Asbestos Quiz

QUESTION

What is asbestos’

ANSWER

Asbestos is a group of naturally occurring silicate minerals. Mined and milled from native rock, asbestos is fibrous, thin, and strong. Chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite fibers are the most common types of asbestos minerals. However, only chrysotile, crocidolite, and amosite varieties are of industrial importance. Characteristics, like heat resistance, chemical inertness, and insulating capacity, coupled with the flexibility to be woven make asbestos suitable for use in many industrial applications.

WHY IS IT RIGHT

Exposure Asbestos Fibers

When handled, asbestos can separate into microscopic-size particles that remain in the air and are easily inhaled. Persons occupationally exposed to asbestos have developed several types of life-threatening diseases, including **asbestosis, lung cancer and mesothelioma**.

Asbestos may be found in products like floor tiles, roof shingles, cement, and automotive brakes. Electrical, plumbing, acoustical, and structural insulation applications are also

very common. Asbestos fibers are released into the air when these products are disturbed.

Health Effects of Fibers Entering a Body

Breathing asbestos-containing air into the lungs is the exposure route of greatest concern. Some of the asbestos fibers reaching the lungs are eliminated in exhaled air and others are coughed from the lungs with mucous. The fibers reaching the deepest air passages of the lungs can produce the greatest damage.

The digestive system can be exposed to asbestos fibers from drinking water and mucous cleared from the lungs. A small number of fibers may penetrate the cells that line the digestive system, but only a few will reach the bloodstream. These fibers will be released in the urine. Asbestos fibers contacting the skin rarely pass through the skin into the body.

PREVENTION

There are 5 principal ways to eliminate and/or reduce occupational exposure of asbestos

- **Work Practices and Procedures –** In order that asbestos exposure is minimized/eliminated, the employer must develop and use appropriate, protective work practices and procedures. Issues of concern would include housekeeping procedures, wet-cleaning and vacuuming asbestos-containing waste and debris, and disposal of asbestos waste. Adherence to protective work practices and procedures is extremely important and necessary.
- **Monitoring –** The employer must conduct air monitoring sampling or tests to determine levels of airborne asbestos in all workplaces that contain either asbestos-containing products or presumed asbestos-containing products. In addition, the employer must notify the affected workers in writing or by posting the monitoring

results in an appropriate and accessible location (e.g., an employee bulletin board) within fifteen days of receipt of the results. Workers must be allowed access to any record concerning their exposure to asbestos. The employer must keep records of asbestos exposures for at least 30 years.

- **Medical Surveillance –** Employers must institute a medical surveillance program for all workers who are exposed to airborne asbestos concentrations at or above either the standard's time-weighted average (TWA) or excursion limits. Pre-placement medical exams must be provided affected workers before they are assigned to perform work in areas where levels of airborne asbestos fibers have been identified at or above the standard's TWA or excursion limits. In addition, follow-up medical examination must be provided annually. Medical examinations must also be provided affected workers within 30 calendar days before or after the termination of employment. The above asbestos medical exams must include a medical and work history, chest x-ray, and lung function tests.

Further, employers must keep workers' medical records for at least 30 years. Employees or former employees have the right to request that her/his medical records be made available to other doctors. Workers who change jobs should inform their doctor about their exposure to asbestos.

- **Personal Protective Equipment –** When airborne asbestos exceeds the OSHA standard or excursion limit, the employer must provide workers with personal protective equipment such as clothing, gloves, gauntlets, boots, head and foot coverings, and, where necessary, air-supplied respirators. The employer is also responsible for cleaning, maintaining, and disposing of all personal protective equipment. CWA members who regularly work at a single location where they are exposed to excessive

amounts of asbestos must be provided with change rooms. These must have two separated lockers or containers – – one for street clothes and one for protective clothes for each worker. Shower facilities must also be provided. Workers should shower at the end of each shift.

- **Training and Information –** Employers must develop and provide an asbestos training and information program to all workers who are exposed at or above the Asbestos Standard's permissible exposure and/or excursion limits. This program should include the toxicity of and health effects related to asbestos exposure; engineering controls and work practices; protective measures such as appropriate work practices, emergency and clean-up procedures, and personal protective equipment; the medical surveillance program; and a copy of the OSHA Asbestos Standard.

WHY IS EVERYTHING ELSE WRONG

ASBESTOS IS A HAZARD

Asbestos is made up of microscopic bundles of fibers that may become airborne when distributed. These fibers get into the air and may become inhaled into the lungs, where they may cause significant health problems. The greater and the longer the exposure, the greater the risk of contracting an asbestos related disease. These health problems include:

- **Asbestosis –** a lung disease first found in navel shipyard workers. As asbestos fibers are inhaled, they may become trapped in the lung tissue. The body tries to dissolve the fibers by producing an acid. This acid, due to the chemical resistance of the fiber, does little to damage the fiber, but may scar the surrounding tissue. Eventually, this scarring may become so severe that the lungs cannot function. The latency period (meaning the time it takes for the disease to become developed) is

often 25-40 years.

- **Mesothelioma –** a cancer of the pleura (the outer lining of the lung) and/ or the peritoneum (the lining of the abdominal wall). This form of cancer is peculiar because the only known cause is from asbestos exposure. The latency period for mesothelioma is often 15-30 years.

Cancer – caused by asbestos. The effects of lung cancer are often greatly increased by cigarette smoking (by about 50%). Cancer of the gastrointestinal tract can also be caused by asbestos. The latency period for cancer is often 15-30 years.