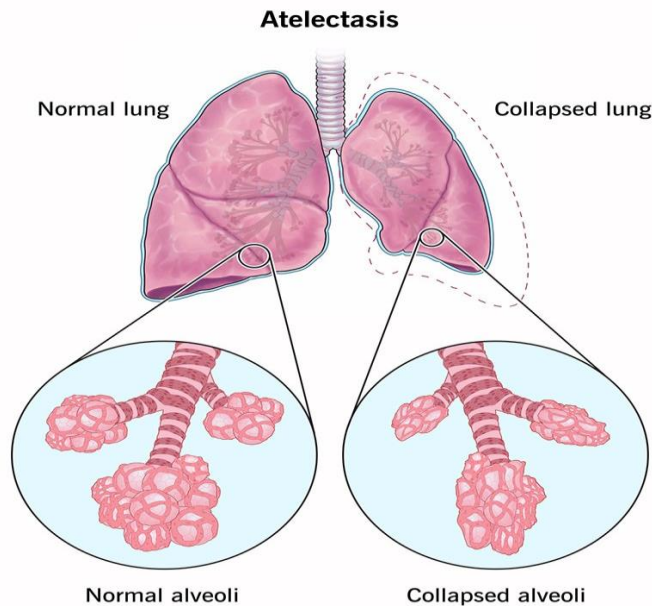
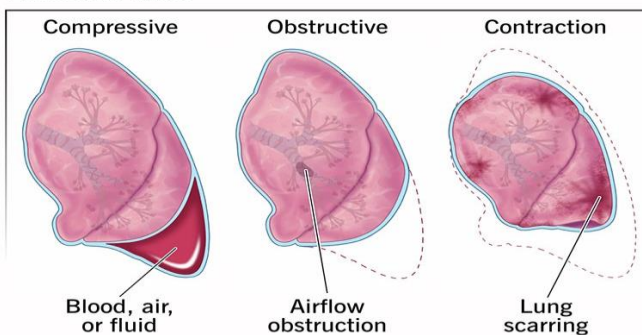


Atelectasis :

Atelectasis happens when lung sacs (alveoli) can't inflate properly, which means blood, tissues and organs may not get oxygen. It can be caused by pressure outside of your lung, a blockage, low airflow or scarring. The most common cause of atelectasis is surgery with anesthesia. Atelectasis usually resolves after treating the underlying cause



Atelectasis types



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Atelectasis can be compressive, resorptive /obstructive, or contraction. Compressive atelectasis is when fluid, air, blood or a tumor presses on alveoli from the outside. Resorptive atelectasis happens when no new air can move into the alveoli (for instance, there's a blockage). Contraction atelectasis is the result of lung scarring

What is atelectasis?

Atelectasis (pronounced at-uh-LEK-tuh-sis) is the collapse of one or more parts of the lung. It specifically affects the small air sacs called alveoli. When you breathe in, your lungs fill up with air. The air travels to sacs in your lungs (alveoli), where the oxygen moves into your blood. The blood delivers the oxygen to organs and tissues throughout your body.

If you don't have enough air coming in to inflate your alveoli or if outside pressure is pushing on them, they can collapse (atelectasis). Atelectasis can happen in a small area or

the whole lung. If enough of your lung is affected, your blood may not receive enough oxygen, which can cause health issues.

What's the difference between atelectasis and pneumothorax?

Atelectasis is a condition where alveoli in your lung or a part of your lung deflates, causing a partial or complete collapsed lung. [Pneumothorax](#) is a condition where air leaks into the space around your lung, compressing it and causing it to collapse.

Who is at risk for atelectasis?

You're at a higher risk for atelectasis if you have:

- Had chest or abdominal surgery that requires medication to keep you relaxed or asleep ([anesthesia](#)), preventing you from taking deep breaths.
- A condition that blocks the small airways (branches) in your lungs, preventing normal lung expansion.
- A chest injury or rib fracture that causes severe pain. This may keep you from being able to take deep breaths.
- Had smoke exposure.

There are three main types of atelectasis: compressive, resorptive (obstructive) and contraction.

1- Compressive atelectasis

Compressive atelectasis is when something around your lung — like fluid, air, blood or a tumor — pushes against it, causing it to collapse.

2- Resorptive/obstructive atelectasis

Resorptive atelectasis happens when the oxygen and carbon dioxide in your alveoli move into your bloodstream and no new air moves in. This causes your alveoli to collapse. Surgery that requires anesthesia is a common cause of resorptive atelectasis. Something blocking the inside of your lung, keeping air from coming into the alveoli, can also cause resorptive atelectasis. Also called obstructive atelectasis, the blockage can be mucus, a tumor or an object that you accidentally inhaled.

3- Contraction atelectasis

Lung scarring ([fibrosis](#)) causes contraction atelectasis. Scarring keeps the alveoli from opening properly.

Other types of atelectasis

Newborns, particularly premature newborns, or people with acute respiratory distress syndrome (ARDS) can have an uncommon type of atelectasis called patchy atelectasis. Patchy atelectasis happens when you don't have enough of a protein in your lungs that helps keep them from collapsing (surfactant).

Other types of atelectasis (bibasilar atelectasis, rounded atelectasis, gravity-dependent atelectasis and subsegmental atelectasis) describe the location, appearance or severity of the collapse.

Symptoms and Causes

Atelectasis often causes no symptoms on its own, though some underlying conditions that lead to atelectasis (like COPD) can cause symptoms.

If atelectasis affects large areas of the lungs, the oxygen level in your blood may go down (hypoxemia). This can lead to symptoms like:

- Trouble breathing/shortness of breath (dyspnea).
- Coughing.
- Chest pain.
- Rapid breathing (tachypnea).
- Skin and lips turning blue.

What is the most common cause of atelectasis?

Surgery is the most common cause of atelectasis. When anesthesia is used during surgery to keep you asleep, you don't breathe deeply enough to fill your lungs all the way or cough to clear your lungs of mucus. This can lead to blockages or lack of air to the alveoli, causing resorptive atelectasis.

Other causes of atelectasis include:

- **Mucus plug.** A buildup of mucus is common after surgery, in children, in people with cystic fibrosis and during severe asthma attacks.
- **Inhaled object.** A lung blockage by an accidentally inhaled object is particularly common in children, who often inhale small toy parts or foods.
- **Fluid around the lungs (pleural effusion).** Underlying illness (such as heart disease) is usually the cause of pleural effusion.
- **Air around the lungs (pneumothorax).**
- **Non-cancerous (benign) growths.**

- **Cancerous tumors.**
- **Lung scarring.**
- **Underlying illness.** Conditions like chronic obstructive pulmonary disease (COPD) or acute respiratory distress syndrome (ARDS) and respiratory infections like COVID-19 or pneumonia can lead to atelectasis.

Diagnosis and Tests

Chest X-rays (pictures of your lungs) are the first step in diagnosing atelectasis. Your healthcare provider may use a computed tomography (CT) scan to get more detailed pictures if necessary.

In some cases, your provider may look at the inside of your lungs using a small camera attached to a tube that goes down your throat (bronchoscopy). Blockages may be removed during bronchoscopy.

Management and Treatment

Many cases of atelectasis get better without treatment, under careful monitoring by your healthcare provider.

Other treatments depend on the cause and extent of the collapse. Treatments could include:

- Deep breathing exercises (incentive spirometry).
- Removing obstructions in your lung (usually using bronchoscopy).
- Physical therapy to help promote expansion of your lungs.
- Inhaled medications to open up your airways (bronchodilators).
- Treatment of tumor or chronic lung conditions.

Prevention :

Here are some ways to reduce the risk of atelectasis:

- Get up and walk around, perform breathing exercises and use an incentive spirometer after surgery as directed by your healthcare provider.
- If you have any underlying conditions that can cause atelectasis, follow your provider's recommendations for treating that condition.
- Don't smoke or quit smoking.
- Keep small objects away from children to reduce their risk of inhaling them.