

Asbestos Health Effects

What is asbestos?

Asbestos is the name for a group of minerals that occur naturally in the ground. Groups of fibers make up asbestos minerals. These fibers have special characteristics. Heat or chemicals do not affect them and they do not conduct electricity. Asbestos is also very strong. Pound for pound, asbestos is stronger than steel. That is why industry has mined and widely used asbestos to make many different products. Three types of asbestos were commonly used to manufacture products.

- Chrysotile, sometimes called white asbestos, is composed of wavy, flexible white fibers. Chrysotile is about 90 to 95 percent of the asbestos used in the U.S.
- Amosite, sometimes called brown asbestos, is composed of straight, light gray or brown fibers.
- Crocidolite, sometimes called blue asbestos, is composed of straight blue fibers.

Anthophyllite, tremolite and actinolite are three other types of asbestos. They were not commonly used to manufacture products. Recently though, tremolite asbestos has been detected as a contaminant in vermiculite attic insulation and other products that contain vermiculite. Disturbing products that contain vermiculite may cause exposure to tremolite asbestos and result in an asbestos-related disease.

Why is asbestos dangerous?

All types of asbestos fibers are dangerous if you breathe them. Some people say that some kinds of asbestos fibers are less dangerous. Many people, including doctors and scientists,

disagree. Until proven safe, treat all asbestos as dangerous.

You cannot tell when asbestos is in the air or is hurting your lungs. Asbestos will not make you cough or sneeze. It will not make your skin or throat itch. Asbestos fibers get into the air when asbestos materials are damaged, disturbed or removed unsafely. When asbestos is crushed, it does not make ordinary dust. Asbestos breaks into tiny fibers that are too small to see, feel or taste.

Asbestos fibers can be measured when they are in the air. They are measured in units called fibers per cubic centimeter of air (f/cc). A cubic centimeter is about the size of a sugar cube. The air is checked for asbestos fibers by taking samples of the air using air sampling methods. The Minnesota Department of Health has established a "clean air" level of 0.01 f/cc.

How do we know that asbestos can make you sick?

Laboratory studies and studies of people who worked with or around asbestos show us that asbestos can make you sick. If you breathe asbestos fibers, you may increase the risk of several serious diseases:

- Asbestosis, also called white lung disease, is a scarring in the air sacs of the lungs
- Lung cancer; and
- Mesothelioma, a cancer of the lining of the chest or abdomen

When asbestos is released into the air, it enters the surrounding environment. You can be exposed to asbestos if you enter these environments. If exposed to asbestos, many



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factors contribute to whether harmful health effects will occur. These factors include:

- dose (how much);
- duration (how long);
- the route or pathway by which you are exposed (breathing, eating, or drinking); and
- other chemicals to which you are exposed.

Individual characteristics may also have an effect, such as:

- age;
- gender;
- nutritional status;
- family traits;
- lifestyle; and
- your general state of health

How much asbestos is dangerous?

No amount of asbestos is considered safe. Products that contain greater than 1 percent of asbestos minerals are considered to be asbestos-containing by regulating agencies. Asbestosis and lung cancer are dose-related diseases. Dose-related means the more asbestos you breathe, the more likely you are to get sick.

The more asbestos you are exposed to, the more likely you are to get an asbestos disease.

The one asbestos disease that is different is mesothelioma. Very small amounts of asbestos can give you mesothelioma. Asbestos workers' families have gotten mesothelioma from the dust the workers brought home on their clothes.

How long does it take to get sick from asbestos?

All of the asbestos diseases have a latency period. The latency period is the gap between the time you breathe asbestos and the time you

start to feel sick. The latency period for asbestos diseases is between 10 to 40 years. You will not feel sick during the latency period. If you get an asbestos disease, you will begin to feel sick after the latency period.

Not everyone exposed to asbestos gets an asbestos disease. However, anyone exposed to asbestos has a higher risk of getting an asbestos disease. All of the asbestos diseases are difficult to treat. Most are impossible to cure. Stopping asbestos fibers from ever entering your lungs is important. The only cure for most asbestos diseases is to prevent them.

Is there any way of knowing if I have been exposed to asbestos?

The most common test used to learn if you have been exposed to asbestos is a chest x-ray. The x-ray cannot detect the asbestos fibers themselves, but can detect early signs of lung disease caused by asbestos. Other tests, such as lung scanning and computer-aided tomography (CAT scan), are also useful in detecting changes in the lungs.

How do I get more information?

For more information about asbestos, contact the Asbestos Program of the Minnesota Department of Health. You can call us at (651) 201-4620, visit our website at www.health.state.mn.us/asbestos or write us at the address on the front of this handout.

This handout was developed as a summary of MDH regulations. It does not cover all situations or conditions and is not to be used as a substitute for the Minnesota Statutes and Rules. Additional federal, state and local regulations may apply.

If you require this document in another format such as large print, Braille, or cassette tape, contact 651-201-5000 or 1-800-657-3908. For deaf or hard of hearing TTY: 651-201-5797