

## AN EPIDEMIOLOGY PUBLICATION OF THE OREGON DEPARTMENT OF HUMAN SERVICES

### PATIENTS EXPOSED TO ASBESTOS: WHAT'S A PROVIDER TO DO?

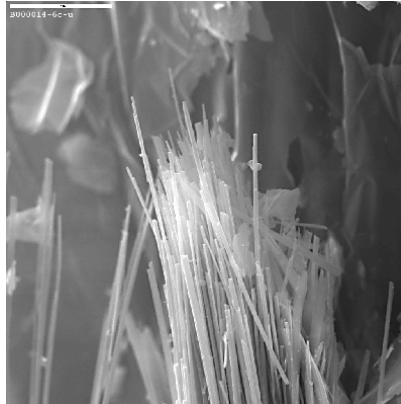
**A**SBESTOS has been widely used in products and materials for over 75 years. New use of asbestos is banned in the US, because exposure to it is now known to cause diseases such as asbestosis, lung cancer, and mesothelioma (uses established before the 1989 ruling, including brake pads, roofing materials, and vinyl tile are still allowed)<sup>1</sup>. Although this law has dramatically reduced exposure to asbestos, the legacy of widespread asbestos use in the past continues to plague us.

This issue of the *CD Summary* describes three communities where Oregon State Public Health is assessing health risks from asbestos exposure, and reviews medical screening options and recommendations for providers to use with patients potentially exposed to asbestos.

#### EXPOSURE TO ASBESTOS

In general, the more asbestos a person is exposed to, the greater the risk of developing an asbestos-related disease. People are mainly exposed to asbestos through breathing in microscopic fibers in the air, and these fibers can cause a spectrum of diseases that range from cancer to disorders associated with inflammation and fibrosis. While exposure has traditionally been viewed as happening in the work setting, it is now recognized that people living near areas where asbestos mining and product manufacturing occurred are also at risk for developing disease. Asbestos-containing materials are also commonly found in residential and office

buildings, and asbestos fibers can be released during the renovation and demolition of such structures, or during asbestos abatement procedures. For individuals living in areas contaminated with asbestos, there can be many ways to come into contact with fibers in the air.



*Amphibole asbestos – Higher cancer risk due to the brittle rod or needle-like shape that makes the fiber more likely to lodge in the lower lung.*

#### OREGON SITES

Oregon State Public Health is currently working with three Oregon communities affected by asbestos contamination.

The first is North Ridge Estates, a residential subdivision near Klamath Falls. Homes in this development were built on soil containing asbestos fibers and material from the demolition of more than 80 buildings on the site. In 2003, Oregon State Public Health documented that inhalation and ingestion of these fibers posed a potential health hazard to residents. Until a recent \$11 million settlement there were 77 residents, including 35 children, who lived in the subdivision; at present three households have

decided to continue to live in the subdivision. Although it is difficult to quantify the extent of exposure, residents and former residents of this site may have been exposed to asbestos.

The other two sites contaminated with asbestos are industrial sites at which vermiculite from Libby, Montana was processed. Vermiculite is a mineral that pops when heated and is used for various products including insulation and soil amendments. It is now known that the vermiculite from Libby contained asbestos. Two facilities in Portland processed vermiculite from Libby: the Vermiculite Northwest facility located in an industrial area in Northeast Portland, which operated from the early 1950's until 1993, and the Supreme Perlite facility located in an industrial area in North Portland, which processed vermiculite from 1968-1974. Workers at these facilities are likely to have been exposed to hazardous levels of amphibole asbestos while working in and around these facilities. In addition, household contacts of these workers are likely to have been exposed to asbestos brought home on the hair and clothing of workers. Oregon Public Health is in the process of identifying and informing potentially hundreds of former workers, their families and people who lived near these sites about their potential exposure. Although both sites were cleaned up by environmental agencies in 2001 and 2002, there have been many advances in the understanding of vermiculite cleanups, as well as fiber toxicity, since the



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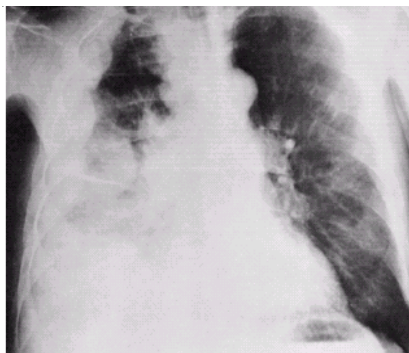
sites' initial cleanup. Oregon State Public Health has recommended that both sites be revisited by the EPA for further limited sampling to determine if additional cleanup is necessary.

#### MEDICAL SCREENING OPTIONS AND RECOMMENDATIONS

People who have been exposed to asbestos and are concerned about harmful effects should inform their medical provider so they can be offered appropriate preventive care, checked for early signs of disease, and provided treatment and advice. If the time since first exposure is greater than 10 years (the minimum latency for asbestos-related lung changes), or symptoms of respiratory disease (including the persistence or new onset of respiratory symptoms that could be correlated with loss of lung function) are present, practitioners often recommend persons in these groups consult with a specialist who has expertise in asbestos-related disease.

Asbestos-related conditions can be difficult to identify. Diagnosis of asbestos-related disease is based on clinical findings in conjunction with an appropriate history of exposure to asbestos and a documented latency period. Assessing the potential for exposure requires taking a thorough occupational and environmental history. This includes looking at the person's medical, work, cultural, and envi-

ronmental history. It is important to obtain exposure history information directly from the patient whenever possible to define the duration, intensity and exposure scenario experienced. For all patients who present with a history of exposure, a baseline, high-quality chest film and a spirometry test should be obtained<sup>1</sup>.



Chest X-Rays are the most common method of detecting asbestos-related disorders.

Practitioners should advise asbestos-exposed patients to follow these important steps for minimizing risks of asbestos-related disorders:<sup>2</sup>

- Minimize or avoid further exposure to any form of asbestos,
- Stop smoking and avoid tobacco smoke (secondhand) because tobacco smoke and asbestos are synergistic,<sup>3</sup>
- Get regular medical care, and
- Consider appropriate vaccines (such as influenza and pneumo-

nia) based on practitioner recommendations to prevent other pulmonary infections.

#### WHERE CAN I GET MORE INFORMATION?

Case Studies in Environmental Medicine: Taking An Exposure History [http://www.atsdr.cdc.gov/hanford/docs/exposure\\_history.pdf](http://www.atsdr.cdc.gov/hanford/docs/exposure_history.pdf).

NAER Community Site Kit for Health Care Professionals <http://www.atsdr.cdc.gov/naer/site-kit/healthprofessional.html>.

Information on vermiculite from Libby, Montana <http://www.atsdr.cdc.gov/naer/>.

EPA Asbestos Containing Consumer Products <http://www.epa.gov/reg3wcmd/asbestoslist.htm>.

EPA's Asbestos Homepage <http://www.epa.gov/asbestos/>.

American Thoracic Society's Diagnosis and Initial Management of Nonmalignant Diseases Related to Asbestos <http://www.thoracic.org/sections/publications/statements/pages/eoh/asbestos.html>.

#### REFERENCES:

1. American Thoracic Society. 2003. Diagnosis and initial management of nonmalignant diseases related to asbestos. [www.atsjournals.org](http://www.atsjournals.org).
2. Agency for Toxic Substances and Disease Registry. 2003. Diagnosis and treatment of asbestos-related illnesses. Atlanta: US Department of Health and Human Services.
3. World Health Organization. Health effect of interactions between tobacco use and exposure to other agents. Inter-Organization Programme for the Sound Management of Chemicals. Geneva, 1999.