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Agency for Toxic Substances and Disease Registry Questions and Answers Exposure to Asbestos

What is asbestos?

Asbestos is a naturally occurring mineral found in soil and rock in some areas of the United States. The six types of asbestos are actinolite, amosite, anthophyllite, chrysotile, crocidolite, and tremolite. These minerals are made up of fibers that vary in size and shape. The type of asbestos found in the vermiculite ore from the mine at Libby is tremolite/actinolite.

How would I come into contact with (be exposed to) asbestos?

Inhalation of asbestos fibers is the method of exposure that is most likely to cause adverse health effects for people. Workers in industries that use asbestos or products containing asbestos (such as building materials), may inhale fibers that are suspended in the air. Workers may also carry asbestos fibers home on their clothes, where family members might come into contact with asbestos by inhaling the fibers. Also, people who live or work near asbestos-related operations may inhale asbestos fibers that enter the air because of releases of materials into the environment. Generally, asbestos fibers are thin fibers too small to be seen; as they float in the air, they can easily be inhaled. People may also swallow asbestos fibers if they eat in areas where asbestos fibers are in the air or if they drink water contaminated with fibers. Homes and businesses insulated with material containing asbestos may also be a source of exposure.

The amount of asbestos a person is exposed to will vary according to how many fibers are in the air and how long a person breathes the air containing the fibers.

Between 1940 and 1980, an estimated 27 million Americans workers had an occupational exposure to asbestos that could result in health effects.

Does asbestos exposure cause health problems?

Health problems are usually related to the amount and length of time of exposure to asbestos. After asbestos fibers are breathed in, they can easily enter and become trapped in the airways and lung tissue and the body has difficulty removing the fibers. Continued exposure to asbestos increases the amount of asbestos that remains in the lungs. Diseases related to asbestos may not show up until several years later.

What illnesses are associated with asbestos exposure?

Asbestosis

Asbestosis is a serious, progressive, long-term disease of the lungs. It is not cancer. It is caused by inhaling asbestos fibers that irritate lung tissues and cause the tissues to scar. The scarring makes it hard for lungs to do their job of getting oxygen into the blood. Symptoms of asbestosis

include shortness of breath and a dry crackling sound in the lungs while inhaling. The chance of getting asbestosis is very small for those who do not work with asbestos. Although there is no effective treatment for asbestosis, symptoms of the disease can be managed under the care of a physician. The disease, if severe, can cause disability and death.

Lung Cancer

Lung cancer causes the largest number of deaths related to asbestos exposure. People who work in occupations involving the mining, milling, manufacturing, and use of asbestos and its products are more likely to get lung cancer than the general population. The most common symptoms of lung cancer are coughing and a change in breathing. Other symptoms include shortness of breath, persistent chest pain, hoarseness, and anemia. People who develop these symptoms do not necessarily have lung cancer, but should consult a physician for advice. People who have been exposed to asbestos and are also exposed to some other cancer-causing product, such as cigarette smoke, have a greater risk of developing lung cancer than people who have been exposed only to asbestos.

Mesothelioma

Mesothelioma is a relatively rare form of cancer that is found in the thin lining (membrane) of the lungs, chest, abdomen, and heart. Several hundred cases are diagnosed each year in the United States, and most cases are linked with exposure to asbestos. About 2 percent of all miners and textile workers who work with asbestos, and 10 percent of all workers who were involved in the manufacture of gas masks containing asbestos, develop mesothelioma. This disease may not show up until many years (generally 20 to 40 years or more) after asbestos exposure.

Is there a medical test to show whether I've been exposed to asbestos?

Chest x-rays cannot show asbestos fibers, but can find early signs of lung disease. Other tests, such as lung function tests and high resolution CT scans, can also detect changes in the lungs caused by asbestos. These changes usually are not detectable until years after exposure.

What treatments are available for asbestos-related diseases?

The National Cancer Institute indicates that the key to successful treatment of asbestos-related diseases lies in early detection.

Many of the health problems caused by asbestosis are due in large part to lung infections, like pneumonia, that attack weakened lungs. Early medical attention and prompt, aggressive treatment offer the best chance of success in controlling such infections. Depending on the situation, doctors may give a vaccine protecting against influenza or pneumococcal pneumonia as a precautionary measure.

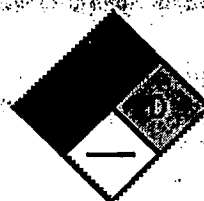
Treatment of cancer is tailored to the individual patient and may include surgery, anticancer drugs, radiation, or combinations of these therapies. Information about cancer treatment is available from the Cancer Information Service of the National Cancer Institute. Their toll free number is 1-800-4-CANCER.

For more information about Asbestos, go to **ATSDR ToxFAQsTM**.

For other information, contact Kathy Skipper, John Florence, or Mike Grouett, ATSDR Office

Asbestos

There is no molecular representation since this substance is a mixture of many compounds.



NFPA Label Key

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