Exposure to Asbestos

A RESOURCE FOR VETERANS, SERVICE MEMBERS, AND THEIR FAMILIES

To help WRIISC best respond to the concerns of Veterans and health care providers, we've compiled a list of frequently asked questions.

WHAT IS ASBESTOS?

Asbestos is a fibrous mineral that occurs naturally in the environment. Asbestos has good heat resistant and strength properties. Given these characteristics, asbestos has been used in a wide range of manufactured goods, including building materials (roofing shingles, ceiling and floor tiles, paper products, and asbestos cement products), friction products (automobile clutch, brake, and transmission parts), heat-resistant fabrics, packaging, gaskets, and coatings. In July 1989 the Environmental Protection Agency issued a final ruling banning most asbestos materials use, because of the health risks associated with asbestos exposure.

WHAT ARE THE SOURCES OF ASBESTOS EXPOSURE FOR SERVICE MEMBERS?

In the past, the military used many asbestos containing materials (ACM) because of their excellent heat resistance, insulation, and fireproofing capabilities. Some of the ACM that the military used included brakes, gaskets, valves, cements, adhesives, and floor and pipe coverings called lagging. The Navy also used ACM in its shipyards and ships that were built before the mid-70s. The ships often contained multiple ACMs in the engine and boiler rooms and other areas below deck for fire safety purposes.

HOW ARE SERVICE MEMBERS EXPOSED TO ASBESTOS?

Because asbestos has been so widely used in our society, most people have been exposed to some asbestos at some point in time. Asbestos is most hazardous when it is friable. This means asbestos material that is easily crumbled by hand, thus releasing fibers into the air. People are exposed to asbestos when ACMs are disturbed or damaged, and small asbestos fibers are dispersed in the air. These fibers may get into the lungs through the air that we breathe. Individuals who only have contact with intact ACM (that is not fraying, peeling, or falling apart) are not expected to be at risk for asbestos exposure.

Service members at risk for asbestos exposure may include:

- Those involved in demolition of asbestos-containing structures and/or removal of asbestos materials either before or after 1970.
- Navy Veterans who served on ships whose keels were laid before 1983.
- Navy Veterans who worked in shipyards from the 1930s through the 1990s when ACM was widely used in ship building and in construction materials.
- Navy personnel who regularly worked below deck before the early 1990s since asbestos was often used below deck and the ventilation was often poor.
- Navy Veterans who were frequently tasked with removing damaged asbestos lagging in engine rooms and those using asbestos paste to re-wrap the pipes.
- Veterans who handled damaged ACM.
- Pipe fitters, welders, boiler operators, building renovation and demolition specialists who worked in these occupations may have had exposure.
- Service members who served in Iraq and other countries who may have been exposed to asbestos when older buildings were damaged, and the asbestos released into the air.

HOW CAN ASBESTOS AFFECT MY HEALTH?

Whether a Veteran develops health effects because of their asbestos exposure depends on several factors.

- The **amount and duration** of exposure. People who breathe in high levels of ACM and/or lower levels over long periods of time are at greatest risk.
- **Whether or not you smoke.** If you smoke and have been exposed to asbestos, you are far more likely to develop asbestos related problems than someone who does not smoke and who has not been exposed to asbestos.
- **History of a pre-existing lung condition.** If you have an underlying lung condition and are exposed to asbestos, you may be at greater risk.
- **Age.** Studies have shown that the younger people are when they inhale asbestos (and the longer and more intense the exposure), the more likely they are to later develop asbestos related problems.

Asbestos can cause several health effects. Mainly these health effects involve the lungs or membranes around the lungs. Asbestos related health effects are:

- **Pleural plaques.** These are scars of the lining that surround the lungs (called the pleural membrane). Finding pleural plaques on a chest X-ray or a chest Computed Axial Tomography (CAT) scan is considered proof that asbestos exposure did occur sometime in the past. In the overwhelming majority of cases, pleural plaques do not cause any symptoms at all.

- **Asbestosis** is a condition in which the asbestos fibers that were inhaled cause the lung tissue to scar up and cause lung tissue to become thick, stiff, and scarred. Asbestosis is a serious disease which can progress and cause symptoms like shortness of breath, chronic cough, and other effects. There is a higher risk of lung infections and pneumonia in persons with asbestosis.

- **Cancer.** High and/or low levels of prolonged exposure to ACM may cause cancer. There are two types of respiratory cancer caused by exposure to asbestos:
  Mesothelioma is a cancer that affects the mesothelium (a thin membrane that covers and protects most of the internal organs of the body). Lung Cancer is a type of cancer that forms in the tissues of the lung. This is the same type of cancer that develops in cigarette smokers, and people exposed to high radon levels. It is not unique to people with asbestos exposure. This type of lung cancer occurs much more than mesothelioma in asbestos exposed individuals ***Cancer from asbestos does not develop immediately.*** It usually does not manifest for 20 to 30 years or more after the onset of exposure. People who smoke and are exposed to asbestos have an increased risk of developing lung cancer. Other cancers linked with asbestos exposures include cancers of the pharynx, larynx, stomach, ovary, and colon and rectum.

IS THERE A TEST FOR ASBESTOS AND WHAT DOES IT SHOW?

A thorough exposure history, physical exam, and diagnostic tests are needed to diagnose an asbestos- related condition. A chest x-ray is a useful screening tool to identify lung changes resulting from asbestos exposure. In persons with high and/or prolonged exposures to asbestos, scarring of the lung tissue (asbestosis) may be seen on chest-x ray many years after their first exposure to asbestos. Pulmonary function tests (PFTs) and CT scans may assist in the diagnosis of asbestosrelated lung disease. Individuals who had high or prolonged exposures to ACM are encouraged to follow-up periodically (every 1-2 years) with their physician to monitor their symptoms and determine the need for further diagnostic testing.

WHAT CAN I DO IF I HAVE HEALTH CONCERNS RELATED TO ASBESTOS?

Being exposed to asbestos does not mean that you will develop health problems. If you are a Veteran who believes that you may have been exposed to asbestos, it is important to remember the following:

- If you smoke, get help with quitting. The combination of cigarette smoke and asbestos together significantly increase your chances of getting lung cancer and asbestosis. If you have been exposed to ACM, this may be the most important action that you can take to improve your health and decrease your risk of asbestos-related lung problems, since there is no way to reverse the exposure.
- Schedule regular medical examinations with your primary care doctor.
- Keep up to date with your vaccinations (for example, flu shot, and pneumonia vaccine, if indicated).

WEB SITE RESOURCES:

- Agency for Toxic Substances and Health Registry
  https://wwwn.cdc.gov/TSP/ToxFAQs/ToxFAQsDetails.aspx?faqid=29&toxid=4
- National Academy of Medicine
  https://nap.nationalacademies.org/catalog/11665/asbestos-selectedcancers
- United States Department of Labor Occupational Safety and Health Administration
  https://www.osha.gov/sites/default/ files/publications/OSHA3507.pdf

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