



Hanford Occupational Health Services

Preventing Asbestos Health Effects

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Asbestos can be found in many natural and manufactured materials. Mined from natural deposits in many parts of the world, this mineral—a kind of silicate existing in six different crystalline forms—has been used for centuries for everything from wrappings for kings who were to be cremated to the many fire-retardant and insulating components in modern industry. But because of health effects that come from breathing in the fine fibers that make up this otherwise very useful mineral, the United States and other countries have banned its use in many products. It still exists, though, in many older structures and manufactured components, as well as in nature, thus presenting a potential hazard to those living or working with or around it. As with most toxic substances, “the dose makes the poison,” meaning that the more exposure there is to asbestos fibers, the more likely the development of lung health effects.

Lung diseases caused by asbestos inhalation include lung cancer, mesothelioma—a rare cancer of the lining of the lung, and chronic obstructive pulmonary (lung) disease (COPD)—similar to that caused by tobacco and other smoke, coal and rock dust, and other air pollutants. Smoking tobacco greatly increases the risk of lung cancer from asbestos. The best “treatment” for asbestos health effects—as for so many other illnesses—is prevention. Avoiding exposure to asbestos is key in preventing lung disease. Prohibition of use in many items sold in the U.S. has reduced the

risk of exposure considerably. Workplace exposure, however, can still be a concern, particularly during renovation or demolition of structures containing asbestos. For that reason, OSHA and other regulatory agencies have defined the amounts of asbestos fibers to which workers are permitted to be exposed, minimizing the risk of health effects.

Many of the buildings on the Hanford Site contain or contained materials made with asbestos in varying amounts. For that reason, strict controls are in place to protect workers from exposure. While there are no medical tests that can determine recent exposures, evaluation over time can indicate if there is development of effects on the lungs. It takes years for lung diseases to occur after repeated, unprotected exposures to elevated air levels of asbestos. Workers who might be exposed to asbestos must complete training and follow strictly delineated and monitored protocols; they are also placed into the Asbestos Current Worker Program with CSC Hanford OHS. This program provides a periodic evaluation—particularly of the pulmonary (lung) system—to assure that lung disease is not developing. In addition, any worker who thinks that (s)he might have been exposed to asbestos may be enrolled in the Asbestos Worker Previous Exposure program which offers the same evaluation. (Former asbestos workers are automatically entered into the “Previous Worker” program, as triggered by their EJTA modification.) For further information, see the [CSC website](#) or call or email [Dr. Sandy Rock](#) (509) 372-0407. Also, see: