Asbestos is the generic name that refers to six unique minerals:

- Chrysotile
- Amosite
- Crocidolite
- Anthophyllite
- Tremolite
- Actinolite
These naturally occurring mineral fibers were widely used in building materials, vehicle products, and insulation materials because of their strength and resistance to corrosion and heat.

Asbestos fibers are hazardous when workers are exposed to them:

- Inhalation of dust and fibers is the main route of exposure to asbestos
Activities that disturb asbestos-containing materials can release asbestos fibers into the air, allowing the fibers to be inhaled by workers.
Activities that may disturb asbestos-containing materials include:

- Manufacturing asbestos-containing products
- Performing brake or clutch repairs
- Renovating or demolishing buildings or ships; or cleanup from these activities
- Contact with deteriorating asbestos-containing materials
- Cleanup after natural disasters
Asbestos exposure can lead to **serious health effects** that cause death, including:

- Chronic lung disease
- Asbestosis (scarring of lung tissue)
- Lung cancer
- Mesothelioma (cancer formed in the lining of the lung)
The Occupational Safety and Health Administration (OSHA) has the following exposure limits for asbestos:

- Permissible exposure limit (PEL) of 0.1 fiber per cubic centimeter of air as an 8-hour time-weighted average
- Excursion limit (EL) of 1.0 fibers per cubic centimeter over a 30-minute period
Companies must make sure workers are not exposed to asbestos above exposure limits.

Companies must perform assessments and monitor workers to determine if exposure is at or above the PEL or EL if workers can be expected to be exposed to asbestos.
**Requirements** for workers to be provided with medical surveillance depend on the industry.

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<th>General Industry</th>
<th>Construction and Shipyards</th>
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<td>Must be provided with medical examinations if they experience exposure at or above the PEL</td>
<td>Must be provided with medical surveillance if they engage in certain classifications of work OR experience exposures at or above the PEL</td>
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Materials suspected to contain asbestos should be left alone and an assessment of the worksite must be done to determine if:

- Asbestos is present
- The work to be performed will create airborne fibers above the PEL
Materials presumed to contain asbestos, especially if installed before 1981, include:

- Thermal system insulation
- Roofing and siding shingles
- Vinyl floor tiles
- Plaster, cement, putties, and caulk
- Ceiling tiles and spray-on coatings
All workers who work in areas with presumed asbestos-containing materials but not at the PEL must have asbestos awareness level training.

All workers who are exposed at or above the PEL must be properly trained before work begins and on a yearly basis in order to work with asbestos-containing materials.
Do not perform work in or on any area that contains asbestos unless you are properly trained to do so.
Companies must use engineering controls and safe work practices to **reduce worker exposure** to the lowest level achievable through methods that include:

- Negative air pressure ventilation/filtration (HEPA) equipment
- Wet removal techniques
- Enclosure techniques
- Glove and bag use
- Good housekeeping
If engineering controls and safe work practices cannot reduce exposures below the PEL:

- Workers must be provided with and use proper personal protective equipment (PPE) to prevent exposure, including respiratory protection.
Companies must use proper hazard communication and mark areas that have exposures above the PEL or EL with warning signs.

Workers should not eat, drink, or smoke in these areas.
Asbestos is a **serious health problem** when workers are exposed above safe exposure limits.

If you suspect your work may be exposing you to airborne asbestos, **alert** your company so that the proper assessment can be done.
If the assessment determines that asbestos exposure is at or above the PEL, training, engineering controls, safe work practices, and PPE must be used to reduce exposure below the PEL.

Your lungs are a vital part of your life, make sure you protect them.
1. ____________ is the generic name that refers to six unique minerals.
   A. Asbestos
   B. Silica
   C. Hydrogen sulfide
   D. Benzene

2. ____________ of dust and fibers is the main route of exposure to asbestos.
   A. Ingestion
   B. Injection
   C. Inhalation
   D. Skin absorption

3. Asbestos exposure can lead to serious health effects that cause death, including chronic lung disease, lung cancer, mesothelioma, and ____________.
   A. Silicosis
   B. Asbestosis
   C. Kidney disease
   D. Hepatitis B

4. Activities that may disturb asbestos-containing materials include ____________.
   A. Manufacturing petroleum products
   B. Renovating or demolishing buildings or ships
   C. Constructing new housing developments
   D. Performing work on diesel engines

5. OSHA’s asbestos permissible exposure limit (PEL) is ____________ fiber per cubic centimeter of air as an 8-hour time-weighted averaged.
   A. 0.1
   B. 0.2
   C. 0.3
   D. 0.4

6. OSHA’s excursion limit (EL) for asbestos is ____________ fibers per cubic centimeter over a 30-minute period.
   A. 1.0
   B. 2.0
   C. 3.0
   D. 4.0

7. ____________ must make sure workers are not exposed to asbestos above exposure limits.
   A. Short service employees
   B. Mentors
   C. Companies
   D. Manufacturers

8. Materials suspected to contain asbestos should be ____________ and an assessment of the worksite must be done.
   A. Tagged out
   B. Destroyed
   C. Immediately removed
   D. Left alone

9. All workers who are exposed at or above the PEL must be properly trained before work begins and ____________ in order to work with asbestos-containing materials.
   A. Every 18 months
   B. Every 6 months
   C. On a yearly basis
   D. Every 2 years

10. Companies must use proper hazard communication and mark areas that have exposures above the PEL or EL with ____________.
   A. Lockout/tagout
   B. Pictograms
   C. Product labels
   D. Warning signs
Instructors: The following key shows the answers for the Asbestos safety meeting quiz.

1. A  
2. C  
3. B  
4. B  
5. A  
6. A  
7. C  
8. D  
9. C  
10. D
# Student Roster

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<th>SAFETY MEETING DATE</th>
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Student Instructions: Print and sign your name. Also, provide your date of birth or the last four digits of your social security number.

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