

# Mesothelioma: The Deadly Legacy of Asbestos

To provide hope and life-saving treatment to the thousands of Americans dying each year from asbestos-caused mesothelioma, a *federal investment* in medical research is critical. Asbestos must be banned in the United States to protect future generations from increased proliferation of this deadly disease.

## Mesothelioma: A Cruel Killer

Mesothelioma is an extremely painful, almost always fatal cancer in which membrane cells (mesothelium) lining the chest or abdomen become malignant and proliferate uncontrollably. The resulting tumor thickens and hardens, crushing the lungs and suffocating the patient, invading the chest wall so that even breathing is excruciating, or invading the heart, aorta or other vital organs and causing catastrophic failure.

## Everyone Is at Risk

Mesothelioma is the tragic legacy of the industrial and commercial use of asbestos. Advertised as “the miracle mineral” because of its excellent fireproofing, insulating, filling and bonding properties, asbestos was used virtually everywhere in industry, manufacturing and construction from the 1930s through the late 1970s, *even as* its carcinogenic and respiratory lethality was well known to medicine, industry and the government. At its peak usage, more than 3,000 industrial applications or products were listed as utilizing asbestos. (For more information, see <http://ntp.niehs.nih.gov/ntp/roc/elevnth/profiles/s016asbe.pdf> )

As a result, over 20 million American workers suffered dangerous exposures and are at risk of mesothelioma today, according to the Environmental Protection Agency (EPA). When the workers brought the fibers home on their skin, hair and clothes, their families were exposed also. Asbestos was prevalent on Navy ships, and servicemen and shipyard workers were heavily exposed. A study at the Groton, Connecticut shipyard found that over one hundred thousand workers had been exposed to asbestos over the years at just this one shipyard.

Mesothelioma has a long latency (ten to 50 years), and even low-dose, incidental exposures to asbestos are sufficient to cause the cancer. Thus, the prolific exposures of the past are leading to an epidemic of disease today. Minnesota Congressman Bruce Vento worked near an asbestos-insulated boiler in a Minneapolis brewery for two summers while putting himself through college. In October 2000, he was diagnosed with mesothelioma, and died just ten months later. According to the most recent data released by the Centers for Disease Control and Prevention, in 2004, approximately 2,700 Americans died from mesothelioma, and incidence still has not peaked.

Millions more Americans are being put at risk today, because of all of the asbestos that remains present in occupational settings; in buildings such as homes, offices and schools; and in a wide variety of products. Just one product, an insulation contaminated with a very dangerous form of asbestos, is estimated by the EPA to be in 30 million U.S. homes. The EPA estimates that there are asbestos containing materials in most of the

nation's approximately 107,000 primary and secondary schools and 733,000 public and commercial buildings. According to the US Department of Labor's Occupational Safety and Health Administration (OSHA), an "estimated 1.3 million employees in construction and general industry face significant asbestos exposure on the job." (For more information, see <http://www.osha.gov/SLTC/asbestos/>) The utility tunnels under our nation's Capitol have hazardous levels of asbestos, and demonstrate just how pervasive the problem is.

In fact, asbestos still has not been banned. Every year, the hazards of asbestos increases as more of the carcinogen is introduced into our environment. Asbestos is still used in roofing and other building materials, and in many consumer products including vehicle brakes. As a result, everyday occurrences like going to work, simple remodeling projects, or the normal wear of roofing materials, tiles or brakes on a family vehicle are exposing Americans to the hazardous risk of mesothelioma.

### **Needed: A National Commitment to a Cure**

Mesothelioma was identified in medical literature by the late 1940's. However, for decades the need for research to develop effective treatments for mesothelioma patients was ignored, obscured by the legal, economic and political aspects of asbestos. The National Cancer Institute's annual investment in clinical mesothelioma research has been, on a per death basis, only a fraction of its investment in other cancers. For years, despite the disproportionate toll of the disease on Navy veterans and shipyard workers, the Department of Defense did not apply any of its vast biomedical research resources to mesothelioma. As a result of the Meso Foundation's advocacy efforts, in 2008 mesothelioma investigators are for the first time eligible to compete for Department of Defense Peer Reviewed Medical Research Grant funding. No mesothelioma grants have yet been awarded, however.

As a result, advancements in the treatment of mesothelioma have lagged far behind other cancers. According to the National Institutes of Health, the median survival of mesothelioma patients is only 14 months, with most patients dying within two years.

But there is hope.

Since 1999, the Mesothelioma Applied Research Foundation has awarded over \$5 million to spur mesothelioma research forward. Researchers are gaining valuable understandings of the tumor and potential treatment targets, and new clinical trials are opening. The field is ripe for federal partnership. Federal investment in the research needed to develop earlier detection and more effective treatment is essential to provide hope to the thousands of Americans who will become sick as a result of asbestos exposures that have already occurred or that will inevitably occur given the virtual ubiquity of asbestos in our environment.

The proliferation of asbestos and asbestos-disease must be stopped. Over 40 industrialized countries have already banned asbestos; the United States should also protect its citizens by enacting an immediate asbestos ban.