Being Prepared to Work Safely with Asbestos Concrete Water Pipe

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The American Dreams

A Short Lesson in AC Pipe History

- WW II – Lack of metal pipe materials

AC Pipe History - Wonder Pipe

- 1940's – 1970's – AC Pipe
  - Material of Choice
  - Readily available
  - Reasonable costs
  - Easily handled

AC Pipe History

- Estimated that about 400,000 miles of AC Pipe was installed in North America
  - Estimated up to 15% pipes contain asbestos
- Use of AC Pipe largely discontinued in the early 1980s
- Rules developed to control use of ACM in 1984

Exposure to ACM Hazardous to Health

DANGER!!!

ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING REQUIRED IN THIS AREA

EPA Fines Boise Asbestos Abatement Company
October 1, 2009

The EPA fined **(Place your Name Here)** of Boise, Idaho, $36,000 for failing to properly handle asbestos during ….

A site inspection by the EPA found several violations, most notably failing to keep asbestos wet and preventing visible emissions to the outside air.

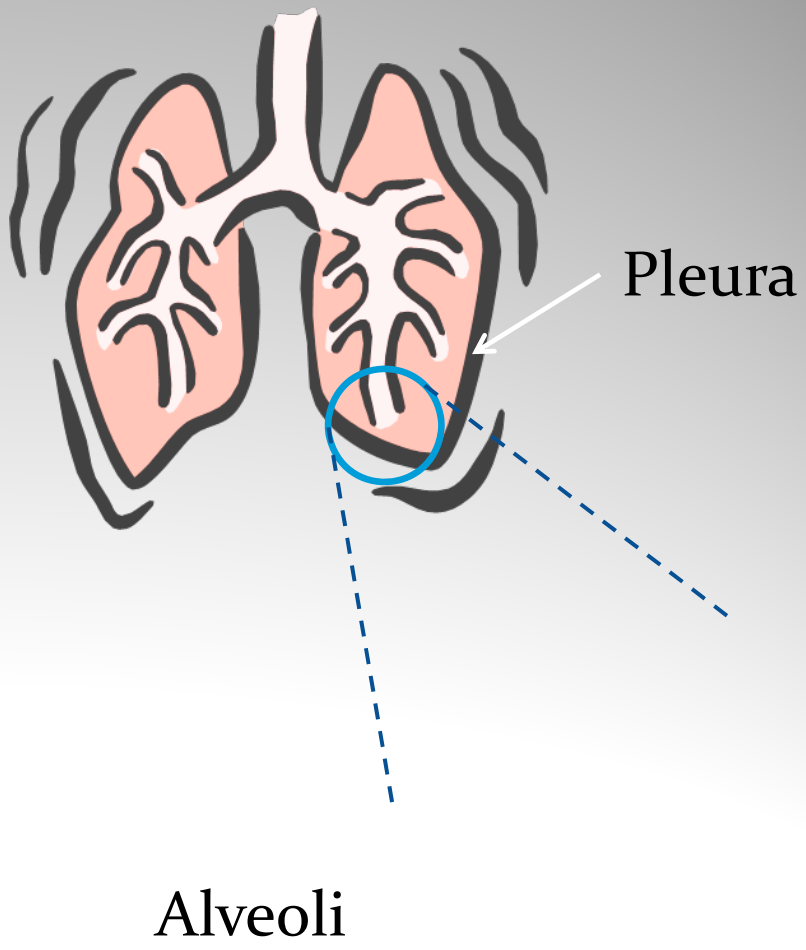
Airborne asbestos fibers inhaled deep into the lung can cause damage.

Tiny breathable asbestos fibers are deposited in the alveoli, they end in the small air sacs in the lungs.

The body's defense mechanisms cannot break down the fibers.

Asbestos fibers cause damage to the lungs.

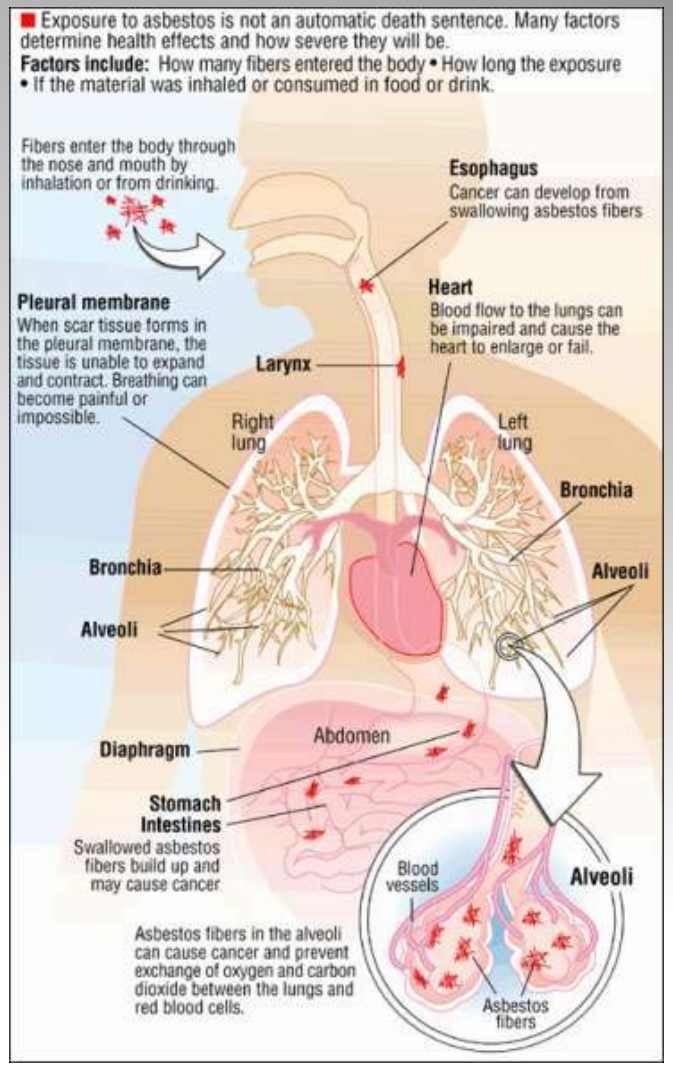
The fibers may also travel to the pleura, the membrane lining the outside of the lungs.



Asbestos-related Diseases

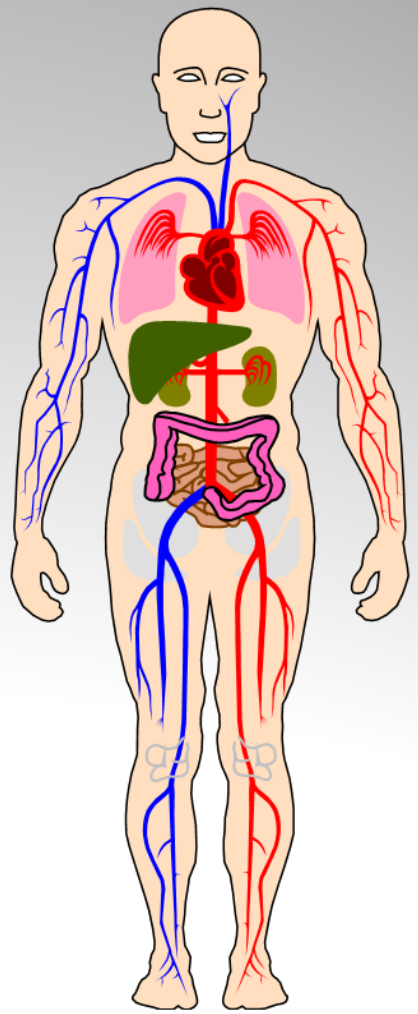
Asbestosis
Mesothelioma
Lung Cancer
Other cancers

- Usually symptoms take 15 to 30 years or more to develop.
- Health effects from asbestos exposure may continue to progress even after exposure is stopped.



Evidence suggests that ingesting asbestos can also cause cancers in the:

- Esophagus
- Larynx
- Oral cavity
- Stomach
- Colon
- Kidney



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 causes the largest number of deaths from asbestos exposure. The risk greatly increases in workers who smoke.

Don’t Take it Home

Regulating Asbestos Work

- **OSHA Construction Standard (29 CFR 1926.1101)**
- **EPA Asbestos Worker Protection Rule (40 CFR Part 763 Subpart G)**

Regulating AC Pipe Work

- Who regulates asbestos release and worker exposure:
  - Federal level
    - EPA and OSHA
  - States
    - Idaho
    - Oregon
    - Washington
  - Local Air Pollution Agencies Rules

Written Program

- Employers assigning employees to duties where they may be exposed to fibers from asbestos containing materials
  - Must have a detailed written procedure

Common Element – All Three States

- Idaho, Oregon & Washington
  - Training Required
    - Dependent on State program
    - Based on EPA & OSHA rules
      - Asbestos Worker
      - Competent Person

Certification Requirements

- Based on EPA & OSHA rules
  - Asbestos Worker
    - Vary by State
      - Exemption
  - Competent Person
    - Common to all States

Four Classes ACM Work

- **Class I asbestos work** means activities in which thermal system insulation (pipe and boiler covering) or surfacing material such as sprayed on fireproofing is removed.
- **Class II asbestos work means removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics. (AC Pipe)**
- **Class III asbestos work means repair and maintenance jobs where ACM (including thermal system insulation or surfacing materials) is likely to be disturbed.**
- **Class IV asbestos work** means maintenance and custodial activities during which employees contact ACM or PACM and clean up waste containing ACM and PACM

Idaho AC Pipe Work Training Requirements

- Follow EPA & OSHA training requirements for asbestos abatement projects
  - Asbestos Concrete pipe work
    - Class II project work
      - Removal of AC Pipe
        - Non Intact
        - Friable ACM
    - Class III work
      - Repair of Intact – Non friable AC Pipe

Idaho State AC Pipe Work Certification Requirements

- Asbestos Worker
  - Class II work
    - 8 hour
  - Class III work
    - 16 hour
- Asbestos Supervisor
  - 40 hour additional
  - Experience requirement
    - Must be responsible for project

Oregon AC Pipe Work Training Requirements

- Training shall be provided prior to or at the time of initial assignment
  - Annual refresher required
- Class II Work
  - Min 8 hrs training specific to type material being worked on
- Class III Work
  - Min 16 hrs – Competent person / trainer may add to or reduce min hr requirement

Oregon AC Pipe Work Training Requirements

- Class II Work
- If AC PIPE is shattered, damaged, or badly weathered, it is considered to be friable and will likely release asbestos fibers.
  - Follow OSHA Construction Standard for **removal** of asbestos-containing materials
- Asbestos Supervisor required
- A DEQ licensed asbestos abatement contractor using DEQ certified workers must remove all friable asbestos materials.

Oregon AC Pipe Work Training Requirements

- Class III Work
  - Where AC Pipe materials is likely to be disturbed, but>>>
    - Not broken up in pieces
    - Not removed from trench

- Training required
- Asbestos Supervisor required

Oregon AC Pipe Work Certification Requirements

- Certification required by Oregon EPA & Oregon OSHA for asbestos abatement projects
  - Asbestos Worker
    - Class II work
      - Removal of AC Pipe
        - Non Intact
        - Friable ACM
    - Class III work
      - Repair of Intact – Non friable AC Pipe
  - Asbestos Supervisor / Competent Person

State Requirements -Oregon

- Nonfriable asbestos materials in good condition are exempt from some Oregon DEQ rules.
- Do not need to be a DEQ licensed asbestos contractor or DEQ certified asbestos worker to do nonfriable ACM removal
  - AC Pipe remains in intact (nonfriable)
  - Nonfriable AC Pipe materials handled, transported, and disposed of in way to prevent it from becoming friable
- Check with Oregon DEQ

Washington State AC Pipe Work Training Requirements

- Training Required
  - Shall be provided prior to being assigned duties to work on AC Pipe
    - Initial training - 8 hr approved course
    - Annual refresher training required

Washington State AC Pipe Work Certification Requirements

- Class II Work Certification Exemption for AC Water pipe work if:
  - Properly trained
  - Done in accordance with training
  - AC Pipe work includes only the following practices
    - Cutting pipe using **carbide wheel cutter**
    - Cutting pipe using **hand saw**
    - Cutting pipe using **snap cutter**
    - Installation of **repair band**
    - Installation of **wet tap w/ pipe under pressure**

Washington State AC Pipe Work Certification Requirements

- Asbestos Supervisor / Competent Person
  - **Must be responsible for work**
  - **Not required to be on site at all times**

Certification Exemption

- A study was undertaken to collect air sample data
  - For each of the five AC Pipe work practices.

- Result of the study
  - Demonstrated that release of airborne fibers from the AC Pipe was well below the WISHA action level of 1.0 fibers per cubic centimeters of air

State Requirements - Washington

- Common Procedures for all five acceptable procedures
  - Make contact with
    - Local Air Pollution Control Authority
    - Local solid waste utility
  - Continuously wet work area
  - Personal Protective Equipment must be worn at all times (PPE)
  - Excavation and exposing work area
    - Do not abrade the AC Pipe

State Requirements - Washington

- Preparing pipe surface
  - Do not abrade pipe while preparing surface
- Keep pipe surface wet
  - Ensures **No** Asbestos Dust is created
- Make cuts and repairs
- Finishing Cuts, Taps and Repairs
- Closing down the worksite
- Storing and disposing of Asbestos Waste

Wrapping up

- Always be conscious that:
  - AC Pipe contains a Dangerous Hazardous material
  - Following required training practices you can prevent release of dangerous asbestos fibers
  - Any exposure can be fatal
  - You can affect your loved ones health

Thank You!