

Archdiocese of Seattle

Safety Training 2023



Archdiocese of Seattle

ASBESTOS

Class 4 Worker Training



Class 4 Worker Training

Class 1: Asbestos Disturbed

Class 2: Asbestos Disturbed

Class 3: Asbestos Disturbed

Class 4: Maintenance and custodial work
where employees come into contact with
but do not disturb ACM



IMPORTANT to KNOW & DO!

- Get help from Property & Construction
- Know what materials are PACMs
- Handle PACMs as asbestos until told by AHERA inspector that it is not asbestos
- Get and provide a “Good Faith Survey” to those starting or bidding on building work.



Terms: "ACM" and "PACM"

Asbestos Containing Material

Any material containing more than 1% asbestos by weight.

Presumed Asbestos Containing Material

Installed prior to
1981

- Surfacing materials
- Thermal System Insulation
- Flooring

Must be handled as ACM unless proved otherwise



REGULATIONS

The “fail safe” factor

One must always assume “something”

IS asbestos,

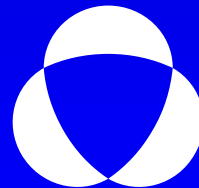
And an AHERA inspector is REQUIRED to
rule a PACM as not being asbestos!



What are the Laws?

- Washington State Department of Labor and Industries = **L&I** or LNI
- DOSH = Department of Safety and Health

“Work Procedures”



Washington State Department of
Labor & Industries



What are the Laws?

- US Environmental Protection Agency = **EPA**

AHERA

"Protect Students"
-the "GOLD STANDARD"

NESHAPS

"Protect the Environment"



What is Asbestos?

- It is a naturally occurring material
- The word "asbestos" comes from Greek meaning "inextinguishable."



What is Asbestos?

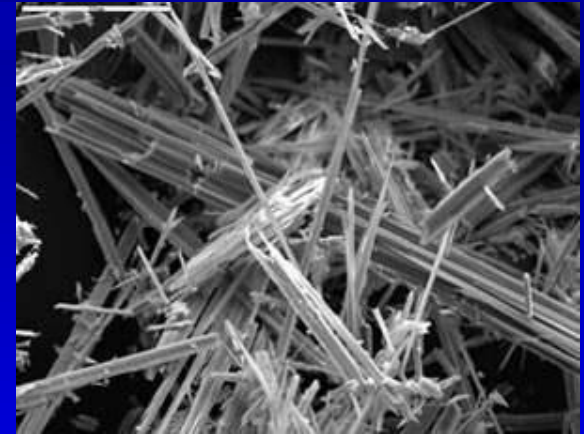
- It has been used in building materials because of its desirable properties, including it:
 - Is flexible, adds strength to materials and doesn't deteriorate
 - Doesn't burn – Good for fire proofing
 - Is a good heat insulator
 - Doesn't conduct electricity
 - Is resistant to chemicals



Types of Asbestos

Most commonly used:

- **Chrysotile** - "White asbestos"
- **Amosite** - "Brown asbestos"
- **Crocidolite** - "Blue asbestos"



Asbestos fibers, high magnification

Others:

"Blue Asbestos" -

Tremolite
(sometimes found in vermiculite)

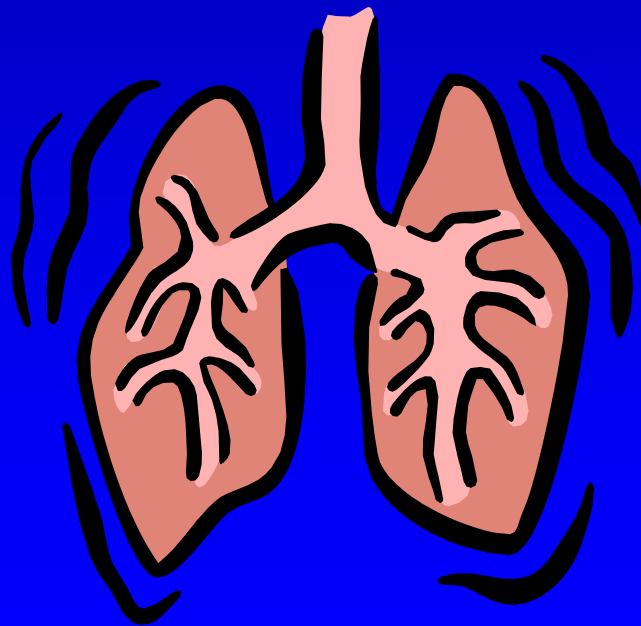
Actinolite

Anthophyllite



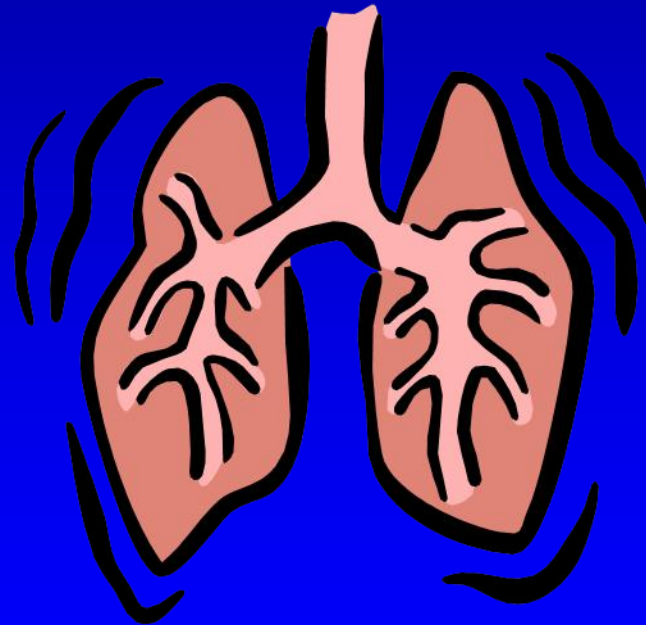
Why is Asbestos a Hazard?

- When inhaled, it can cause lung diseases



Asbestos Diseases

- Asbestosis
- Lung cancer
- Mesothelioma
- Other cancers



Diseases related to Asbestos Exposure

- Acute vs Chronic
- Usually symptoms take 15 to 30 years to develop
- Health effects from asbestos exposure may continue to progress even after exposure has stopped.



Dose Response Relationship

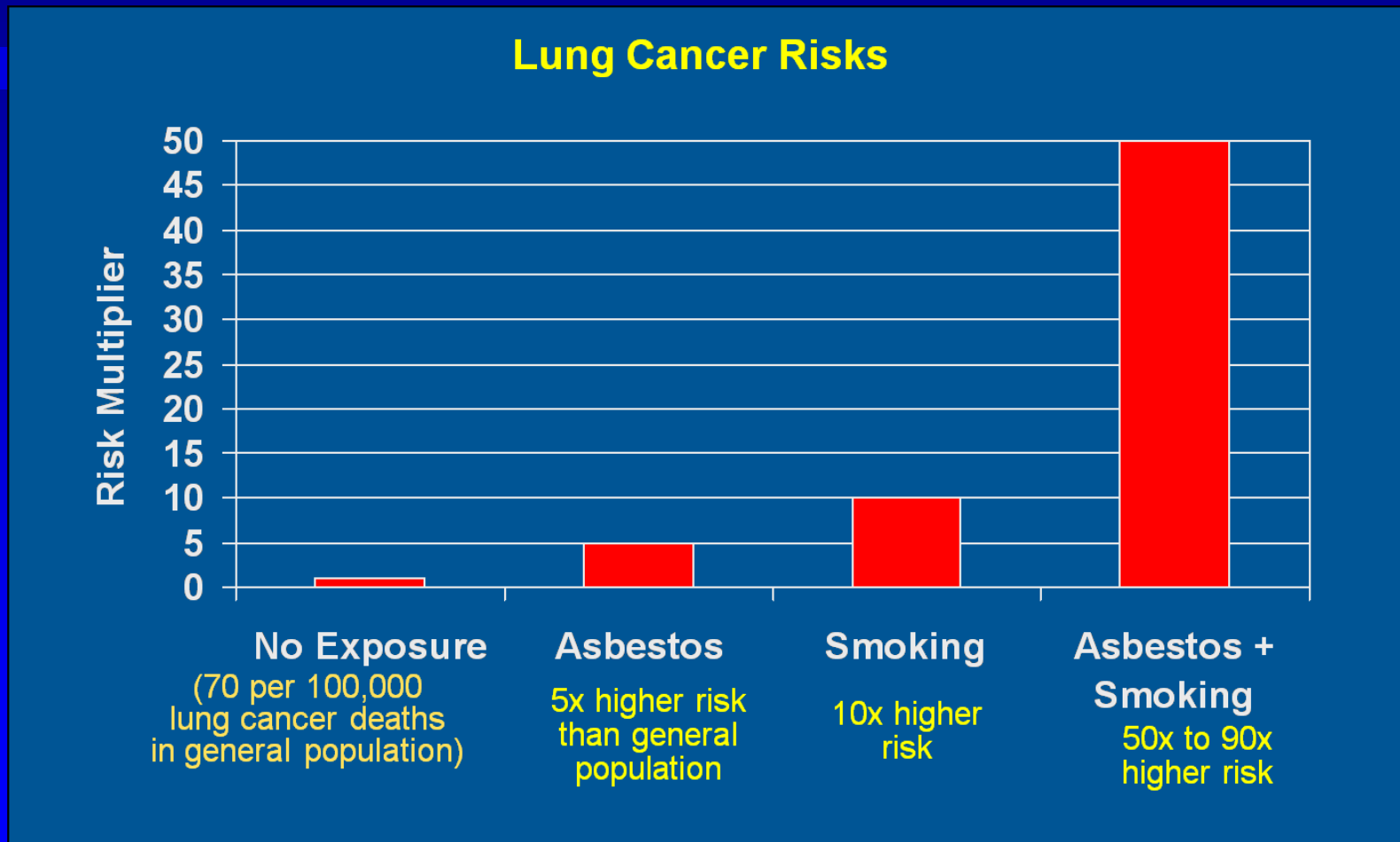


The potential for asbestos related disease depends on:

- Amount of fibers inhaled
- Length of exposure
- Whether exposed worker smokes
- Age – because of delayed effects



Lung Cancer Risks



Building Materials that may contain Asbestos

AHERA categorizes PACMs as:

1 - THERMAL SYSTEM INSULATION

- Pipe & Duct Insulation

2 - SURFACING MATERIAL

3 - MISCELLANEOUS MATERIALS



Building Materials that may contain Asbestos

THERMAL SYSTEM INSULATION

- Pipe & Duct Insulation



Building Materials that may contain Asbestos

THERMAL SYSTEM INSULATION

- Pipe & Duct Insulation



Duct Insulation Tape and "Mud"



Building Materials that may contain Asbestos

SURFACING MATERIAL

- Sprayed on Fireproofing



Building Materials that may contain Asbestos

MISCELLANEOUS MATERIALS



Building Materials that may contain Asbestos

MISCELLANEOUS MATERIALS

Roofing Material



Acoustical Spray-on ("popcorn ceiling")



Building Materials that may contain Asbestos

MISCELLANEOUS MATERIALS

Joint compound and plaster



Some Asbestos Containing Materials

- Cement Pipes
- Cement Wallboard
- Cement Siding
- Asphalt Floor Tile
- Vinyl Floor Tile
- Vinyl Sheet Flooring
- Flooring Backing
- Construction Mastics (floor tile, carpet, ceiling tile, etc.)
- Acoustical Plaster
- Decorative Plaster
- Textured Paints/Coatings
- Ceiling Tiles and Lay-in Panels
- Spray-Applied Insulation
- Blown-in Insulation
- Fireproofing Materials
- Taping Compounds (thermal)
- Packing Materials (for wall/floor penetrations)
- High Temperature Gaskets
- Laboratory Hoods/Table Tops
- Laboratory Gloves
- Fire Blankets
- Fire Curtains



Some Asbestos more Containing Materials

- Elevator Equipment Panels
- Elevator Brake Shoes
- HVAC Duct Insulation
- Boiler Insulation
- Breaching Insulation
- Ductwork Flexible Fabric Connections
- Cooling Towers
- Pipe Insulation (corrugated air-cell, block, etc.)
- Heating and Electrical Ducts
- Electrical Panel Partitions
- Electrical Cloth
- Electric Wiring Insulation
- Chalkboards
- Roofing Shingles
- Roofing Felt
- Base Flashing
- Thermal Paper Products
- Fire Doors
- Caulking/Putties
- Adhesives
- Wallboard
- Joint Compounds
- Vinyl Wall Coverings
- Spackling Compounds



How do asbestos fibers get in the air?

Physical disturbance of asbestos-containing materials can suspend fibers in the air.

Asbestos is most hazardous when it is “FRIABLE”.

- Friable: can be easily crumbled or crushed by hand, releasing fibers into the air
- Very small fibers stay in the air for long periods
- Damaged or deteriorated ACM increases friability



Photo of friable asbestos

Non-friable ACM (floor and ceiling tiles, house siding, fire doors, etc.) won't release fibers unless disturbed or damaged in some way.



"Good Faith" Inspection/Survey

- Required for all construction and maintenance in buildings that may contain asbestos:
 - Must be done by an EPA-accredited AHERA building inspector
 - documented written report
 - not required if assumed and treated as asbestos

- * Possible fines of \$250/day if not done or poorly done
- * Both building owner and contractor can be cited!



Who to Contact?

- Archdiocese Property and Construction Services:
 - propertyx@seattlearch.org

