
Understanding Oxygen Toxicity

Oxygen toxicity is lung damage that happens from breathing in too much extra (supplemental) oxygen. It's also called oxygen poisoning. It can cause coughing and trouble breathing. In severe cases it can even cause death.

What happens during oxygen toxicity?

When you breathe, oxygen from the air enters your lungs and goes into your blood. The oxygen then goes to all parts of the body through the blood. It keeps organs and tissues working normally. But too high a level of oxygen can harm lung tissues. The tiny air sacs (alveoli) in the lung may fill with fluid. Or they may no longer inflate (collapsed lung). The lungs then can't take in air normally. This can make it harder for the lungs to send oxygen into the blood. Oxygen toxicity can also cause central nervous system symptoms.

What causes oxygen toxicity?

This condition can occur if you are using supplemental oxygen or canned air, such as:

- Oxygen tank for scuba diving
- Hyperbaric oxygen therapy
- Breathing machine (mechanical ventilator) in the hospital

These sources can sometimes give you levels of oxygen that are too high.

Symptoms of oxygen toxicity

Pulmonary and central nervous system symptoms can include:

- Coughing
- Mild throat irritation
- Chest pain
- Trouble breathing
- Muscle twitching in face and hands
- Dizziness
- Blurred vision
- Nausea
- A feeling of unease
- Confusion
- Convulsions (seizure)

Diagnosing oxygen toxicity

If you are in the hospital on a ventilator, your blood oxygen level may be measured by a device that is placed on a finger or toe. Or healthcare staff may take a sample of your blood. Otherwise, your healthcare provider will ask about your health history and give you a physical exam. Tell them if you have had recent oxygen therapy or have been scuba diving.

Treating oxygen toxicity

Your lungs may take weeks or more to recover fully on their own. If you have a collapsed lung, you may need a tube inserted into your chest or to use a ventilator for a while. Your healthcare provider will tell you more about any other kinds of treatment. They can also answer any questions you may have.

Preventing oxygen toxicity

Oxygen toxicity can be prevented by lowering the amount of oxygen in supplemental breathing sources. If you are on a ventilator, your healthcare team will adjust the settings of the machine. If you use any kind of oxygen therapy or scuba equipment, you may be told to change the settings. If you are using portable oxygen, your healthcare provider will test you while you are doing normal activities or exercise. This is to make sure that the oxygen is at the correct setting. Talk with your provider about how to use oxygen safely.

When to call your healthcare provider

Call your provider if you have any of the following:

- Symptoms that don't get better, or that get worse
- New symptoms