Pleurisy: What Is It, Symptoms, Causes, and More



<u>Medically reviewed</u> by <u>Raj Dasgupta, MD</u> — Written by <u>Shannon Johnson</u> and <u>Alina Sharon</u> — <u>Updated on December 21, 2023</u>

Symptoms Causes Diagnosis Treatment Complications

Prevention Outlook

Pleurisy or pleuritis is an inflammation of the pleura, the tissue that protects and cushions the lungs. It can present with pain and may be caused by different types of inflammation or infection.

When a person has pleurisy, a doctor will look for the underlying cause of the inflammation. In some cases, a person can also

develop [♥] pleural effusion, which is when fluid gets into the space between the pleura.

Read on to learn more about pleurisy, its symptoms, causes, and treatments.

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How does pleurisy present?

The chief symptom associated with pleurisy is a sharp, stabbing pain when you breathe. This pain might go away when you hold your breath or put pressure on the painful area.

However, the pain will often get worse when you sneeze, cough, or move. Fever, chills, and loss of appetite are also possible symptoms, depending on the condition that's causing the pleurisy.

You may experience pleurisy with:

- pain on one side of your chest
- pain in your shoulders and back
- shallow breathing to avoid feeling pain

When pleurisy is accompanied by pleural effusion, the fluid buildup will put pressure on the lungs and cause them to stop working properly. You may eventually experience shortness of breath as the fluid increases. You may also experience fever, chills, or dry cough.

These symptoms can indicate an infection in the fluid called an empyema.

What causes pleurisy?

A variety of conditions can cause pleuritic inflammation and pain, though the most common causes are tuberculosis and other bacterial infections.

Other causes include :

- cancerous tumors such as mesothelioma, pleural lymphoma, angiosarcoma of the pleura, pleuropulmonary blastoma, and synovial sarcoma
- trauma to the chest
- thoracic endometriosis
- rheumatoid arthritis
- pneumothorax
- aortic dissection
- pneumonia
- acute pericarditis
- viruses such as influenza, mumps, adenovirus, cytomegalovirus, Epstein-Barr virus, coxsackieviruses, and respiratory syncytial virus
- familial Mediterranean fever
- pulmonary embolism
- lupus

How does pleurisy lead to a diagnosis?

If you have pleural effusion, you may need to have a thoracentesis, which is a procedure that removes fluid, blood, or air from the pleural space with a needle. The doctor can send the fluid for analysis to help identify the underlying cause.

If you're only experiencing pleuritic pain without an indication for effusion, your doctor will conduct a physical exam and may send you to undergo other types of testing to determine the underlying cause of your symptoms. The doctor will try to rule out life threatening conditions before moving on to less serious potential causes.

Depending on the suspected cause, your diagnosis process may include:

- Chest X-ray. Chest X-rays will allow your doctor to see if there's any inflammation in your lungs, fluid indicative of effusion, or causes such as an injury, a tumor, or pneumonia.
- Blood tests. Blood tests can help your doctor diagnose causes such as bacterial or viral infection, rheumatic fever, lupus, or pulmonary embolism.
- CT and MRI scans. A CT or MRI scan can also show fluid in the lungs indicative of effusion or help identify causes such as pneumonia, a tumor, or a lung abscess.
- Ultrasound. If a doctor suspects that in addition to pleuritic pain you have pleural effusion, they can do an ultrasound to see where the fluid is located in your chest.
- Arterial blood gas test. This test can help the doctor determine whether there is a problem in your lungs by measuring how well your lungs absorb oxygen and blow off carbon dioxide.

How is pleurisy treated?

If you're experiencing pleuritic pain, you can take over-the-counter medicines such as aspirin (Bayer), ibuprofen (Advil), or other

nonsteroidal anti-inflammatory drugs for relief. People who cannot tolerate these medicines may be candidates for treatment with corticosteroids, assuming there is no active infection or contraindications.

However, to actually make pleurisy go away, the doctor must treat the underlying cause. Depending on the suspected cause, treatment may include :

- antibiotics for bacterial infections
- anti-inflammatory or biologic drugs for diseases like systemic lupus erythematosus (SLE) and rheumatoid arthritis
- anticoagulants as part of the treatment when the cause is a pulmonary embolism
- surgery for pus (empyema) (Individuals with large amounts of fluid in their lungs (pleural effusions) might have to stay in the hospital with a drain tube in the chest until fluids drain adequately.)
- oxygen therapy for a pneumothorax
- antiparasitic medications for pneumonia that's caused by a parasite, though this cause is rare

Complications after treatment

Treatment complications depend on the specific treatment and the underlying cause of pleurisy. Once you have a specific diagnosis, check with your doctor regarding your planned course of treatment and any potential side effects.

If you are planning to undergo a thoracentesis, ask if the technician plans to use an ultrasound to guide them during the procedure. If not, then you're more at risk for some pain following the procedure, as they have a greater chance of nicking your tissue along the way.

This also means you may be more at risk for bleeding in your lungs, a pneumothorax, a hemothorax, or pulmonary edema after the procedure.

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Can pleurisy be prevented?

Since so many different conditions can cause pleurisy, the best prevention strategy involves closely monitoring your health and undergoing timely checkups.

This means going to the doctor early if you experience respiratory symptoms to rule out a bacterial infection in your lungs, a viral illness impacting your lungs, or some of the less common causes such as a fungal infection.

You should also never ignore any cardiac symptoms or injuries to the chest area. If you smoke, working toward quitting can be another major prevention strategy.

Long-term outlook

Pleurisy is an inflammation in the pleura of the lungs sometimes accompanied by pleuritic pain. In some cases, it can progress to pleural effusion, which is when fluid builds up inside the lungs.

Since a variety of causes can lead to pleurisy, the outlook depends on the underlying cause. The best course of action is to see your doctor so that they can identify the cause quickly and rule out anything that may be life-threatening. Your treatment will depend on the cause of your symptoms.

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Current Version

Dec 21, 2023

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Nov 8, 2021

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