

Your Oxygen Level

When your lungs are healthy and working well, you breathe in air and your body gets the oxygen it needs to keep everything working. Your blood cells are able to pick up the oxygen and carry enough to handle your body's needs. This is your oxygen level.

With injury or illness to your lungs, you may not be able to get enough oxygen into your body by breathing the air around you. This can happen with lung diseases like emphysema or asthma, or with other diseases like heart failure. Extra oxygen, called oxygen therapy, may be needed to keep your oxygen at the right level. This extra oxygen may be needed while you exercise or get more active. For some, extra oxygen may be needed during sleep. As the lung disease or other condition affecting your lungs gets worse, oxygen therapy may be needed all the time to keep your oxygen level in a good range.

How do I measure oxygen levels?

- **Arterial Blood Gases or ABGs**

ABGs are done by collecting a sample of your blood in a syringe using a needle that is put into an artery. Your oxygen level, the level of carbon dioxide and the acidity of your blood are checked with this test.

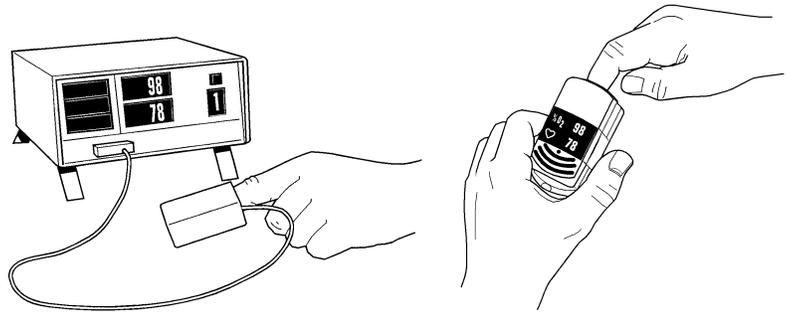
- **Pulse oximeter reading**

The pulse oximeter measures the oxygen in your blood by reading the color of your blood through a light sensor. The hemoglobin in your blood cells turns bright red when it is full of oxygen. It turns darker red

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Learn more about your health care.

or purple when the oxygen is gone. A small clip is put on, often over a finger. A light flashes in the clip and shines a light through the tip of your finger. The clip has a wire that connects it to a meter that gives the reading.



People with damage to their lungs from lung disease or injury need to check their oxygen level with one of these tests at times. It is also key to know what your oxygen needs are when you exercise and sleep, because you may not have any symptoms if your oxygen level is too low or too high.

What happens if my oxygen level is too low?

Because all of your body's cells need oxygen to work and live, low oxygen can affect almost every part of your body. Low oxygen is very hard on cells of your heart and brain, and other body cells that are always working and not able to repair themselves. Also, when your oxygen level is low, the right side of your heart has to work much harder to pump blood through your lungs.

How will I feel if my oxygen is too low?

You may not feel any different. That is why you may need a pulse oximeter reading or ABGs to know your level. Some symptoms you may notice include:

- Feeling very tired
- Being short of breath
- Having trouble thinking or concentrating
- Feeling drowsy
- Being irritable
- Having a blue or gray tint to your skin, nails or lips

If you have these symptoms, let your doctor know. You may need to use oxygen therapy or change the amount of oxygen you are using.

Is there any problem if I use too much oxygen?

Too much oxygen can damage the cells inside your lungs. Also, if you have too much oxygen, your brain may not send out signals for you to breathe.

For most people, when carbon dioxide starts to build up in your body, the brain signals to take a breath. The brain for a person with COPD (chronic obstructive pulmonary disease) gets used to a little extra carbon dioxide because the lungs have a hard time getting rid of it. If a person uses too much oxygen, the carbon dioxide levels may not trigger the brain so the brain may not signal to breathe as often or as deeply as needed. Taking fewer or less deep breaths is called hypoventilation (hi-po-ven-ti-la-tion).

To prevent problems with too much oxygen, your oxygen levels are adjusted based on your pulse oximeter or ABG readings. Ask your doctor before making any changes in your oxygen therapy.

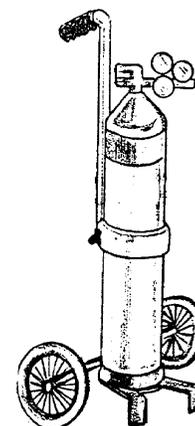
Oxygen Therapy

Extra oxygen can help your oxygen level stay in a good range. This means less damage to your heart and brain cells and lower blood pressure in your lungs. If your doctor prescribes oxygen therapy, wear it.

Oxygen therapy is often done with a tube that has 2 prong openings that fit in your nose. This is called a nasal cannula (kan-u-la). A mask that fits over the nose and mouth or a tube connecting to a tracheostomy are other ways oxygen therapy may be done.

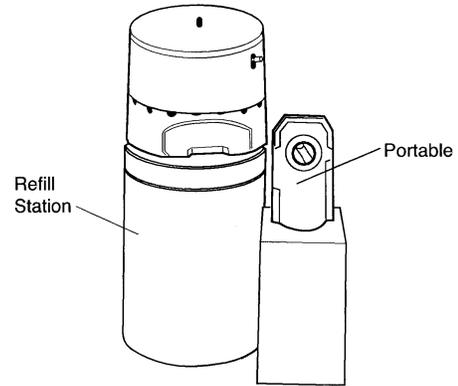
There are several types of oxygen sources that may be used:

- Compressed Gas Tanks - Sometimes called cylinders, these can be very large for use in the home or very small that can be carried over the shoulder or wheeled around.



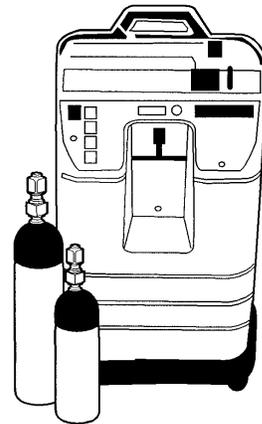
Tank

- Liquid systems - There is a large refill station and a smaller portable tank. This type system works well for people who are active and on the go. Two brands are “Helios” and “Escort”.



Liquid System

- Concentrator - Electric power unit that concentrates the oxygen from room air. These can be noisy and do not travel well. Use of this type source means less oxygen deliveries are needed. This is a good system for the person who is more home bound.



Concentrator

Your oxygen supplier will determine the best source of oxygen, based on your needs and your doctor's orders.

If you have questions about your oxygen level or oxygen therapy ask you doctor, nurse, therapist or supplier.

- **Talk to your doctor or others on your health care team if you have questions. You may request more written information from the Library for Health Information at (614) 293-3707 or email: health-info@osu.edu.**