

NYCOSH Asbestos Fact Sheet #1

Asbestos

What is asbestos?

Asbestos is a natural mineral that is mined from the earth. There are several kinds of asbestos. Asbestos fibers are so small that they cannot be seen with the naked eye. They can only be viewed or identified by using a microscope. Asbestos is resistant to fire and acid and has high tensile strength.

Are any types of asbestos safe?

No. Although there are indications that some types of asbestos may be more dangerous than others, asbestos-related disease can be caused by all types of asbestos.

Where has asbestos been used?

Asbestos has been used in thousands of different products. The amount of asbestos in asbestos-containing materials varies from less than 1% to 100%. Examples of products that might contain asbestos are:

- fireproofing and insulation in buildings and ships
- insulation for pipes and boilers
- putties, caulks, paints, and cements
- floor and ceiling tiles
- friction products, such as clutch facings and brake linings in vehicles.

When are asbestos-containing products dangerous?

Asbestos-containing material (ACM) is dangerous if the asbestos fibers can be released. Once asbestos fibers become airborne, they can be inhaled and can cause disease. Eventually, airborne asbestos fibers, if not properly cleaned up (abated), will settle out onto floors and other surfaces and can be resuspended into the air.

When ACM can easily be crumbled by hand pressure, it is called "friable" asbestos. Friable ACM is of concern because it can easily release fibers. As the binders (such as plaster and cement) that hold asbestos fibers in place deteriorate, are damaged, or are disturbed, the likelihood of fiber release increases. Examples of asbestos-containing materials that are likely to be friable are fireproofing on structural beams, sprayed-on asbestos ceiling insulation, and troweled-on acoustical insulation.

Hard asbestos-containing materials such as vinyl floor tile – in which asbestos fibers are firmly bound or encased – do not generally create exposure problems. However, even non-friable ACM can become friable and release fibers if it is sanded, cut, ground, or disturbed in some other way. Therefore, any material that contains asbestos has the potential to become hazardous.

How I know if a product contains asbestos?

You cannot tell whether a material contains asbestos by looking at it. The only way to know if a product contains asbestos is to have a piece of the suspect material analyzed by a qualified laboratory. This is called a *bulk sample*.

By law, the employer is responsible for appropriately determining whether a suspect material contains asbestos. If your employer does not have reliable laboratory data or manufacturer's information or refuses to sample the suspect material, you should speak to your union representative.

As a last resort only, you or your union may want to obtain your own samples and have them analyzed. Although this is easy to do, there are some problems with taking your own samples. You

or your union may want to talk with NYCOSH (212-227-6440) about how and whether to take your own samples.

How does asbestos enter the body?

The most common way for asbestos to enter the body is via inhalation (breathing). Asbestos can also enter the digestive tract when you eat, drink, or smoke in a contaminated area. Asbestos does not pass through the skin.

What are the health effects of asbestos exposure?

Scientists have demonstrated the links between exposure to asbestos and four serious diseases: lung cancer, mesothelioma, asbestosis, and digestive system cancers.

- **Lung cancer:** Asbestos-exposed people are significantly more likely than nonexposed people to develop lung cancer.

Asbestos and cigarettes are a particularly deadly combination. If a person exposed to asbestos also smokes, his or her chance of getting lung cancer increases dramatically. If you are a smoker and you have been exposed to asbestos, giving up smoking will significantly decrease your risk of contracting lung cancer.

- **Mesothelioma:** Mesothelioma is a cancer of the lining of the lungs or of the abdominal cavity. This is a rare cancer that is almost always associated with asbestos exposure. Mesothelioma can occur after very brief or very low exposures to asbestos.

Cases of mesothelioma have occurred in spouses and children of asbestos workers whose only exposures were from the dust brought home on the clothing of family members who worked with asbestos.

- **Asbestosis:** Asbestosis is a scarring of the lung tissue that can lead to shortness of

breath. A person with a severe case of asbestosis can barely get enough oxygen to breathe. Sometimes the scarring may spread so far through the lungs that it causes death. These severe cases are usually caused by very high exposures.

- **Digestive system cancers:** Increases in stomach, colon, rectal, and other digestive system cancers have been observed in asbestos-exposed workers.

How soon will asbestos-related symptoms or illness develop?

There is no known safe level of exposure to asbestos. Any exposure can cause illness. However, greater exposure means greater risk. Many people who are exposed to asbestos will never develop an asbestos-related illness.

There are no short-term symptoms of exposure to asbestos. Asbestos does not cause any immediate effects, such as coughing or illness. The diseases caused by asbestos do not appear until 15 to 40 years after your first exposure. This time lag is called the *latency period*. Even if you feel healthy while you are working with asbestos, you may get sick years later.

Can I get sick from asbestos if I'm not an asbestos worker?

Yes. Workers who did not work directly with asbestos, but whose jobs were located near contaminated areas, have developed asbestos-related diseases. There is no "safe level" of exposure to asbestos.

Even "bystander" exposures can cause asbestos-related disease. As noted above, family members of workers exposed to asbestos have gotten sick from asbestos dust brought home on work clothes, as have people who lived near factories where asbestos products were manufactured.

If I've already been exposed, why should I take precautions?

The more you are exposed, the more likely you are to develop asbestos-related disease. In addition, the more exposure you have, the sooner you are likely to become sick. You should act to prevent further exposures so that your chances of developing asbestos-related disease will not increase.

If I've been exposed, is there a medical test that I should get?

Your employer must provide medical surveillance if you do Class 1, 2, or 3 asbestos work for more than 30 days per year or if you are exposed above a Permissible Exposure Limit. (See NYCOSH Fact Sheet #2 for a more detailed explanation.)

Your union may also arrange for medical surveillance from an independent (not employer-based) occupational physician or occupational clinic. Your employer's medical surveillance program must include:

- an annual physical examination
- pulmonary (lung) function tests
- medical and work histories
- a respiratory disease questionnaire.

Remember, the signs of asbestos disease usually do not appear for 15 to 40 years after exposure first occurs. However, if you do get sick years later and want to seek compensation, a "baseline" examination now will document your health status and help doctors relate future changes in your health to your asbestos exposure.

Once you are exposed, you should see the physician regularly. While the scarring of lung tissue that leads to asbestosis is not curable, lung cancer and mesothelioma may be curable if detected early.

Why is the prevention of asbestos exposure so important?

Asbestos fibers remain in the lungs. The body cannot break down or expel these fibers. Each exposure adds to the body burden from previous exposures.

Asbestos disease will progress even after exposure stops. If you have asbestos fibers in your body, you are at risk for developing lung disease. Because you cannot turn back the clock, it is essential to prevent exposure in the first place.

Asbestos-related diseases are usually not curable. Once an asbestos-related disease develops, there is often little that can be done to change the course of the disease.

Are there laws to protect me from exposure to asbestos?

Yes. There are asbestos laws that protect both workers and the general public. Federal OSHA and NYS PESH have asbestos standards for asbestos abatement workers and for other workers who may be exposed to asbestos. New York State and New York City have additional asbestos control laws. The federal Asbestos Hazard Emergency Response Act (AHERA) covers asbestos in schools. (See the NYCOSH fact sheets on these laws for further information on proper engineering controls and work practices.)

Are there safe substitutes for asbestos?

Products like fiberglass and rock wool are being used as substitutes or replacements for asbestos. Although they are presumed to be less dangerous than asbestos, they also have significant exposure hazards. Therefore, you should limit exposure to fiberglass and rock wool just as you would limit exposure to asbestos.

NYCOSH Asbestos Fact Sheets:

Fact Sheet #1 - Asbestos

Fact Sheet #2 - OSHA Asbestos Standards

Fact Sheet #3 - New York State Asbestos Law

Fact Sheet #4 - New York City Asbestos Law

Fact Sheet #5 - Asbestos Hazard Emergency Response Act (AHERA)

Fact Sheet #6 - Respirators: Information for Asbestos Workers