CONDITION

Pleurisy

Pleurisy is inflammation of the lining around the lungs that causes sharp pain when breathing

WHAT IT IS
Inflammation of the two-layered lining around the lungs

BODY SYSTEM
Lungs and breathing

MAIN SYMPTOMS
Sharp chest pain, painful breathing, cough, breathlessness

WHAT CAUSES IT
Usually infection; sometimes blood clots, autoimmune disease, or cancer

HOW IT IS DIAGNOSED
Clinical assessment, chest imaging, and tests for the cause

MAIN TREATMENT
Pain relief and treatment of the underlying cause

CAN IT BE CURED?
Sometimes - resolves when the underlying cause clears

IS IT AN EMERGENCY?
Sometimes - sudden breathlessness or severe chest pain

LONG-TERM OUTLOOK
Usually short-lived; recurrent if the cause persists

Overview

Pleurisy, also called pleuritis, is inflammation of the pleura. The pleura are two thin layers of tissue around each lung. One layer covers the lung, while the other lines the inside of the chest.

A small amount of fluid normally allows these layers to slide smoothly over each other as you breathe. When they become inflamed, the surfaces can rub together. This causes sharp chest pain that is often worse during a deep breath, cough, sneeze, or movement.

Pleurisy is a condition rather than a single disease. It can happen with a viral infection, pneumonia, a blood clot in the lung, an autoimmune condition, or another problem. Finding the cause matters because treatment and recovery depend on what is producing the inflammation.

Although many cases improve without lasting problems, pleuritic chest pain can resemble pain from serious heart or lung conditions. New or unexplained chest pain should therefore be medically assessed rather than self-diagnosed.

Symptoms

The main symptom is a sharp or stabbing pain, usually on one side of the chest. It may start suddenly and become worse when you take a deep breath.

The pain may also worsen when you:

Some people feel pain in the shoulder or upper back. This is known as referred pain: the discomfort is felt away from the inflamed area because nearby nerves share pathways.

You may take smaller breaths to avoid pain. This can make you feel short of breath even when the lungs are still working normally. Breathlessness can also come from the underlying cause or from fluid collecting around the lung.

Other symptoms may include a dry cough, fever, or tiredness. These are more likely to come from the illness causing the pleurisy. During an examination, a clinician may hear a rough, grating sound called a pleural rub as the inflamed layers move against each other.

Sometimes fluid builds up between the pleural layers. This is called a pleural effusion. The pain may ease as the fluid separates the inflamed surfaces, but breathlessness can increase if the collection becomes large.

- Cough or sneeze
- Laugh or speak forcefully
- Twist or move your upper body
- Lie in certain positions

Causes and risk factors

Respiratory infections are common causes of pleurisy. Viral infections may settle as the infection clears. Bacterial pneumonia can also inflame the pleura and may produce an infected fluid collection.

Other possible causes include:

Your risk reflects the underlying cause rather than pleurisy itself. For example, prolonged immobility, recent major surgery, pregnancy, cancer, or a previous blood clot can increase the

risk of pulmonary embolism. Exposure to tuberculosis raises the risk of that infection.

Pleurisy itself is not contagious. However, an infection causing it may spread to other people, depending on the type of infection.

- A pulmonary embolism, which is a blood clot blocking an artery in the lung
- A pneumothorax, in which air around the lung causes it to partly or fully collapse
- Tuberculosis
- Autoimmune conditions such as lupus or rheumatoid arthritis
- Injury to the chest or ribs
- Recent chest surgery
- Lung cancer or cancer that has spread to the pleura
- Certain medicines, although this is uncommon

Diagnosis

There is no single test that identifies every case of pleurisy. Diagnosis begins with the pattern of pain, other symptoms, medical history, and a physical examination. Your temperature, heart rate, breathing rate, blood pressure, and blood oxygen level may be checked.

Because several conditions cause pain during breathing, tests often focus on finding or excluding the underlying problem. These may include:

If there is a significant pleural effusion, a clinician may remove a sample using a needle. This procedure is called thoracentesis or pleural aspiration. Laboratory tests on the fluid can look for infection, cancer cells, blood, or other clues.

Occasionally, a small tissue sample called a biopsy is needed when imaging and fluid tests do not explain persistent pleural inflammation.

- An electrocardiogram, or ECG, to examine the heart's electrical activity
- Blood tests for infection, inflammation, heart injury, or blood-clot risk
- A chest X-ray to look for pneumonia, fluid, or a collapsed lung
- Ultrasound to identify and measure fluid around the lung
- CT scanning for a closer view of the lungs and pleura
- CT pulmonary angiography when a pulmonary embolism is suspected

Treatment and management

Treatment has two aims: controlling the pain and addressing its cause.

Anti-inflammatory pain medicines are often used to reduce pleural pain. These medicines are not suitable for everyone and can affect the stomach, kidneys, or other treatments you take. A clinician or pharmacist can help you choose an appropriate option. Other pain relief may be considered when anti-inflammatory medicines are unsuitable.

Holding a pillow against the painful area when coughing may provide support. Rest can help during an acute illness, but prolonged bed rest is not usually helpful unless medically necessary. Try not to suppress every deep breath because of pain; adequate pain control can make comfortable breathing easier.

Treatment of the cause may involve:

Antibiotics do not treat viral infections and are not routinely useful for unexplained pleurisy.

A large pleural effusion may need to be drained if it is causing significant breathlessness. Infected fluid may require a chest tube as well as antibiotics. Repeated fluid collections sometimes need longer-term procedures to control them.

- Antibiotics like amoxicillin or doxycycline for bacterial pneumonia or another bacterial infection
- Antiviral treatment for selected viral infections
- Blood-thinning medicine for a pulmonary embolism
- Treatment to remove air from around a collapsed lung
- Medicines that control inflammation from an autoimmune condition
- Cancer treatment when cancer is responsible

Complications

Many people recover without complications. When problems occur, they are often related to the underlying illness rather than the inflamed pleura alone.

Possible complications include:

Severe pain can lead to shallow breathing and difficulty coughing effectively. This may make it harder to clear mucus during a respiratory infection.

A pulmonary embolism, severe pneumonia, pneumothorax, or cancer can have its own complications. This is why identifying the cause is more important than treating the pain alone.

- Pleural effusion, meaning excess fluid around the lung
- Empyema, which is infected fluid or pus in the pleural space
- Thickening or scarring of the pleura
- Reduced lung expansion from a large fluid or air collection
- Recurrent pain when an underlying condition remains active

Prevention

Pleurisy cannot always be prevented. It may occur unexpectedly with a viral illness, an autoimmune condition, or another medical problem.

Steps that may reduce certain causes include keeping recommended vaccinations up to date and getting appropriate care for respiratory infections that are severe or not improving. Avoiding smoking lowers the risk of several lung conditions linked with pleural inflammation.

If you are at increased risk of blood clots, follow medical instructions about movement, compression stockings, or preventive medicine during hospital stays, recovery from surgery, or long journeys. Do not start blood-thinning medicine on your own.

Taking prescribed treatment for tuberculosis or an autoimmune condition can lower the chance of ongoing pleural inflammation. These measures cannot prevent every episode.

Living with it and what to expect

The course of pleurisy depends mainly on its cause. Pain linked with an uncomplicated viral infection may improve over days or weeks as the infection clears. Recovery from bacterial pneumonia or a pulmonary embolism may take longer and requires treatment of that condition.

The pain can be intense even when the inflammation is temporary. It should gradually become less frequent and less severe as the pleura heal. Pain that persists, worsens, or returns needs reassessment rather than repeated self-treatment.

During recovery, increase everyday activity gradually according to your symptoms and medical advice. Avoid strenuous exercise while you have fever, significant breathlessness, or pain that interferes with normal breathing.

Some autoimmune conditions can cause repeated episodes over months or years. People with recurrent pleural effusions may need ongoing specialist care. When cancer causes pleural inflammation or fluid, the outlook is linked to the type and stage of cancer and how it responds

to treatment.

Most people with a short-lived cause return to their usual activities. Pleurisy itself does not usually leave permanent lung damage, but severe infection, scarring, or the underlying disease can affect long-term breathing.

When to get medical help

Seek emergency medical help for:

These symptoms can occur with a blood clot, collapsed lung, heart problem, or another emergency.

Arrange an urgent medical assessment for new, unexplained pain when breathing, particularly if it persists for several hours. Prompt assessment is also important if you have fever, worsening cough, increasing breathlessness, or risk factors for a blood clot.

Routine follow-up is appropriate if diagnosed pleurisy is not improving as expected, keeps returning, or interferes with sleep and normal activity. Also seek advice if treatment causes side effects or you are unsure when to return to work, driving, or exercise.

- Severe difficulty breathing, gasping, or an inability to speak normally
- Sudden chest pain with breathlessness, fainting, or coughing up blood
- Blue, grey, or unusually pale lips or skin
- Heavy, squeezing, or pressure-like chest pain, especially if it spreads
- Sudden chest pain and breathing difficulty after an injury

Common questions

What does pleurisy pain feel like?

It usually feels sharp, stabbing, or catching rather than dull or heavy. It often becomes worse with a deep breath, cough, sneeze, or upper-body movement. Symptoms alone cannot reliably separate pleurisy from other causes of chest pain.

How long does pleurisy last?

Pleurisy from a minor viral infection may improve within days or a few weeks. It can last longer when caused by pneumonia, an autoimmune condition, cancer, or another continuing problem. Persistent or worsening pain should be reassessed.

Is pleurisy contagious?

Pleurisy itself does not spread between people. A respiratory infection causing it may be contagious. The precautions needed depend on the specific infection.

Can I exercise with pleurisy?

Strenuous exercise may worsen pain and breathing discomfort during the acute episode. Gentle movement may be reasonable if you feel well enough, but activity should be increased gradually. Avoid exercise and seek advice if you have fever, significant breathlessness, dizziness, or unexplained chest pain.

Can pleurisy come back?

Yes. It can return if you develop another respiratory infection or if an underlying condition remains active. Repeated episodes may need tests for autoimmune disease, recurrent infection, blood clots, or another cause.

Does pleurisy mean I have cancer?

Usually not. Infection and other non-cancerous conditions can cause pleurisy. Cancer is one possible cause, particularly when there is a persistent or recurrent pleural effusion. Imaging and, when needed, fluid or tissue testing help determine the cause.

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