

## The Asbestos Issue

Asbestos fibers can cause serious health problems. If inhaled, they can disrupt the normal functioning of the lungs. Three specific diseases – asbestosis, lung cancer, and another cancer known as mesothelioma – have been linked to asbestos exposure. These diseases do not develop immediately after inhalation of asbestos fibers; it may be 20 years or more before symptoms appear. In general, as with cigarette smoking, the more asbestos fibers a person inhales, the greater the risk of developing an asbestos-related disease.

## What is Asbestos?

Asbestos became a popular commercial product because it is strong, won't burn, resists corrosion, and insulates well. It is a mineral found in certain types of rock formations and when mined and processed, takes the form of very small fibers which are usually invisible to the naked eye. A typical asbestos fiber is 1,200 times smaller than a strand of human hair. These individual fibers are generally mixed with a material which binds them together so that they can be used in many different products. Because the fibers are so small and light, they can remain in the air for many hours if they are released from asbestos-containing material.

## Where is Asbestos Found?

Asbestos is most commonly used in buildings as insulation and in building materials. It has also been used in floor tile, ceiling tile, cement asbestos pipe, corrugated paper pipe wrap, acoustical and decorative insulation, pipe and boiler insulation, and spray-applied fireproofing. The fluffy white substance you may find above a dropped ceiling, for example, is one type of spray-applied material. The precise amount of asbestos in a product cannot always be determined by asking the manufacturer or from labels since most products used in the past were not labeled. Instead, positive identification of asbestos requires analysis of samples by a qualified laboratory.

## When is Asbestos a Problem?

Intact and undisturbed asbestos materials generally do not pose a health risk. Asbestos materials, however, can become hazardous when, due to damage or deterioration over time, they release fibers. If the fibers are inhaled, they can lead to health problems.

The potential for an asbestos-containing material to release fibers depends primarily on its condition. If the material, when dry, can be crumbled by hand pressure – a condition known as “friable” – it is more likely to release fibers, particularly when damaged. The fluffy spray-applied asbestos fireproofing material is generally considered “friable.” Pipe and boiler insulation materials can also be “friable,” but they often are enclosed in a protective casing which prevents fiber release unless the casing is damaged. Some materials, which are considered “nonfriable,” such as vinyl-asbestos floor tile, can also release fibers when sanded, sawed or otherwise disturbed. Materials such as asbestos cement pipe can release asbestos fibers if they are broken or crushed when buildings are demolished, renovated or repaired.

## Proper methods for dealing with asbestos are:

- Developing and carrying out a *special maintenance plan* to insure that asbestos-containing materials are kept in good condition. This is the most common method when the materials are in good condition at the time of initial inspection.
- *Repairing* damaged pipe or boiler covering, which is known as thermal system insulation.
- Spraying the material with a sealant to prevent fiber release – a process called *encapsulation*.
- Placing a barrier around the materials, which is known as an *enclosure*.
- Removing asbestos – under special procedures, a process known as *abatement*.

Here at NDSU, asbestos in poor condition is most often abated, unless specific circumstances dictate another course of maintenance is more applicable. Contact the OSEH at 231-7759 with any asbestos related questions you may have.