



Patient education: Oxygen therapy at home (The Basics)

Written by the doctors and editors at UpToDate

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What is oxygen?

Oxygen (O₂) is a gas in the air we breathe. Your body needs oxygen to survive. You take oxygen into your lungs as you breathe in air. The oxygen passes through the tiny air sacs in your lungs into your blood. From there, the oxygen is taken to the organs in your body.

What is oxygen therapy?

Your doctor might order extra oxygen if you have a disease where you do not get enough oxygen into your blood. This is called "oxygen therapy." Extra oxygen might help ease symptoms like shortness of breath, tiredness, or feeling dizzy.

Some people need extra oxygen for:

- Short-term problems like an infection, asthma flare-up, or other lung problems
- Long-term problems like chronic obstructive pulmonary disease ("COPD"), cystic fibrosis, or emphysema
- Heart problems like a heart attack or heart failure

Oxygen can be:

- Compressed – Oxygen is stored in metal tanks under high pressure. The tanks come in different sizes. Some are small enough to carry around with you.
- Liquid – Liquid oxygen is very cold. It turns into a gas when you breathe. It takes up less room than other types of oxygen, but costs more.
- Concentrated – This uses oxygen already in the air. An electric machine filters out other gases and keeps just the oxygen. There are also portable oxygen concentrators that use a battery instead of electricity.

What happens before I start using oxygen?

Your doctor will place a small device called a "pulse oximeter" on 1 of your fingers. This measures the amount of oxygen in your blood. Sometimes, your doctor might order an arterial blood gas ("ABG") test. This is a blood test that shows how much oxygen is in your blood.

These tests will help your doctor know how much extra oxygen you need and when you need to use it.

How do I use oxygen therapy?

Your doctor will order how much oxygen you need, similar to how they prescribe medicines.

Oxygen therapy is measured in 2 different ways. Some people call this the "flow rate" or "oxygen setting." Your doctor might order an **amount** of flow, like 2 or 3 liters per minute. Or they might order a **percent** of oxygen, like 40% or 50%. Sometimes, your doctor will order your oxygen using both of these numbers.

The oxygen can be given in different ways. You might need to use a:

- Nasal cannula – This device delivers oxygen through 2 small tubes that you place in your nostrils ([figure 1](#)).
- Mask – This type of mask goes over your nose and mouth.

How do I care for myself at home?

Ask the doctor or nurse what you should do when you go home. Make sure that you understand exactly what you need to do to care for yourself. Ask questions if there is anything you do not understand.

- Before you go home, your doctor or nurse will talk with you about when to use oxygen and how much to use. Some people need to use oxygen all of the time. Others use it only when sleeping or when active. Follow all instructions carefully.
- Make sure that you have extra oxygen tanks, tubing, nasal cannula, and face masks in case of an emergency. Know how to clean all of the parts and when they should be replaced. Make sure that the tubing is not pinched or blocked.
- Each day, check your skin under your oxygen tubing or mask. Talk to the doctor or nurse if you notice:

- Redness or irritation that does not go away after 15 minutes
 - A sore on your skin
- When you need to use oxygen at home, an oxygen supplier will set up the equipment in your house. Be sure that you know:
- The name and phone number of the oxygen supplier
 - How long it takes to get oxygen delivered. This will help you know when you need to order more so you do not run out.
 - How to connect and use all of the parts
 - How often you should change or clean your equipment. Learn if there are filters that need to be replaced or cleaned, and how often.
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What else should I know?

Some important safety tips to remember when you are using oxygen:

- Tell your electric company if you use an oxygen concentrator. You might need to have a back-up power source if your electricity goes off. Also, let your local fire department and gas companies know that you use oxygen at home.
- **Never smoke** or light flames around the oxygen device. Do not let others smoke around you. This is **very** important. You could be seriously burned if there is ever a flame or lit cigarette around oxygen.
- Never use the oxygen device near a gas heater or stove.
- Avoid using lotions and creams with petroleum in them.
- Store the oxygen tanks upright. Make sure that they cannot fall over.
- Turn off the oxygen supply when not in use.
- Have working smoke detectors in your home.
- Take extra care when moving around. It is easy to trip over the oxygen tubing.
- You might need to make special arrangements if you travel by plane. Most airlines will only accept a portable oxygen concentrator. Tell your doctor about any plans for air travel.

When should I call the doctor?

Call for advice if:

- You have symptoms of not enough oxygen – These might include chest pain, trouble breathing, loss of appetite, trouble sleeping, dizziness, feeling drowsy, or blue or gray skin around your eyes, lips, or fingernails.
- You are having so much trouble breathing that you can only say 1 or 2 words at a time.
- You need to sit upright at all times to be able to breathe and/or cannot lie down.
- You have trouble breathing when talking or sitting still.
- You have signs of infection. These include a fever of 100.4°F (38°C) or higher, chills, cough, or more mucus or change in color of the mucus you cough up.
- Your nose feels very dry inside, or you get a bloody nose.
- You do not remember what your oxygen settings are supposed to be.
- You are not able to get the oxygen that is ordered for you.

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This topic retrieved from UpToDate on: Jan 04, 2025.

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Topic 142172 Version 3.0

GRAPHICS

Oxygen therapy in adults



Oxygen flows from the cannister or other source through the tubing and is breathed in. This person is using a nasal cannula, which has a small tube in each nostril.

Graphic 138478 Version 1.0

