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THE ASBESTOS PROBLEM

An asbestos curtain was once the very symbol of safety and security. When primitive stage lighting made the risk of theater fires a constant worry, the presence of a fireproof curtain reassured audiences that a blaze could be contained long enough for them to escape it. Now the tables are turned; disease caused by asbestos has become a matter of serious concern.

Since antiquity, asbestos had been made into such items as permanent lamp wicks or novelty fabrics that would not burn. But early in this century, the use of asbestos grew like wildfire (so to speak). A potential health hazard was suspected very early, but it wasn't until the 1960's that its full magnitude became evident.

THE MATERIAL: Asbestos is a family of similar minerals that all occur naturally as a kind of soft rock made up of compressed fibers. One of the best insulators known, it protects what it covers from heat, corrosion, or electrical damage. It is also strong and durable. The mineral fibers can be handled in ways similar to vegetable fibers; they can be spun, made into felt, or bonded with other substances to form durable materials.

By now there are 3,000 uses of asbestos. Insulation for buildings is made from the material, huge amounts have also been used to insulate boilers and pipes in ships; automobile brake linings and clutch plates have been made of asbestos since the early 1900's. Asbestos has been incorporated into cement to strengthen it for use in pipes and other formed objects. Asbestos filters are used in the manufacture of some imported wines. For many years, hair dryers were insulated with the material. Until recently, asbestos was commonly incorporated into the spackling and taping compounds used for drywall construction. From 1946 to 1973, asbestos was added to coatings that could be sprayed onto walls or other structures in lieu of plastering them.

In all, some 30 million tons have been used in the United States since the beginning of this century, and by its end, according to one estimate, some half a million people will have died as a result of their exposure to asbestos.

THE PROBLEM: Asbestos produces disease only when it is inhaled (or possibly swallowed). Minuscule fibers of the material (some too small to be seen with a standard microscope) are drawn into the lungs. There the fibers are taken up by cells responsible for cleaning the air passages, but these fibers cannot easily be broken down for removal. Instead, the fibers remain in place or migrate slowly toward the periphery of the lungs. Some may even travel across the diaphragm into the abdominal cavity (peritoneum), whereas others probably arrive there after being swallowed.

It appears that asbestos creates problems solely because of its physical properties, not because of its chemical nature. The tiny size of asbestos particles is important, if they were larger, the frag-

LLA 000158

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The answer to the first question is reasonably straightforward for people who do not work with the material. Asbestos is only dangerous when it produces dust. Left undisturbed or bonded into durable slates, tiles, or other materials, it presents virtually no risk. But asbestos-containing insulation around pipes or boilers and in walls, wall coverings, or spackling compounds that are sawed, cut, sanded, or are exposed to damage from routine use, may give off considerable quantities of asbestos dust. Nobody should work with such materials unless he or she is adequately trained and is fully protected from inhaling the dust. Deteriorating asbestos materials should be removed, covered with an effective sealant, or enclosed under another covering. Expert advice is needed both to determine whether there is an asbestos problem in a given area and to choose the proper method for dealing with the hazard.

Spray-on wall coverings that contain asbestos present a special problem. This inexpensive technique was rarely used in homes but quite frequently in school construction. Water damage, heavy use, and occasionally vandalism have caused the coatings to begin disintegrating in some schools, and several states have begun programs to detect and correct the problem. Unfortunately such efforts are expensive and, all too often, underfunded.

People who work with asbestos and its products, including those who repair existing objects that contain the material or are covered with it — such as plumbers, shipyard workers, brake and clutch workers, construction workers — are entitled to protection from asbestos and the diseases it causes. They should be fully aware of the amount of asbestos dust that they breathe while they earn a living. Unfortunately, employers — both private industries and the government — have often been negligent, failing to inform employees about asbestos exposure or to protect them from it. Workers at risk of exposure should insist that the air they breathe be frequently sampled and analyzed by an appropriate method. Employers and workers should cooperate in bringing fiber counts in the air well below the current legal standard (2 million fibers per cubic meter), which is probably at least twenty times too high. Face masks and respirators are not as effective as ventilation control or improved handling, such as "wet processing."

The second question — what national action should be taken — is much more difficult to answer. There is no doubt that asbestos represents a major public health problem, one that extends beyond the large group of people who suffer from occupational exposure. Every possible way should be found to remove it from the human environment. But eliminating the substance from existing structures or from industrial applications may not be feasible for technical, economic, or political reasons. Meanwhile, there is controversy about the amount of asbestos exposure that is compatible with good health. Enforcing existing regulations, let alone more stringent ones, is difficult.

To date there has been no coherent, effective government program for dealing with the asbestos problem. Responsibility has fallen partly on the states and partly on several federal agencies. At a minimum, the federal government should be expected to take the initiative in developing a unified program to conduct research on asbestos diseases, measures to control exposures, and substitute materials. Technical advice and support should be offered to local control programs, and a policy should be developed for the future. Asbestos diseases become a medical problem only when it is too late to cure them. Preventing these diseases is a political challenge, not a medical one.

HIDDEN INGREDIENTS

Thousands of Americans every day consume a drug similar in structure to amphetamine ("speed") without knowing it. That sounds like a scare headline — but is in fact true. The drug in this case, is phenylpropanolamine — PPA for short — which is a common ingredient in dozens of cold and cough remedies of both the prescription and the non-prescription variety. (As such, PPA is no different from many other drugs that are consumed as ingredients in various cold remedies.) Recent articles in the British medical journal The Lancet point out that PPA has two actions which

LLA 000159