

## Asbestos Questions

### What is asbestos?

Asbestos is the name that is used for a group of six different fibrous minerals (amosite, chrysotile, crocidolite, and the fibrous varieties of tremolite, actinolite, and anthophyllite) that occur naturally in soil and rocks in some areas. Asbestos fibers vary in length and may be straight or curled.

Asbestos fibers are resistant to heat and most chemicals, and because of this, asbestos fibers have been used for a wide range of manufactured goods, mostly in building materials, friction products, and heat-resistant fabrics.

### What happens to asbestos when it enters the environment?

- Asbestos fibers do not evaporate into air or dissolve in water.
- Asbestos can enter the air and water from the weathering of natural deposits and the wearing down of manufactured asbestos products, such as brake pads.
- Small fibers may remain suspended in the air for a long time before settling. Larger fibers tend to settle more quickly.
- Asbestos fibers are not able to move through soil and they are not broken down to other compounds in the environment. Therefore, they can remain in the environment for decades or longer.

### How might I be exposed to asbestos?

- Inhaling low levels of asbestos fibers in air.
- Inhaling high levels in air while working in industries that make or use asbestos products or near a building that contains asbestos products and is being torn down or renovated.
- Inhaling higher levels in air near an asbestos-related industry or near an asbestos-containing waste site.
- Drinking asbestos fibers present in water as a result from natural sources or from asbestos-containing cement pipes used in drinking water distribution systems.

### How can asbestos affect my health?

- If exposed to asbestos, several factors may influence whether harmful health effects will occur. These factors include the dose (how much), the duration (how long), and whether or not you smoke. Generally, adverse health effects from asbestos are the result of long term exposure to high concentration of airborne fibers.
- Asbestos mainly affects the lungs. Changes in the membrane surrounding the lung are quite common in workers exposed to asbestos. These are sometimes found in people living or working in areas with high levels of asbestos in the air.
- Breathing high levels of asbestos over long periods of time can lead to a lung disease termed asbestosis, which is a diffuse fibrous scarring of the lungs. Asbestosis is usually found in asbestos workers and not in the general public.

People with asbestosis have shortness of breath, often along with a cough. This is a serious disease and can eventually lead to disability or death.

### **How likely is asbestos to cause cancer?**

- Asbestos has been determined to be a human carcinogen (cancer-causing agent).
- A large number of occupational studies have reported that exposure to asbestos via inhalation can cause cancer. There are two types of cancer caused by exposure to asbestos: cancer of the lung tissue itself and mesothelioma, a cancer of the membrane that surrounds the lung and other internal organs. Both of these are usually fatal. These diseases do not develop immediately, but will show up only after many years. It can take 10 to 40 years between exposure and the onset of disease.
- Individuals who smoke and are also exposed to asbestos have a greater risk of developing lung cancer.
- People who are exposed to low levels of asbestos may also have an increased risk of developing cancer, but the risks are usually small and are difficult to measure.
- It is not known whether ingesting asbestos causes cancer. Some people who had been exposed to asbestos fibers in their drinking water had higher-than-average death rates from cancer of the esophagus, stomach, and intestine. However, it is not known whether this was caused by asbestos or something else.

### **Is there a medical test to show whether I have been exposed to asbestos?**

- Chest X-rays cannot detect asbestos fibers themselves, but can detect early signs of lung disease caused by asbestos. Other tests (lung and CAT scans), are also useful in detecting changes in the lungs.
- Tests exist to measure asbestos fibers in urine, feces, mucus, or material rinsed out of the lung. However, low levels of asbestos fibers are found in these body fluids in nearly all people, so higher-than-average levels can only show that you have been exposed to asbestos, not whether you will experience any health effects.

### **Can asbestos harm animals?**

- Inhalation of asbestos fibers can also adversely affect animals. As with humans, the dose and duration of exposure is of importance. Ingestion of fibers by animals does not appear to have any adverse outcome since the fibers are not absorbed.

### **Can asbestos accumulate in the food chain?**

- No data is available on asbestos levels in the tissues of edible organisms. However, it is not expected that either aquatic or terrestrial organisms will accumulate a significant number of fibers in their flesh. Consequently, food chain bioaccumulation or bio-magnification does not appear to be of concern.

### **How can private citizens safely handle asbestos?**

- Information for the safe handling of asbestos is available to the homeowner from the Nebraska Department of Health and Human Services, Asbestos Program and can be found on our Index Page: <http://dhhs.ne.gov/Pages/Asbestos.aspx>

## Has the federal government made recommendations to protect human health?

- In 1989, the US Environmental Protection Agency (EPA) banned all new uses of asbestos; uses established before this date are still allowed. The EPA has established regulations that require school systems to inspect for damaged asbestos and to eliminate or reduce the exposure by removing the asbestos or by covering it up. The EPA has set a limit of 7 million fibers per liter (MFL) as the concentration of long asbestos fibers that may be present in drinking water.

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### For More Information

Please refer to the Asbestos Program's Index Page,

<http://dhhs.ne.gov/Pages/Asbestos.aspx>, or contact us using the information provided below:

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