

# *Campus Training: Asbestos Awareness*

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# Purpose

Cultivate a higher safety conscience for the Bowie State University Community and ease concerns regarding asbestos abatements on campus.



# Asbestos Origins

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- Asbestos is a naturally occurring mineral fiber and was used in building materials as a good insulator
  - High chemical resistance
  - High electrical resistance

- It is commonly found in older buildings in materials such as pipe insulator, fire stops, floor tiles and floor tile glue.
- Initial ban in 1972, final ban in 1989 by EPA
  - Overturned in 1991, 114 metric tons of chrysotile imported Jan-March of 2022
  - 100 tons imported in entirety of 2021
  - 114 tons imported in 2023 and 100 tons in 2024
  - Main imports from Brazil and Russia
- EPA (under Biden-Harris admin), attempted to finalize ban ongoing use of chrysotile in March 2024
  - First rule finalized under 2016 amendments to Toxic Substances Control Act, U.S's chemical safety law





# Health and Asbestos

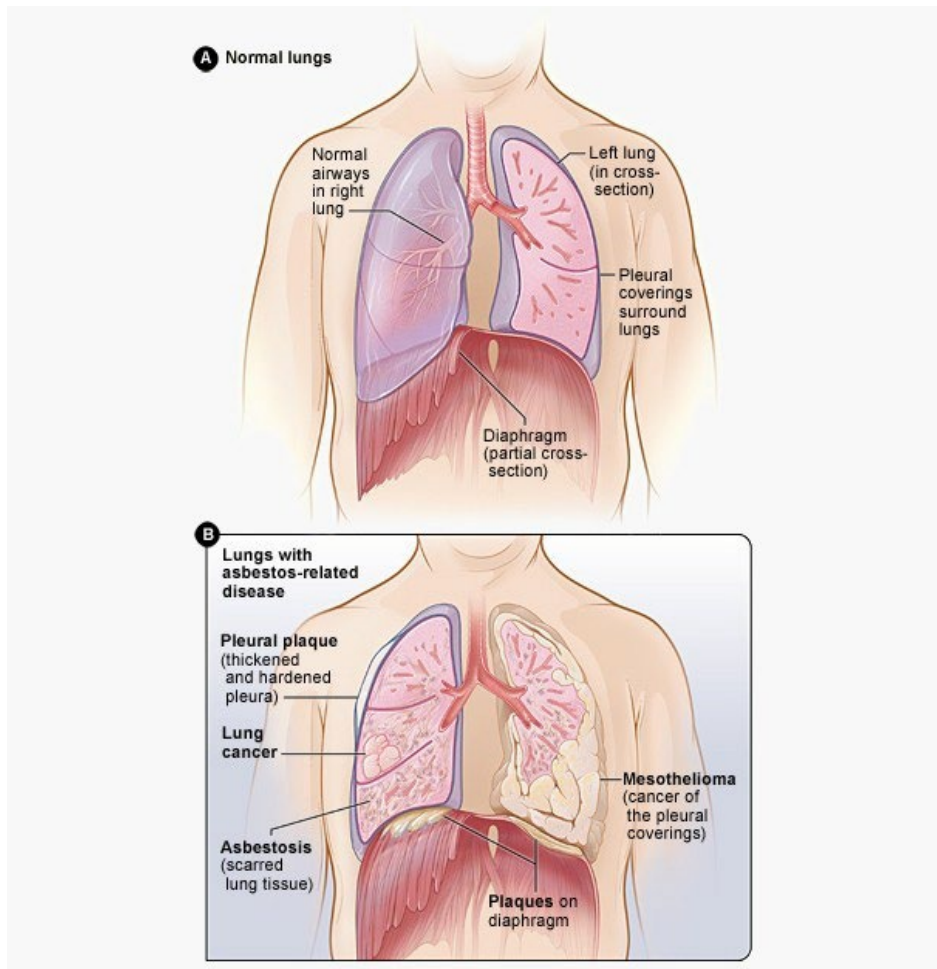
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- Naturally, our lungs are able to remove dust particles by coughing or filtering particles before they enter the lungs
- The large length to diameter ratio for asbestos fibers causes our lungs to have a harder time physically clearing the fiber.

- Some fibers get trapped and damage the lung tissue; this leads to disease like asbestosis and mesothelioma
- Does not dissolve or evaporate
  - Will stay suspended for hours or days



# Asbestosis vs Mesothelioma



- Asbestosis: scarring of air sacs
  - Body isolates fibers, forming scar tissue around them
  - Lungs can't send oxygen to bloodstream through scar tissue
  - Directly dose related
  - Develops 10 years after initial exposure

- Mesothelioma: cancer of the pleura, the thin membrane lining the lungs
  - Is not dose related
  - Rarest of asbestos related diseases
  - Will not show for 20+ years but is fatal within a year of diagnosis

# Why is it harmful?

- Asbestos fibers are tiny and long, and often will get stuck in the lungs, eventually preventing them from their filtering duties
- penetrate and damage lung tissue

<https://www.youtube.com/watch?v=te1YVChqcnw>

# Identifying Asbestos



- Fire Doors
- Insulation
- Fire Stop
- Vibrational Dampers
- Ceiling Tiles
  - 2'x2' or 2'x4' and rectangular or square
  - Pinhole markings, texturing, and powdery appearance
- Floor Tiles
  - 9"x9", 12"x12", and occasionally 18"x18"
- Black asbestos mastic
- PACM vs ACM
  - Presumed asbestos containing material
    - Installed before 1981 and hasn't been tested
  - Asbestos containing material
    - Has been tested
  - **TREAT ALL PACM AS ACM**

# Housekeeping Requirements



- Employees performing custodial/housekeeping activities must be informed of the presence and location of ACM (asbestos containing material) and PACM (presumed asbestos containing material)
- Records must be maintained of the presence, location, and quantity of ACM and PACM for each building for the duration of ownership
- Keep surfaces as free as possible of accumulations of waste containing asbestos or asbestos dust
- Treat thermal system insulation and sprayed-on and troweled-on surfacing materials as ACM, unless analyzed to confirm negative
- Treat asphalt and vinyl flooring installed up to 1980 as ACM, unless analyzed to confirm negative



# Disturbing Asbestos: What's the Risk?



- Fibers can become aerosolized - abatement workers face biggest risk
- Drilling, breaking, sawing, or cutting into asbestos containing materials increases risk of exposure

- Friable vs. Non-Friable:
  - Friable: any asbestos containing material that can be pulverized or crushed with hand pressure
  - Non-Friable: any asbestos containing material that cannot be crushed with hand pressure
  - Non-friable can turn friable through weathering, physical damage, or mechanical vibrations

# What are the regs?



- [MDE Regs](#)

## **MDE and COMAR**

- NESHAP size:
  - Submit a written notification to the MDE's Air and Radiation Management Administration at least 10 working days before commencing the project
  - Usually contractor's responsibility
- Larger than NESHAP
  - "Notice of Asbestos Project" posted at least 3 days prior to the start of work.
  - Displayed prominently at the project site.
  - Formatted according to specific typeface and size requirements as outlined in COMAR 26.11.21.06
- Keep comprehensive records of all asbestos-related activities, including:
  - Surveys and inspections
  - Notifications and correspondence
  - Air monitoring results
  - Waste shipment records

# Containment Process



- Is it safe to occupy a building where an abatement is occurring? YES, because:
  - HVAC and unnecessary electrical power isolated
  - 6-mil poly containment- negative pressure achieved
  - 3 room decon process
  - HEPA filters and air scrubbers
- The only space to avoid is the containment itself



# Abatement Process



- Disposable protective suits and respirators
- Amended water
  - Weighs down fibers
- HEPA filters and air scrubbers
- Air sampling
  - Ensures integrity of containment
- Final Clearance
  - Necessary for reoccupation
- **The only space to avoid is the containment itself**



# Deliverables

- Our contractors are required to be permitted for Asbestos and the workers are certified
- Our contractors are required to submit Activity Hazard Analysis in advance of mobilization
- Notifications are required throughout the building to inform the occupants what is going on
- The notifications are outside the enclosed space where the work happens

