

Pneumonitis

Pneumonitis is inflammation in your lung tissue. Causes include irritants such as chemicals, allergens and certain treatments for other conditions. Healthcare providers can treat pneumonitis, but long-term inflammation can cause irreversible lung damage.

What is pneumonitis?

Pneumonitis (noo-MOHN-eye-tus) is general inflammation in your lungs that can affect how well you breathe and cause other bodily symptoms. It occurs when a foreign substance (irritant) inflames the small air sacs in your lungs (alveoli).

There are different types of pneumonitis inflammation. They include:

- Acute. Inflammation develops suddenly and only lasts a little while.
- Subacute. Inflammation progresses gradually and steadily.
- Chronic. Inflammation unfolds over a long period and becomes ongoing.

Is pneumonitis serious?

Yes, pneumonitis is serious. Long-term exposure to irritants that cause pneumonitis may cause permanent lung damage.

What are the types of pneumonitis?

There are different types of pneumonitis according to their cause. These include:

- Acute interstitial pneumonitis. Acute interstitial pneumonitis develops suddenly, and your symptoms quickly get worse. Healthcare providers aren't sure what causes it.
- Chemical pneumonitis. Chemical pneumonitis develops after inhaling chemicals that appear in household or workplace products (inhalants), such as chemicals in imaging tests, chlorine gas, pesticides, gasoline and smoke.
- Hypersensitivity pneumonitis. Hypersensitivity pneumonitis is a type of allergy that develops when you breathe in (inhale) antigens, including bacteria, dust, molds or tiny scales from animal skin, hair or feathers (dander).
- Radiation pneumonitis. Radiation pneumonitis may occur after radiation therapy to treat cancer.

What is the difference between pneumonia and pneumonitis?

Pneumonitis is inflammation in your lung tissues without an infection. The inflammation affects the walls of your alveoli, but it doesn't cause fluid or pus to build up. Pneumonitis can cause a dry cough.

Pneumonia is a bacterial, viral or fungal infection in your lungs. It's a type of pneumonitis that causes inflammation and fluid or pus to build up in your lung tissues. This can cause a cough that brings up yellow, green or bloody mucus (wet cough).

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Pneumonitis

Symptoms and Causes

What are the symptoms of pneumonitis?

Early signs of pneumonitis include common cold-like symptoms, including:

- Shortness of breath (dyspnea).
- Chest pain.
- A cough that doesn't bring up mucus or phlegm (dry cough).

Other symptoms may include:

- Fatigue.
- Fever.
- Flushed skin.
- Sweating.

Chronic pneumonitis symptoms may include:

- Breathing in short, shallow spurts.
- Cyanosis.
- Unintentional weight loss.

What causes pneumonitis?

There are many different possible pneumonitis causes. Common causes include:

- Animals. Animal fur, feathers and skin contain allergens that may cause inflammation.
- Bacteria. The bacteria commonly appear in humidifiers, hot tubs and heating and air conditioning symptoms.
- Drugs and medicines. Certain drugs and medications may cause pneumonitis, including aspirin, antibiotics (sulfonamides and nitrofurantoin), heart medicines (amiodarone) and chemotherapy drugs.
- Molds. Examples include mold that grows on hay, straw, grains, cheese, mushrooms and sugar cane.
- Radiation therapy. Pneumonitis may develop after whole-body or chest radiation therapies to treat certain cancers, including breast cancer or lung cancer.

Is pneumonitis contagious?

No, pneumonitis isn't contagious. However, some viruses or bacteria that may cause pneumonitis are contagious.

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Who does pneumonitis affect?

Anyone can get pneumonitis. However, you may be more likely to get pneumonitis if you work:

- Around animals, including farmers, veterinarians, zookeepers and pet store employees.
- On a farm around pesticides or moldy grain and hay.
- In flour, paper or lumber mills.
- Using a humidifier in your home or spending time in hot tubs also increases your risk of getting pneumonitis. These devices give off a mist that you breathe in. Without regular cleaning, molds and bacteria can grow, and you may breathe them in through the mist.

What are the complications of pneumonitis?

Long-term exposure to irritants that cause pneumonitis may cause serious, irreversible lung damage.

These may include:

- **Pulmonary fibrosis.** Pulmonary fibrosis causes scars to develop in your lungs that gradually get worse. It becomes hard to breathe and eventually leads to death.
- **Pulmonary hypertension.** Pulmonary hypertension causes high blood pressure (hypertension) in the blood vessels that carry blood from your heart to your lungs (pulmonary arteries).

Diagnosis and Tests

How is pneumonitis diagnosed?

A healthcare provider can diagnose pneumonitis. They'll examine your symptoms, review your medical history and conduct a physical examination. During the physical exam, they'll listen to your lungs with a stethoscope (auscultation). They'll also order tests to help confirm their diagnosis.

What tests will be done to diagnose pneumonitis?

To help confirm pneumonitis, a healthcare provider may order the following tests:

- **Allergy blood test.** The provider will use a tiny needle to take a small blood sample from a vein in your arm. They'll then send your sample to a lab to see if your blood reacts to specific allergens.
- **Bronchoscopy.** The provider will give you a sedative to help you relax. They'll then insert a thin, bendable tool with a camera at the end (bronchoscope) into your mouth or nose down into your lungs.
- **Imaging tests.** Imaging tests are painless, noninvasive tests that help a provider take a closer look at your lungs. They may order a chest X-ray or computed tomography (CT) scan.
- **Lung biopsy.** Your provider will surgically remove small amounts of tissue from different areas of your lung.
- **Pulmonary function tests.** Pulmonary function tests measure how many breaths you take in a minute (respiratory rate) and how much air goes into and out of your lungs.
- **Pulse oximetry (Pulse ox).** Pulse oximetry uses a device on your finger to measure how much oxygen is in your blood.

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Management and Treatment

How is pneumonitis treated?

If you have pneumonitis, the best way to treat it is to avoid its cause. Your provider may also recommend the following medications or treatments:

- Corticosteroids or immunosuppressants. These medications help reduce lung inflammation. Your provider may prescribe prednisone, mycophenolate or azathioprine.
- Antifibrotic drugs. Antifibrotic drugs help slow down scarring in your lungs. Your provider may prescribe pirfenidone or nintedanib.
- Pulmonary rehabilitation. During pulmonary rehabilitation, you and a healthcare provider will work together to create an exercise program to help increase your lung strength.
- Oxygen therapy. Oxygen therapy helps provide your body with oxygen when breathing is difficult. You may need oxygen therapy at all times or only need it during certain activities, such as exercising or sleeping.
- Lung transplant. In severe cases of pneumonitis that progress to pulmonary fibrosis, your provider may recommend replacing one or both of your lungs with a donor's healthy lungs.

How soon after treatment will I feel better?

It depends on what's causing your pneumonitis and its severity. It may take several months for your lungs to heal. In some cases, lung damage may be permanent.

Outlook / Prognosis

What can I expect if I have pneumonitis?

With early diagnosis and treatment, the outlook for pneumonitis is good. If you have acute pneumonitis, your symptoms may go away within a few days after removing the irritant from your environment.

Subacute cases of pneumonitis fall between acute and chronic. They usually occur due to long-term exposure to low levels of irritants. Your symptoms may last a few months, and you typically need medication or therapy.

Chronic pneumonitis damage is usually permanent. However, medication and therapy can help reduce the severity of your symptoms.

How long does pneumonitis last?

Milder cases of pneumonitis may go away within a few days or months once you and a healthcare provider identify the irritant and take the proper steps to avoid it.

Severe cases of pneumonitis usually don't go away.

Can you fully recover from pneumonitis?

It depends. With proper diagnosis and treatment, you can fully recover from acute and subacute cases of pneumonitis. You usually can't make a full recovery from severe cases of pneumonitis. However, medication and therapy can help make your symptoms more manageable.

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Prevention

Can pneumonitis be prevented?

The best way to lower your risk of developing pneumonitis is to avoid substances that cause lung inflammation. If you must be around potential irritants, you may be able to reduce your exposure by:

- Wearing personal protective equipment (PPE), including an N95 mask that filters irritants from the air you breathe.
- Regularly cleaning and sanitizing heating and cooling systems, hot tubs and humidifiers.
- Regularly vacuuming rugs, carpets and other surfaces to remove dust, animal dander and other irritants.
- Running a high-efficiency particulate (HEPA) air filter in your home to remove airborne allergens.

Living With

How do I take care of myself?

If you have pneumonitis, you and your healthcare provider will work together to reduce exposure to what's causing pneumonitis. Be sure to take all prescribed medications and perform all breathing exercises as directed by your provider.

When should I see my healthcare provider?

See your healthcare provider if you have symptoms of pneumonitis or if your symptoms don't improve with treatment.

When should I go to the ER?

Call 911 or your local emergency number or get to an emergency room immediately if you feel like you can't get enough air into your lungs.

What questions should I ask my healthcare provider?

- What's causing my pneumonitis?
- Do I have acute or chronic pneumonitis?
- What's the best way to avoid the irritant that's causing pneumonitis?
- Is there permanent damage to my lungs?
- What medications do you recommend?
- When should I start to feel better?
- How often should I schedule follow-up appointments?
- Should I see a pulmonologist?

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