7 MINUTE Safety Trainer

The Hazards of Asbestos

GOALS

This safety session teaches employees to:

- Recognize the long-term deadly dangers of exposure to asbestos.
- Use a respirator and proper personal protective equipment (PPE) to protect themselves from asbestos exposure.
- Use engineering controls and proper work practices to avoid releasing asbestos.

Applicable Regulations: 29 CFR 1910.1001

1. **Asbestos was, and still is, a widely used substance.**
   - Its fibers are tough, flexible, heat- and fire-resistant, and it provides effective insulation and soundproofing.
   - It may be found in ceiling and floor tiles, insulation materials, in car brake and clutch linings, and in heat-resistant clothing.
   - When the fibers stay bonded together, asbestos is safe.
2. **Asbestos is a serious health hazard causing deadly illnesses that may take years to develop.**
   - Asbestosis is an untreatable lung disease causing shortness of breath. It may lead to death from cardiac or respiratory failure.
   - Mesothelioma is a cancer of the chest lining and is always fatal.
   - Since asbestos affects the lungs, it is especially dangerous to smokers.
3. **Asbestos is dangerous when it becomes friable—meaning that it crumbles and releases airborne fibers that can be inhaled or ingested.**
   - Floor tiles are usually safe unless they are sanded.
   - Sprayed-on insulation may deteriorate over time and release fibers.
   - Renovation and demolition projects are a prime source for the release of asbestos fibers and require rigid safety procedures.
4. **The Occupational Safety and Health Administration (OSHA) has set strict permissible exposure limits (PELs) for asbestos.**
   - Respirators are required for workers exposed to more than 0.1 fiber per cubic centimeter of air (0.1f/cc) averaged over an 8-hour workday and 1 (1f/cc) averaged for a 30-minute work period.
   - In addition to supplying respirators and protective clothing, employers must have a complete respiratory protection program, including employee training and annual retraining, employee medical evaluation and fit-testing.
5. **Where airborne asbestos exceeds OSHA's limits, employers must use engineering controls or work practices to reduce these levels.**
   - Local exhaust ventilation and dust collection systems are very important when a process uses saws, drills, or other tools that could release asbestos fibers.
   - Wetting asbestos is another effective way to keep fibers out of the air.

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- In addition, OSHA prohibits certain practices like sanding flooring materials that contain asbestos or using compressed air to remove asbestos or asbestos-containing materials without a ventilation system to capture the dust.

6. Regulated areas are areas where airborne asbestos levels exceed OSHA's limits.

- These areas must be set aside and warning signs must be posted that say the following:

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY
WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA

- No one is allowed to eat, drink, smoke, chew tobacco or gum, or apply cosmetics in these areas.
- Personnel must not leave the workplace wearing the protective clothing worn in the restricted area.

7. Good housekeeping will help keep these fibers out of the air and lungs.

- Keep all surfaces as free of asbestos-containing dust as possible.
- Use high-efficiency particulate air (HEPA) vacuums to clean up asbestos-containing material.
- Use wet-cleaning methods and dampen asbestos wastes before disposal.
- Dispose of all wastes in clearly labeled, closed containers.

DISCUSSION POINTS:

Discuss asbestos-containing substances, regulated areas, and processes involving asbestos exposure in the workplace. Demonstrate appropriate respirators and protective clothing and distribute copies of pertinent OSHA regulations. Discuss proper disposal of asbestos-contaminated waste.

CONCLUSION:

Asbestos can present a serious health hazard. Respirators and protective clothing must always be used when there is asbestos dust. Following proper safety procedures is necessary at all times.

TEST YOUR KNOWLEDGE:

Have your employees take the Hazards of Asbestos quiz. By testing their knowledge, you can judge their understanding of the rules for working safely with asbestos and whether they need to review this important topic again soon.

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QUIZ 1306

C-1E

THE HAZARDS OF ASBESTOS QUIZ

1. **Inhaling asbestos fibers is the major health hazard associated with asbestos.**
   a. True b. False
2. **If asbestos is not friable, it does not present an immediate danger.**
   a. True b. False
3. **Smoking greatly increases the risk of contracting a serious disease for people who work around asbestos.**
   a. True b. False
4. **You don't need a respirator—a dust mask will do—if you will be in a restricted area for less than 15 minutes.**
   a. True b. False
5. **You should wet asbestos waste before disposal.**
   a. True b. False
6. **Good housekeeping requires you to sweep up asbestos-containing waste frequently.**
   a. True b. False
7. **Employers are in compliance with Occupational Safety and Health Administration (OSHA) regulations if they supply their employers with respirators and protective clothing.**
   a. True b. False
8. **One engineering control that helps reduce airborne asbestos fibers is a good ventilation and dust control system.**
   a. True b. False
9. **Asbestos is still used widely because its fibers are tough, flexible, and heat- and fire-resistant.**
   a. True b. False
10. **Asbestosis and mesothelioma are two fatal lung diseases caused by exposure to asbestos.**
    a. True b. False

When you have completed this quiz, turn it in to your supervisor.

Name:_____ **Date:**_____

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ANSWERS TO THE HAZARDS OF ASBESTOS QUIZ

1. a. True.
2. a. True.
3. a. True.
4. b. False. You always need a proper respirator in a restricted area, even for a very short time.
5. a. True.
6. b. False. Do not sweep up asbestos waste—that only spreads the dust. Use a HEPA vacuum instead.
7. b. False. That is part of the OSHA requirement, but they also need a complete respiratory program including employee training, medical evaluation, and fit testing of respirators.
8. a. True.
9. a. True.
10. a. True.