turn the key counterclockwise to open the valve. Adjust the flow rate to the prescribed number. To remove the regulator, first turn off the oxygen by turning the cylinder key clockwise to close the valve. Leave the flow rate open until it is down to zero, then remove the regulator.

Keeping the Nasal Tubing or Mask Clean

The simplest way to get oxygen into the family member or friend's lungs is through a nasal cannula. A *nasal cannula* is a thin plastic tube that sits under the nose, with two

prongs that fit into the nostrils. The tubing wraps over the ears to stay in place. Another option is an oxygen mask. This is often recommended when a higher flow rate is needed or if the nasal tube is irritating the nose.

Clean the mask or nasal cannula once or twice a week by washing it in warm soapy water. Rinse well and allow it to air dry. Check to make sure there is no water inside the cannula or tubing. If there is water in the tubing, connect the tube to the oxygen tank and turn on the oxygen to blow out all the water. Wipe long oxygen tubing with a damp cloth at least every week.

Replace the nasal tubing or mask every two to four weeks or sooner if there is damage or a leak. Ask the oxygen company for replacements. If your family member has a cold or the flu, replace the tubing or mask when he or she recovers.

Portable Oxygen Cylinders

As the video shows, having a ready supply of oxygen makes it possible for a person to go outdoors and on short trips for shopping or appointments. You can use a small portable oxygen cylinder for this purpose. Make sure you have an extra cylinder or two in case you want to stay out longer.

If you travel by car, keep the cylinder upright by using a carrier or stand; if you must place it on its side, make sure it doesn't roll around. It is important to never store the cylinder in the trunk of the car, and don't allow anyone to smoke in the car. Keep a window slightly open to prevent oxygen from building up inside the car.

If you use a portable concentrator, be sure to charge or change the batteries regularly. In the car, recharge the batteries by plugging the concentrator into the cigarette lighter or other methods created by the portable concentrator's company. When you arrive at your destination or get home, you can charge the batteries by plugging the portable concentrator into a wall outlet.

Watching Out for Problems

If something does not seem right with the equipment or your family member or friend's response to the oxygen therapy, call the health care provider right away. Check the equipment to make sure oxygen is flowing as prescribed, but don't try to fix the problem by adjusting the flow rate or making any other changes on your own.

Some problems that your family member might experience that require medical attention include the following:

- > Frequent headaches
- > Feeling nervous, anxious, or restless
- > Feeling drowsy or confused
- > Difficult, slow, shallow, or uneven breathing

If your family member complains about dry mouth, lips, or nose, use aloe vera (a plant-based product) or a water-based cream or gel to moisten the skin. Do not use oil-based creams or aerosols, which increase the risk of fire.

Paying for Oxygen Therapy

Medicare covers oxygen equipment and accessories under Part B, which means you pay 20 percent of the cost after you have paid the deductible. Your family member or friend's health care provider will need to submit proof that oxygen is a "medical necessity" and that the family member or friend meet the rigorous medical eligibility criteria. Medicaid also covers oxygen therapy, but the rules vary by state. The arrangements with other insurance carriers vary, so it is wise to check before you sign any agreements. For long-term use, renting the equipment is an option.

Additional Resources

Medicare: For more details on Medicare coverage, go to <https://www.medicare.gov/coverage/oxygen-equipment-accessories>. For additional information on

coordinating with oxygen suppliers or travel plans, go to <https://www.medicare.gov/what-medicare-covers/what-part-b-covers/getting-oxygen-equipment-supplies-in-certain-situations>.

The American Lung Association: This nonprofit organization has extensive information about lung diseases and oxygen therapy. Go to <https://www.lung.org/lung-health-diseases/lung-procedures-and-tests/oxygen-therapy>.

Medline Plus: The US National Library of Medicine offers guidance on home oxygen therapy at <https://medlineplus.gov/ency/patientinstructions/000048.htm> and links to other resources at <https://vsearch.nlm.nih.gov/vivisimo/cgi-bin/query-meta?v%3Aproject=medlineplus&v%3Asources=medlineplus-bundle&query=oxygen+therapy>.

US National Heart, Blood, and Lung Institute: A division of the National Institutes of Health, the website has information about oxygen therapy in English (<https://www.nhlbi.nih.gov/health-topics/oxygen-therapy>) and Spanish (<https://www.nhlbi.nih.gov/health-topics/espanol/oxigenoterapia>).

There are many other videos and resource guides in this Operating Specialized Medical Equipment series. Go to www.aarp.org/nolongeralone for a complete listing.

AARP Public Policy Institute

Prepared by Carol Levine, United Hospital Fund