

## Giving Oxygen

1. When giving oxygen, remember that it is a medicine.
2. Know how much oxygen the person you care for should use and when to use it.
  - a. The doctor will order oxygen in liters per minute, such as 2 L per minute
  - b. The doctor will order times to wear oxygen: during activity, rest, sleep or continuously.
  - c. **Do Not change the amount of oxygen a person is to receive on your own, and always follow the ordered time frames for its administration**
3. If the person has an oxygen concentrator, you need the right electrical service in the home. Have an electric company technician check the compatibility of the concentrator with your household current.
4. When using an oxygen concentrator, have a backup system, such as a spare compressed oxygen cylinder. This is needed in case of a power failure.
5. Have a home safety plan: working smoke detectors and fire extinguishers, a plan for exiting the home in case of fire.
6. To set up oxygen, wash your hands for 15 seconds or use a hand disinfectant.
7. Gather these supplies
  - a. Care diary
  - b. Pen
  - c. Oxygen delivery system – cylinder, concentrator or liquid oxygen unit
  - d. Watch or clock with second hand
  - e. Oxygen device – cannula, mask or collar. Have an extra device on hand.
  - f. Oxygen extension tubing
  - g. Small Gauze pad (option)
  - h. A 1 to 3 mixture of white vinegar and water (Or whatever is recommended by the home oxygen provider)
  - i. Paper towels
8. Check the person's pulse (See our lesson on **Taking a Pulse**). Keep a record of the person's pulse rate in your care diary.
  - a. Record the pulse rate at rest (such as before getting up in the morning), after exercise (such as walking up stairs) and if there is a change in how the person feels (such as shortness of breath, feeling very tired).
  - b. A pulse rate faster than normal could mean hypoxia (the person is not getting enough oxygen).
9. **Count the person's breaths or respirations.**
  - a. **Do this** when the person is sitting or lying down comfortably.
  - b. If the person has been active, wait 5 minutes before you count breaths per minute.
  - c. Place the person's arm in a relaxed position over their abdomen.
  - d. Place your hand on top of theirs, as if you were taking a pulse
  - e. Watch the person breathe and look for a complete cycle – breathing in and out.
  - f. Once you see a cycle, look at your watch or a bedside clock with a second hand and count the number of breaths for a full minute.
  - g. Write down the number of breaths in your care diary

If a person is breathing at a faster rate than normal, this could be a sign of hypoxia

10. **Watch the person's behavior for signs of hypoxia:** Signs of hypoxia include:
  - a. Apprehension or fear something is about to happen
  - b. Anxiety
  - c. Loss of memory
  - d. Change in consciousness (harder to arouse or wake up)
  - e. Fatigue (more than usual)
  - f. Dizziness
11. To prepare the oxygen, be sure the delivery system is in a clutter free, well-ventilated area, away from walls, drapes, curtains, bedding and any material that could burn.
12. Place the oxygen cylinder or concentrator at least 8 feet away from heat sources or anything that can cause an electrical spark.
13. **Prepare Compressed oxygen**
  - a. Turn on the oxygen by turning the cylinder valve counterclockwise two to three turns with a wrench (provided by the home oxygen supplier).
  - b. Check the cylinder by reading the amount on the pressure gauge, which tells you the amount of oxygen that remains in the tank
14. **Prepare an Oxygen Concentrator**
  - a. Plug the concentrator into an appropriate electrical outlet.
  - b. Turn on the power switch to start the motor
  - c. An alarm will sound for a view seconds and turns off when the desired pressure inside the concentrator is reached.
15. **Prepare a liquid oxygen system**
  - a. Check the system by pushing the button on the stationary reservoir or ambulatory tank to show the amount of oxygen remaining
16. **Connect oxygen delivery device (cannula, mask or collar)**
  - a. Connect tubing to the extension tubing, then connect extension tubing to oxygen delivery device.
  - b. Adjust oxygen flow rate to level ordered by the doctor
  - c. If person is to receive humidified oxygen, be sure the humidity container/bottle has right amount of water in it.
  - d. Adjust humidifier so that it only gently bubbles into the water. (change humidity bottle every two weeks).
  - e. Connect an Oxygen Cannula
    - i. Be sure oxygen is flowing. Place the nasal prongs or tips of cannula in a shallow cup of water and watch for bubbles. Shake off water before placing cannula in person's nose.
    - ii. Place the two tiny tips or prongs into the person's nostrils. If the prongs are curved, they should point downward inside the nostrils.
    - iii. Loop the cannula tubing up and over the person's ears to make a lanyard. Adjust the lanyard so that the cannula fits snugly.
    - iv. If the person has irritation around the ear, place a small piece of gauze or a cotton ball between the tubing and ear.
  - f. Apply an Oxygen Mask

- i. Place mask over the person's mouth and nose to form a comfortable but tight seal.
    - ii. If there is irritation of the ear or face, place a small piece of gauze between the area of irritation and the mask
  - g. Apply an Oxygen Collar on a Tracheostomy
    - i. Connect the collar to the large oxygen tubing connected to the oxygen cylinder.
    - ii. Loosen the straps of the collar and slip it over the person's head. Then place the collar directly over the tracheostomy opening. Be sure it fits snugly.
    - iii. Keep the area around the tracheostomy collar dry. Observe the tubing regularly for buildup of fluid. This can occur in the tubing because of the build up of moisture from the humidifier. If fluid is present, disconnect the tube and angle it away from the person, then discard the fluid in a plastic container (like a trash can).
- 17. Once you have placed a device, double check to be sure the correct oxygen flow rate is running. **Tell the person not to change the flow rate on their own.**
- 18. If you provide care for someone who does not wear the oxygen device continuously, keep a record in your diary of how long and how often the person wears the device. Record the activities that cause the need for oxygen and how long it takes for breathing to become easier.
- 19. **Clean Oxygen Equipment**
  - a. Clean a mask, cannula or collar **each day** using a damp cloth. Clean when the person is not using the device or apply a clean device while you cleanse the dirty one.
  - b. Do NOT soak a cannula and tubing.
  - c. Replace an extension tubing as needed (usually every 6-12 months). The extension tubing does not need to be washed. Check regularly for major kinks or splitting
  - d. If the person has a humidifier, cleanse it every 3 days. Wash in warm soapy water and rinse with clean hot water. Then soak in a 1part to 3 part mixture of white vinegar and water for one minute. Rinse thoroughly with clean water.
  - e. Clean outside of the humidifier completely, using a soft cloth.
  - f. Use a damp cloth to dust off oxygen tanks and concentrators. **Remember, using a dry cloth can cause static electricity and risk of fire.**
- 20. Wash your hands thoroughly.

## Refill a Liquid Oxygen System

1. Have your home oxygen provider show you how to refill your system
2. Check the liquid system of the stationary oxygen reservoir or the ambulatory tank to see how much oxygen remains.
3. To refill a liquid oxygen tank. Wipe both filling connectors with a clean dry lint-free cloth.
4. Turn off the flow selector of the ambulatory unit.
5. Attach the ambulatory unit to the stationary reservoir. Connect the female adapter from the ambulatory tank to the male adapter of the stationary reservoir.
6. Open the fill valve on the ambulatory tank (usually there is a lever, button or key). Apply firm pressure to the top of the stationary reservoir.
7. Stay with the unit during filling. You will hear a hissing sound.
8. The tank should fill in about 2 minutes.