

Asbestos Awareness Training



Murray State University

Department of Facilities Management

Office of Environmental Safety & Health

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Training Topics

- Forms and Uses
- Health Effects
- Potential Locations
- Who is at Risk
- Protecting Yourself
- Controlling Exposure

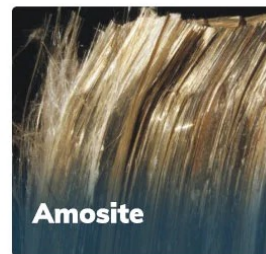
Basic Facts

- ▶ Asbestos is a mineral that comes apart into fibers.
- ▶ Asbestos is dangerous when it is in the air and you inhale it.
- ▶ It is very easy to get asbestos in the air.
- ▶ Asbestos can kill you, but you can protect yourself.



Forms and Uses


- Chrysotile (white asbestos) – used as insulation, fireproofing, and soundproofing
- Amosite (**brown asbestos**) – used in high-friction applications such as brake shoes and clutches
- Crocidolite (**blue asbestos**) – not as common as the other two forms





Recognizing Friable Asbestos

- **Friable asbestos** can be reduced to powder by hand pressure when it is dry. Sprayed-on asbestos insulation falls into this category.
- **Non-friable asbestos** is usually found bonded into other materials. Its fibers are harder to break down into powder but can still be released by cutting, grinding or sanding.

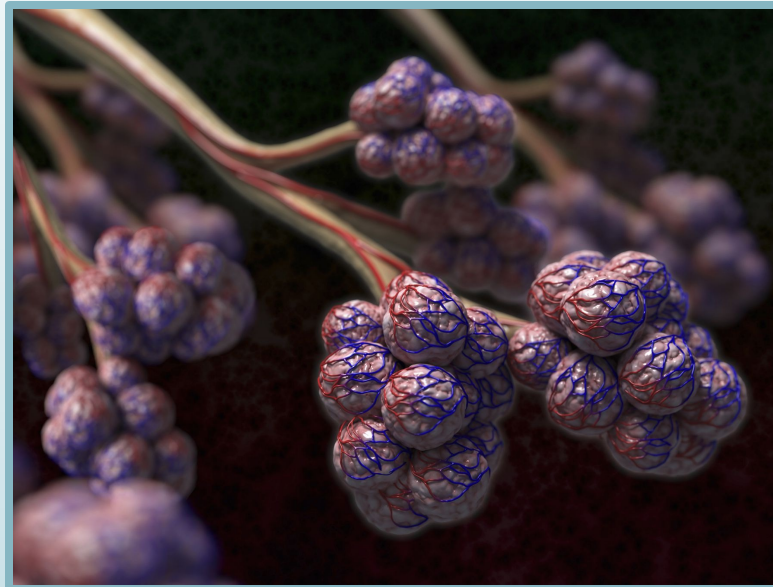


How Do Asbestos Fibers Enter Your Body?

- Asbestos fibers come from damaged materials containing asbestos
- These fibers enter your body when you breath, eat or drink
- They remain in your body for life
- The can cause deadly diseases


Health Effects

- ▶ If you inhale asbestos fibers, they can enter your lungs and lodge into tiny air sacs called “alveoli”. It is through these air sacs that oxygen enters the blood and carbon dioxide is removed.





Health Effects

- ▶ When asbestos fibers enter the alveoli, they irritate the membrane and leave scar tissue which oxygen cannot penetrate. This condition is called ***asbestosis***.
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Health Effects

- Another area that can be affected is the pleura – the membrane lining the lungs.
- Asbestos fibers may migrate from the lungs into the pleura and cause a cancer called ***mesothelioma***.
- It is not dose-related.



Health Effects

- There are no warning signs that asbestos is causing problems in your body.
 - Many harmful effects do not appear for 20 years or more.
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Health Effects

- Smoking can further increase the risk from asbestos exposure.
- Asbestos fibers irritate the lungs, making them even more sensitive to the risk of lung cancer.
- Smokers who have worked with asbestos face as much as 90 times the risk of cancer as non-smokers.



Dose-Related

- The more asbestos fibers you breathe or swallow, the more likely you are to get sick. This is called a dose relationship.
- The higher the amount of asbestos, the greater your chances of getting an asbestos disease.
- Mesothelioma is the exception.




Potential Locations

- ▶ Thermal system insulation, ducts, boilers, pipes
- ▶ Sprayed-on or troweled-on surfacing materials
- ▶ Asphalt & vinyl floors
- ▶ Suspended ceiling tiles
- ▶ Fireproof drywall
- ▶ Fireproof drapes and curtains
- ▶ Roofing felt & shingles
- ▶ Exterior siding shingles
- ▶ Sprayed-on fireproofing on beams
- ▶ High-temp gaskets & valve insulation



Who is at Risk?

- ▶ You don't have to work directly with asbestos to be at risk from exposure to airborne fibers. You may be exposed just by working in a building that contains the material.
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Who is at Risk?

- ▶ Your risk increases if:
 - ▶ Your work area contains friable asbestos, such as sprayed-on insulation.
 - ▶ You work near a construction or renovation area which contains asbestos.
 - ▶ You are engaged in maintenance or custodial activities in areas containing asbestos.



Protecting Yourself

- ▶ Never drill holes or hammer nails in ceilings or surfaced walls.
- ▶ Wear the proper PPE when removing ceiling tiles or light fixtures from suspended ceiling grids.
- ▶ Try to avoid scraping floor tiles, walls or disturb ductwork when moving furniture.

Protecting Yourself

- When removing ventilation system filters, do not shake the filters to remove the dust.
- Don't dust, sweep up debris or vacuum carpets in areas that may contain asbestos.
- If you find any material that you suspect may contain asbestos, notify your supervisor.



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Controlling Exposure

- ▶ Follow your workplace safety procedures and pay attention to asbestos warning signs.
- ▶ Always heed the labels on asbestos products or waste.
- ▶ Remember that good housekeeping practices are very effective in reducing your exposure to asbestos.



Summary



- ▶ Asbestos kills.
- ▶ Beware of material that easily crumbles containing asbestos.
- ▶ If you must work near asbestos, your goal is to prevent asbestos from becoming airborne.
- ▶ Regulated areas contain dangerous levels of airborne asbestos.