



United States
Environmental Protection
Agency

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Office of Pollution Prevention and Toxics

The ABCs Of Asbestos In Schools

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Today's Lesson:

Asbestos



Introduction

- When is asbestos a problem?
- What should my school and school district be doing about asbestos?
- What can I do to help?

The Environmental Protection Agency (EPA) is releasing this updated document in conjunction with the National Parent Teacher Association (PTA) and the National Education Association (NEA) due to an ongoing concern about asbestos in elementary and secondary schools nationwide.

This pamphlet can help parents and teachers answer questions and learn the facts about asbestos in schools. It also outlines the responsibilities of school boards and other school officials to protect school children and employees from possible exposure to asbestos.



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. The most severe health problems from asbestos exposure have been experienced by some workers who held jobs in industries such as shipbuilding, where they were exposed to very high levels of asbestos in the air. These employees worked directly with asbestos materials on a regular basis as a part of their jobs. Much uncertainty surrounds the risk from

exposure to low levels of asbestos fibers.

Nevertheless, the risk of school children being exposed to even low levels of asbestos is a concern. Acting on this concern, Congress passed the Asbestos Hazard Emergency Response Act (AHERA) in 1986 to protect school children and school employees from exposure to asbestos in school buildings. This pamphlet describes key parts of these federal asbestos requirements for schools.



What Exactly Is Asbestos?

Asbestos is a mineral found in certain types of rock formations. When mined and processed, it 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. This increases the chance that someone will inhale them.

Asbestos became a popular commercial product because it is strong, won't burn, resists corrosion, and insulates well. Its commercial use in the United States began in the early 1900s, when it was used as insulation in steam engines. Since then asbestos has been used to create about 3,000 different products, including insulation and fireproofing. The peak years of asbestos use in schools were from World War II until the 1970s.



Where Is Asbestos Likely to Be Found?

EPA estimates that there are asbestos-containing materials in most of the nation's primary, secondary and charter schools.

Asbestos is most commonly used in schools as insulation and in building materials. It has also been used in floor and 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 amount of asbestos in

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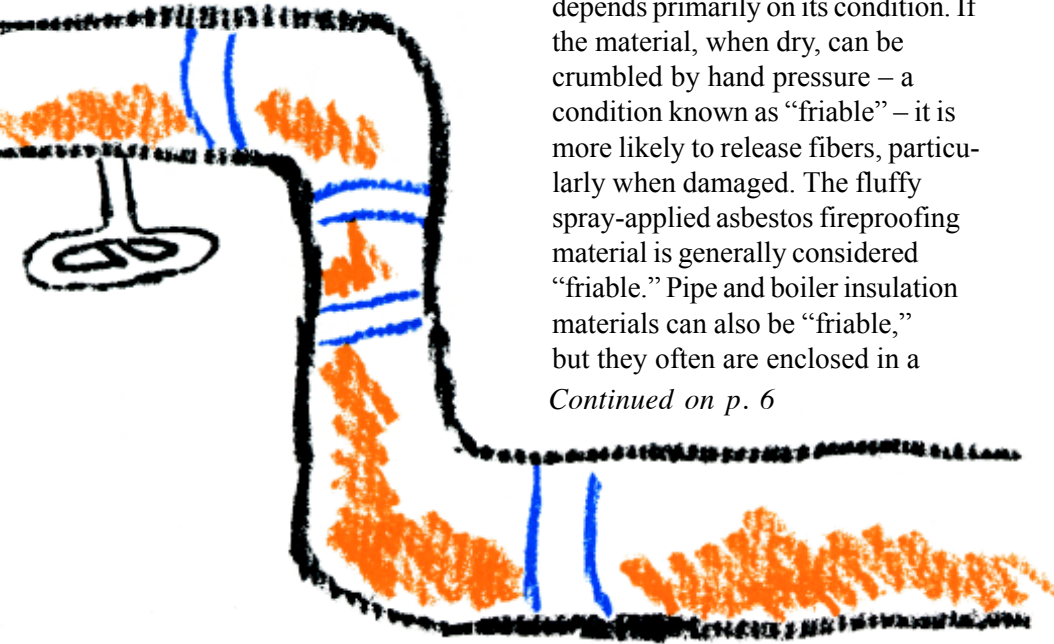
these products varies widely, from less than 1 to 100 percent, depending on the use. Pipe and boiler insulation typically contains more asbestos than other building materials. The precise amount of asbestos in a product cannot always be determined from labels – since most products used in the past were not labeled – or by asking the manufacturer. 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

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What Is the Government Doing about Asbestos In Schools?

The federal government has been regulating asbestos for a number of years. Progress is being made to limit the uses of asbestos and to identify substitute materials.

AHERA required EPA to develop regulations creating a comprehensive framework for dealing with asbestos in public and nonprofit private elementary and secondary schools. The regulations were published on October 30, 1987.

The AHERA schools rule requires all public school districts and private schools, known as local education agencies or LEAs, to inspect all school buildings for both friable and nonfriable asbestos; to develop plans to manage asbestos in schools; and to carry out the plans in a timely fashion. The rule also provides an opportunity for parents, teachers, and other

school employees to become familiar with and involved in their school's asbestos management program. School officials are required to notify parent, teacher and employee groups about asbestos-related activities. For more information contact the TSCA Hotline at (202) 554-1404 or the asbestos hotline at (800) 471-7127. You can also visit our website at http://www.epa.gov/asbestos/asbestos_in_schools.html.

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.

What Are the Proper Methods for Managing Asbestos?

Most asbestos-containing material can be properly managed where it is. In fact, asbestos that is managed properly and maintained in good condition appears to pose *relatively little risk* to students and school employees. Accordingly, the AHERA schools rule rarely requires the removal of asbestos materials.

Proper asbestos management begins with a comprehensive inspection by qualified, trained and experienced inspectors, accredited through an EPA or state-approved training course. Inspecting the condition of asbestos materials – initially with AHERA-accredited inspectors and at least semi-annually with trained custodial or maintenance staff – is extremely important so that changes in the material’s condition, such as

damage or deterioration, can be detected and corrected before the condition worsens. Sometimes normal school or maintenance activities can damage asbestos material and cause fiber release, particularly if the material is “friable.” A thorough initial inspection and regular surveillance can prevent accidental exposure to high levels of asbestos fibers.

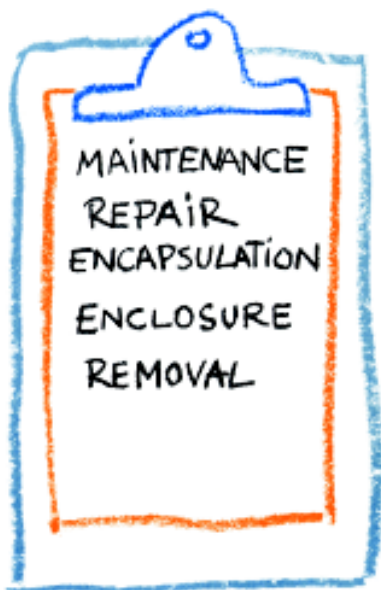
The methods (see page 7), in AHERA terminology, are asbestos “response actions.” The last three methods of response actions – encapsulation, enclosure, and removal – and sometimes the second method – repair – must be done by accredited asbestos professionals.

The final response action, asbestos removal, is generally necessary only when the material damage is extensive and severe,

How To Respond?

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.



and other actions will not control fiber release. Although the AHERA schools rule does not prohibit schools from removing any asbestos materials, removal decisions should not be made lightly. An ill-conceived or poorly conducted removal can actually *increase* rather than eliminate

risk. Consequently, all school removal projects must be designed, supervised, and conducted by accredited professionals and should be performed in accordance with state-of-the-art procedures. In addition, schools may wish to hire an experienced and qualified project monitor to

oversee the asbestos contractor’s work to make sure the removal is conducted safely.

Only an AHERA-accredited management planner – an asbestos professional with proper training, qualifications, and experience – is

authorized to advise school officials on which response action is appropriate for a particular situation. The final selection of the proper method is up to school officials after they receive the advice of the school’s accredited management planner.

What Should My School & School District Be Doing?



Under the AHERA schools rule, each local education agency (LEA, which means a school district or private school) must take the following asbestos-related actions:

- 1** Designate and train a person to oversee asbestos-related activities in the school system.
- 2** Inspect *every* school building for “friable” and “nonfriable” asbestos-containing building materials.
- 3** Prepare a management plan for managing asbestos and controlling exposure in each school.
- 4** Consult with accredited inspection and management professionals

to identify and carry out whatever asbestos actions are necessary and appropriate to protect health and the environment. These actions or methods must be documented in the management plan.

- 5** Notify the public about the asbestos inspection and the availability of the asbestos management plan for review.
- 6** Use only properly accredited persons to conduct inspections, to develop the asbestos management plan, and to carry out the appropriate response actions.
- 7** Keep records of all asbestos related activities in the plan and make them available for public review.



What Does the LEA Designated Person Do?

School officials may choose a consultant or one of their own employees to oversee their asbestos program. This designated person must meet certain training requirements, and serves as the single point of contact for public information about asbestos-related activities in the LEA. He or she is responsible for:

- Ensuring that initial asbestos inspections, re-inspections every three years, and semi-annual surveillance activities are conducted properly by qualified personnel.
- Including results of the inspection in the management plan. The plan must identify all asbestos-containing building materials found in schools and recommend actions for dealing with asbestos hazards.
- Preparing a management plan (for schools built after October 12, 1988) for submission to the appropriate state Agency prior to the school being used as a school building. The management plan should be maintained and updated with records of response actions, periodic surveillance of asbestos containing materials (ACM) and all re-inspections.
- Making sure that custodial and maintenance workers receive required safety training and information about the location of asbestos-containing materials in their school. Warning labels must be posted in all routine maintenance areas, such as boiler rooms, where asbestos-containing building materials are found.
- Ensuring that response actions specified in the management plan are carried out according to the plan's timetables. The regulations require that all LEAs were to begin to carry out their management plans no later than July 9, 1989.
- Seeing that all asbestos records required by the regulations are accurately maintained.
- Informing all teacher, parent and employee organizations at least once a year about the asbestos activities in each school and about the availability of the management plan for their review.

What Can I Do to Help?

As a parent, teacher, student, service worker or other school employee, the most important thing you can do first is to learn about your school's asbestos activities. As you do so, remember that *the mere presence of asbestos in a school doesn't necessarily mean that the health of its occupants is endangered*. Again, asbestos that is managed properly and maintained in good condition poses relatively little risk. Federal regulations do not require the removal of all friable asbestos from schools until the building is demolished. In fact, during the life of the building, other methods of dealing with the material are often preferable to removal.

In those cases when removing asbestos *is* determined to be the appropriate

decision, the work must be done under strict controls by trained, qualified and experienced asbestos professionals who are properly accredited under AHERA.

Step One: Awareness

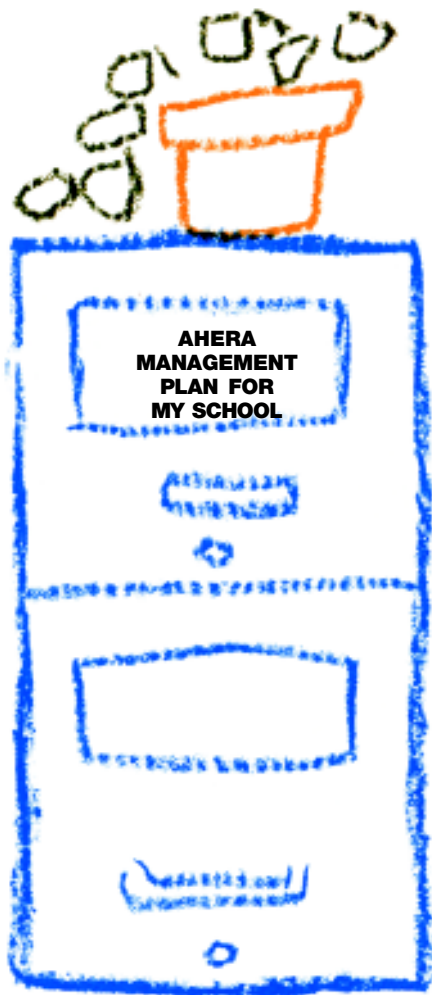
Your first step is to make sure your school has prepared an asbestos management plan as required by AHERA. By becoming familiar with this plan, you will know if asbestos materials are in the school, what plans the school has for managing this asbestos, and when these activities are scheduled to occur.

Step Two: Minimize Disturbance

There are several simple things you can do to minimize your exposure to asbestos. The most important one is to find out which materials in your school contain asbestos; you should be able to get this information from your LEA's designated person or from the school's management plan.

Once you know where asbestos is, use special care to insure that any day-to-day activities, such as repair or maintenance work, do not disturb the material. In fact, special training is required to participate in any maintenance activities which might disturb asbestos. In schools, asbestos-containing materials can also be damaged by student activities. For example, an asbestos ceiling in a gym may be disturbed if basketballs or other

objects are thrown up against it. Students and others who use the gym should be warned to avoid such activities.

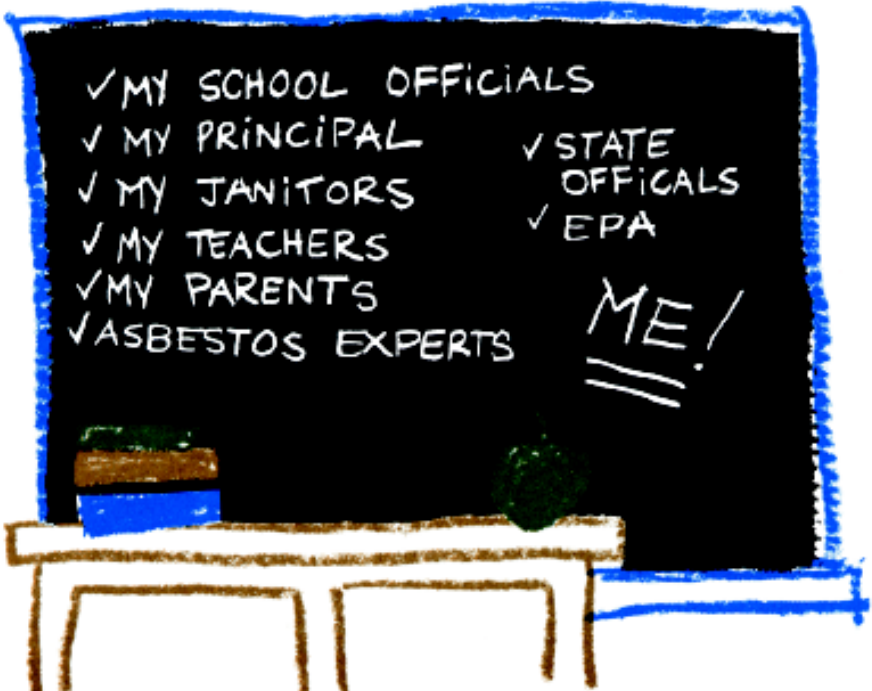


Who Is Responsible for Making AHERA Work?

All of us are responsible. Making the AHERA schools rule work to protect the nation's school children and employees is a joint responsibility of the LEA and its officials, school employees, parents, students,

federal and state governments, and asbestos control professionals.

EPA conducts compliance inspections of a sample of schools each year to make sure they are obeying the law. The Agency is responsible for insuring that schools comply with AHERA and it will investigate reported violations. Since the AHERA schools rule is intentionally designed to involve parent, teacher and other school employee organizations, it is important that *you* work with your school to make sure that its asbestos program is properly conducted.



Where Can I Get More Information?

Under AHERA, citizens have the opportunity to become informed about asbestos activities in their schools. If you have a question or concern about those activities, you should first contact your LEA designated person. This person knows the most about the asbestos situation in your school. When you find out who this person is, ask him or her what steps your school has taken, and will continue to take, to meet the requirements of the AHERA schools rule.

The LEA designated person also can tell you which agency in your state government is responsible for state AHERA activities. The same agency usually is responsible for reviewing the LEA's asbestos management plan. This LEA designated person also should be aware of any local asbestos control requirements.

State AHERA designees also are a good source of information. These officials can help you better understand the AHERA schools rule



and can answer questions about your school's asbestos activities.

Local, state, and national parent and teacher organizations are other good sources of information about asbestos in schools. Many of these

groups worked with EPA in developing the AHERA schools rule, and some have started their own educational efforts to improve understanding of the AHERA requirements and proper asbestos control practices.

The EPA Toxic Substances Control Act (TSCA) Hotline is available to answer your questions about the new AHERA regulations and about asbestos in general. You can obtain a variety of information by calling the TSCA Hotline at (202) 554-1404 or the asbestos hotline at (800) 471-7127. You can also visit our website at http://www.epa.gov/asbestos/asbestos_in_schools.html.

Finally, EPA has an asbestos ombudsman to help citizens with asbestos-in-schools issues, questions, and complaints. This office can be reached through a toll-free number at (800) 368-5888.