



Patient education: Pleural effusion (The Basics)

Written by the doctors and editors at UpToDate

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What is pleural effusion?

This is a buildup of fluid around the lungs ([figure 1](#)). It affects the space between the outside of the lungs and the inner chest wall. This is called the "pleural space" ([figure 2](#)).

Heart failure is the most common cause of pleural effusion. Other possible causes include infection, cancer, or other health problems.

What are the symptoms of pleural effusion?

The symptoms include:

- Chest pain – This pain can be sharp and get worse when you cough or take a deep breath. Sometimes, the pain is a dull ache.
- Breathing problems – You might breathe faster than normal or feel short of breath.
- Cough
- Fever

Some people do not have any symptoms. They learn that they have a pleural effusion after getting a chest X-ray for another reason.

Will I need tests for pleural effusion?

Yes. Tests include:

- X-ray of your chest
- CT scan of your chest – This is a special type of X-ray.
- Ultrasound – This uses sound waves to take pictures of the fluid around your lungs. Your doctor might do this test if you need to have some fluid taken out.

- "Thoracentesis" – A doctor takes a sample of fluid from around your lung. They do this using a needle that goes through the skin on your chest. Another doctor then checks the sample under a microscope. Sometimes, if your doctor is having trouble figuring out the cause of your pleural effusion, they might need to repeat a thoracentesis in order to do special tests on the fluid.

You also might need surgery to remove a small sample of tissue from around your lungs. This is called a "biopsy." Tests on this tissue can help explain why you have the effusion.

How is pleural effusion treated?

If you are having trouble breathing, your doctor will remove the fluid from around your lungs with a needle or plastic tube.

Other treatment depends on your symptoms and the cause of the problem:

- If heart failure caused the fluid around your lungs, your doctor will prescribe medicines called "diuretics." These help pull fluid out of your lungs. Examples include [furosemide](#) (brand name: Lasix) and [torsemide](#) (brand name: Demadex). You might also need to take other medicines for heart failure.
 - If an infection caused the fluid around your lungs, your doctor will prescribe antibiotics. Your doctor might put a flexible plastic tube into the fluid to drain the infection. This tube might stay in for a few days.
 - If you have cancer and get fluid around your lungs, your doctor might put a flexible plastic tube in the side of your chest. This is used to drain away the extra fluid. The tube might stay in for a few weeks and you or a family member will drain the fluid at home. You might also need treatment for your cancer (such as chemotherapy). This can sometimes prevent the fluid from coming back.
 - The doctor might use a powdery substance called "talc" to close the space and keep the fluid from returning.
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GRAPHICS

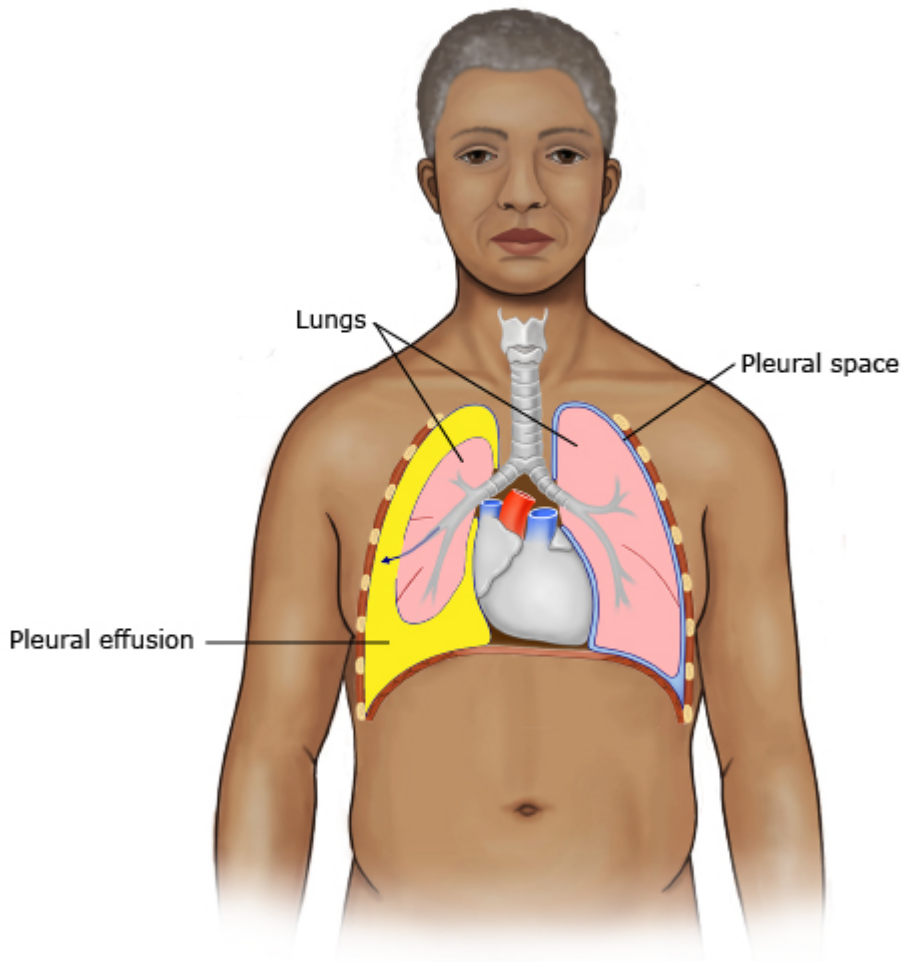
Normal lung anatomy



The lungs sit in the chest, inside the ribcage. They are covered with a thin membrane called the "pleura." The windpipe, or "trachea," branches into 2 smaller airways called the left and right "bronchi." The space between the lungs is called the "mediastinum." Lymph nodes are located within and around the lungs and mediastinum.

Graphic 67527 Version 15.0

Pleural effusion



Pleural effusion is a buildup of fluid around the lungs. It affects the space between the outside of the lungs and the inner chest wall. This is called the "pleural space."

Graphic 141011 Version 1.0

