

# Asbestosis

## What is asbestosis?

Asbestosis is a type of pulmonary fibrosis, or lung scarring, specifically caused by inhaling asbestos fibers. Between 1968 and 2000, the number of people who died from asbestosis annually increased from 78 to 1493. After that time, the number of annual asbestosis deaths has continued to decrease because of regulations put in place in the 1970s and 1980s in the United States.

## What are the symptoms of asbestosis?

A period of 15 to 35 years will pass between the first exposure to asbestos and developing asbestosis symptoms. You may experience gradually worsening shortness of breath along with chest tightness and dry cough.

## What causes asbestosis?

Asbestosis is caused by asbestos, a naturally occurring mineral. Asbestos is resistant to chemicals, heat and electricity, and it is soft and flexible which allows it to be woven into materials. These features have made asbestos an attractive product for many industries. Asbestos fibers can be inhaled and remain in the small airways and air sacs of the lungs. Over long periods of time, these fibers can cause lung scar. The more that someone is exposed to asbestos, the greater their chance of developing lung disease. In many cases, asbestosis is an occupational disease, meaning that it is related to exposure at a prior workplace.

## What would make me more likely to have been exposed to asbestos?

Asbestos was very often used in construction, plumbing, pipefitting, shipbuilding, insulation work, automotive repair, and demolition up until the mid-20th century. People who worked in these jobs during that time are at risk for asbestosis. Uncommonly, asbestosis has occurred in household members who were exposed to workers who came home with clothes covered in asbestos fibers. There have been no reports of asbestosis in individuals who have lived in areas where there are large deposits of asbestos in the soil.

Asbestos is banned in many countries worldwide, but its use continues in some low and middle income countries. In the United States, the use of asbestos was highest between the 1950s and 1970s. Its use has been banned in many, but not all, industries since the late 1980s. In the US, asbestos can still be used in cement products, brakes and certain roofing materials. The U.S. Occupational Safety and Health Administration regulates its usage and sets workplace exposure limits. Currently, workers who are involved in remediation of older buildings can be exposed, but personal protective equipment which includes special respirators and full Hazmat suits effectively limits the exposure of workers' skin, eyes, and lungs to asbestos. Asbestos that is enclosed and undisturbed does not cause disease.

## How is asbestosis diagnosed?

When providers suspect that breathing issues may be due to asbestos exposure, they may perform imaging tests such as a chest X-ray and/or a CT scan (also known as CAT scan). Your doctor may also want to order pulmonary function testing which do not make an asbestosis diagnosis but can help tell us how much the disease has affected your lungs.

## My doctor said my CT Scan (or biopsy) showed asbestosis? What does that mean?

CT scans in asbestosis patients can look very similar to the CT scans of idiopathic pulmonary fibrosis. Unlike other pulmonary fibrosis patients, asbestosis CT scans frequently show "pleural plaques," which are a classic sign of exposure to asbestos. Plaques themselves are not the same as asbestosis. If pleural plaques are not found, asbestosis can still be present.

TYPE OF PULMONARY FIBROSIS	CLUES THAT DOCTORS USE
Drug-induced	Prior or current use of amiodarone, nitrofurantoin, chemotherapy, methotrexate, or other drugs known to affect the lungs
Radiation-induced	Prior or current radiation treatment to the chest
Environmental (called hypersensitivity pneumonitis)	Exposure to mold, animals, or other triggers
Autoimmune (called connective tissue disease-related)	Joint inflammation, skin changes (particularly on the fingers and face), dry eyes or mouth, abnormal blood tests
Occupational (called pneumoconiosis)	Prior or current exposure to dusts, fibers, fumes, or vapors that can cause PF (such as asbestos, coal, silica, and others)
Idiopathic	When no cause can be identified

In certain situations, when you or your doctor might not be sure of how much asbestos exposure you may have had, surgical lung biopsies or bronchoscopies can be performed. The doctor must request a special test called an “iron stain” to help find asbestos fibers in lung tissue, which are referred to as “asbestos bodies.” Although uncommon, lung fluid obtained by bronchoscopy (bronchoalveolar fluid) can also be analyzed.

### How is asbestosis treated?

There is no treatment for the scarring of asbestosis. Treatment instead focuses on treating symptoms and slowing the progression of the disease. The most important step is to stop exposure to asbestos. The disease is more severe in those who smoke, so stopping smoking is extremely important. Routine vaccinations for influenza and pneumonia are also very important.

**Supplemental oxygen** and **pulmonary rehabilitation** are other important tools to treat the symptoms of asbestosis. Eligible patients who are severely affected may be treated with **lung transplantation**. Early evaluation for lung transplant is important because the process involves a series of appointments to provide the patient with information about transplantation and to determine if they are an appropriate candidate.

You can learn more about supplemental oxygen at:

<https://www.pulmonaryfibrosis.org/life-with-pf/oxygen-therapy>

You can learn more about pulmonary rehabilitation at:

<https://www.pulmonaryfibrosis.org/life-with-pf/pulmonary-fibrosis-treatment-options>

### How does asbestosis progress? What is my prognosis?

Asbestosis is a slowly progressive disease, meaning that the scarring of the lungs builds up over time. Removal from asbestos exposure and eliminating other risk factors (such as cigarette smoking) can help slow down its progression. In many cases, people live many years after the diagnosis of asbestosis. Although uncommon, acute exacerbations (sudden worsening), can occur. Pulmonary fibrosis resulting from asbestosis can lead to lung failure (medically called “respiratory failure”), which is a life-threatening condition. No one can predict exactly how long you will live with asbestosis. Everyone is different. Your doctor can give you more detailed information about your prognosis.

Asbestosis is also a marker of being at a higher risk of developing lung cancer. It is estimated that 3-8% of all lung cancers are related to asbestos, and this risk is much higher with cigarette smoking.

### Are there experimental therapies available?

You can search for research studies closest to you on our PFF Clinical Trial Finder: [trials.pulmonaryfibrosis.org](https://trials.pulmonaryfibrosis.org).

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#### References

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