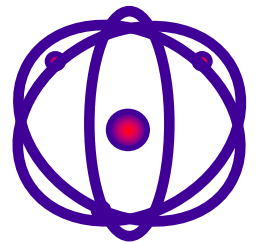


Asbestos - Yes, It's Still Around!

Presented by: Bob Rogalla & Nate Cox
Lake States Environmental, Ltd.
February 26, 2019

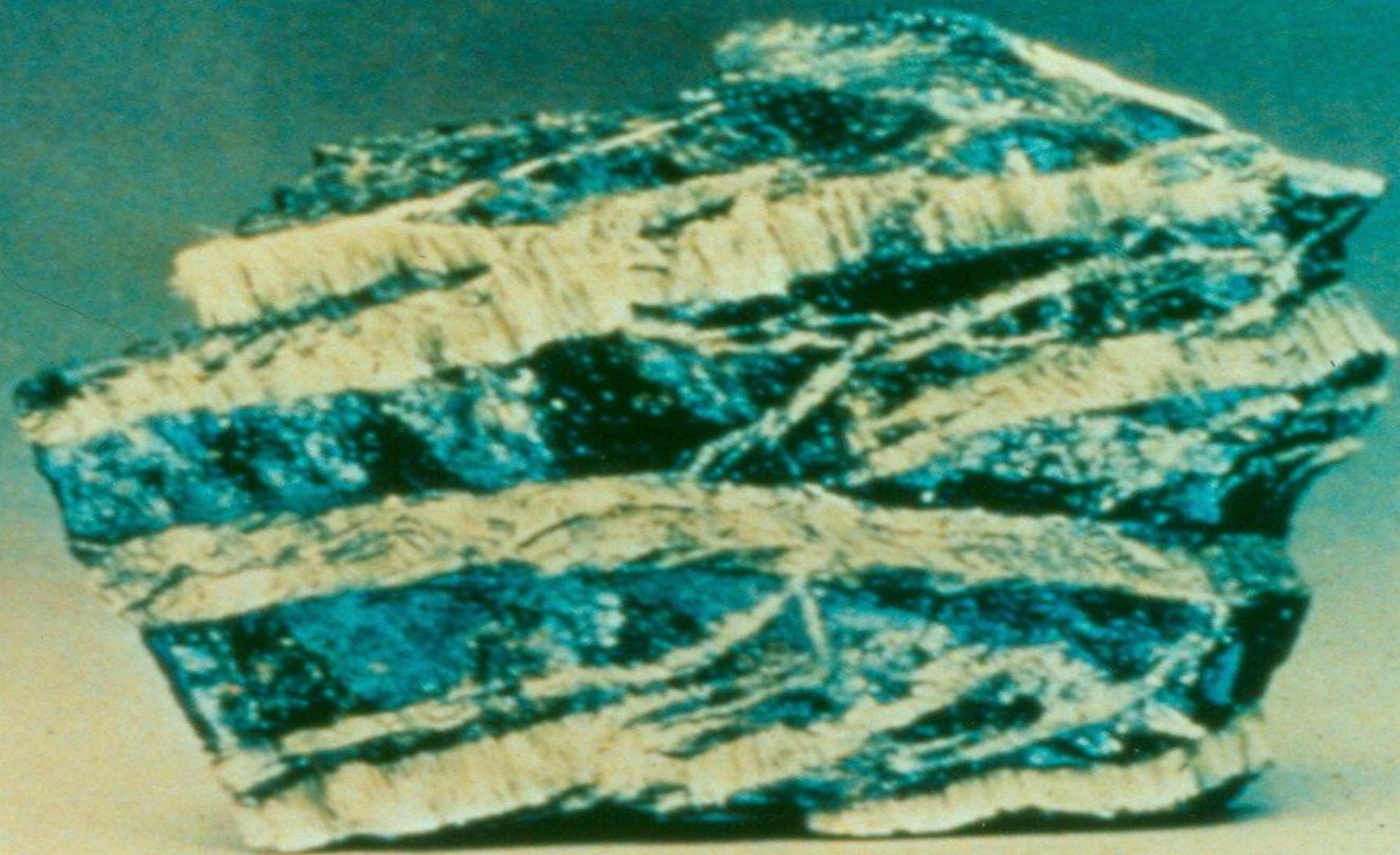




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The "Miracle Mineral"





When is Asbestos dangerous?

- Asbestos is dangerous when it gets in the air and you breathe or swallow it

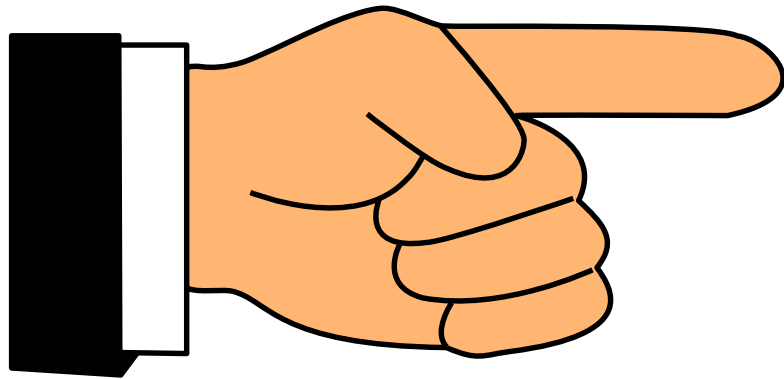


MORE ABOUT ASBESTOS

- Bundles of fibers which break apart easily
- Fibers are microscopic
- Very aerodynamic - float for days
- Strong as steel
- Resists breakdown from heat
- Resists breakdown from chemicals
- The best insulator
 - Temperature
 - Sound
 - Electricity
- Cheap



DEFINITIONS



- Friable
- Non-friable



FRIABLE ASBESTOS

- Asbestos that can be crumbled or pulverized by hand pressure.
- Friable asbestos is more dangerous because the fibers are more likely to get in the air.





NON-FRIABLE ASBESTOS

- Asbestos that cannot be crumbled or pulverized by hand pressure.





ASBESTOS CONTAINING MATERIAL - ACM

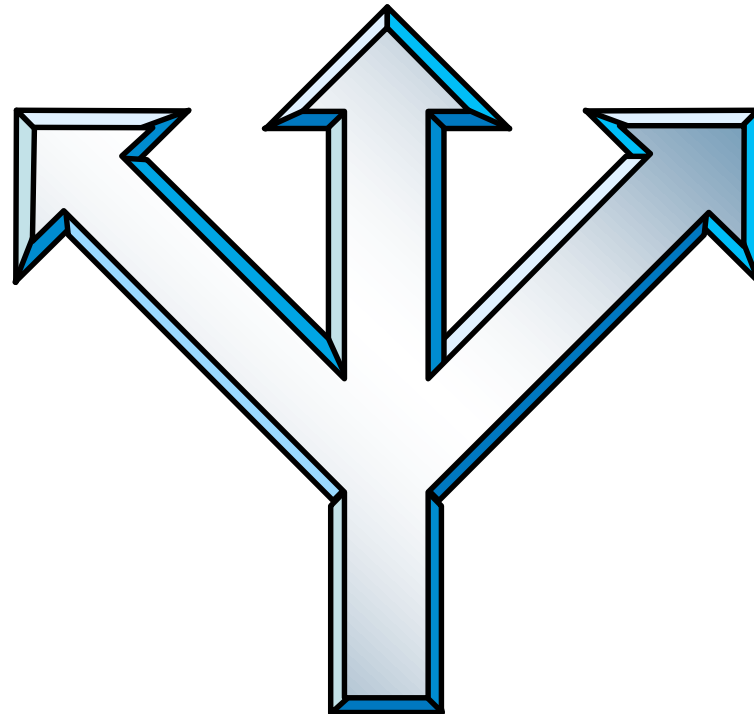
ACM is defined as a material containing greater than 1 % of an asbestos mineral.





CATEGORIES OF ACM

- Surfacing material
- Thermal system insulation (TSI)
- Miscellaneous Materials





SURFACING MATERIAL

- An asbestos containing material that is **sprayed, troweled-on** or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).










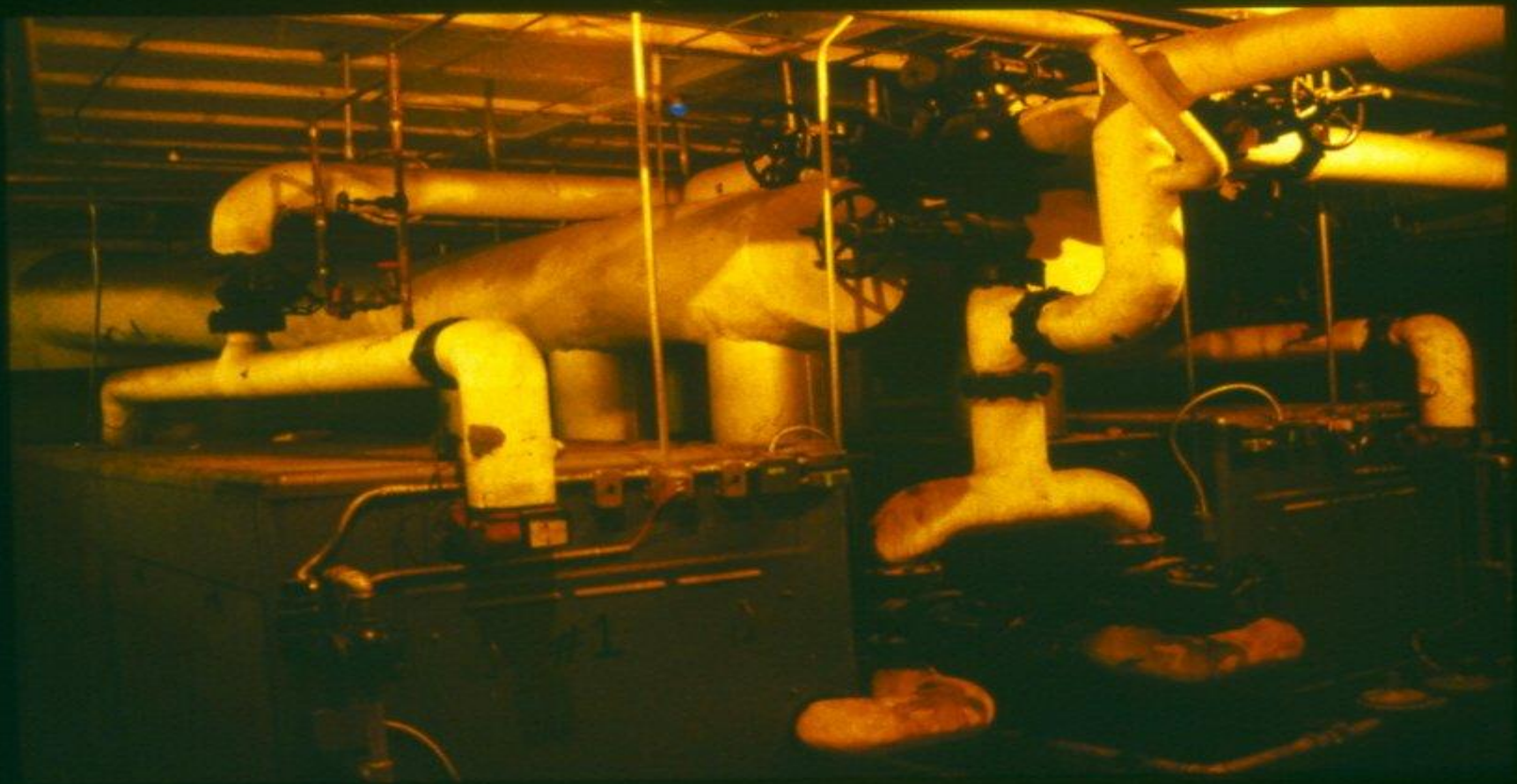


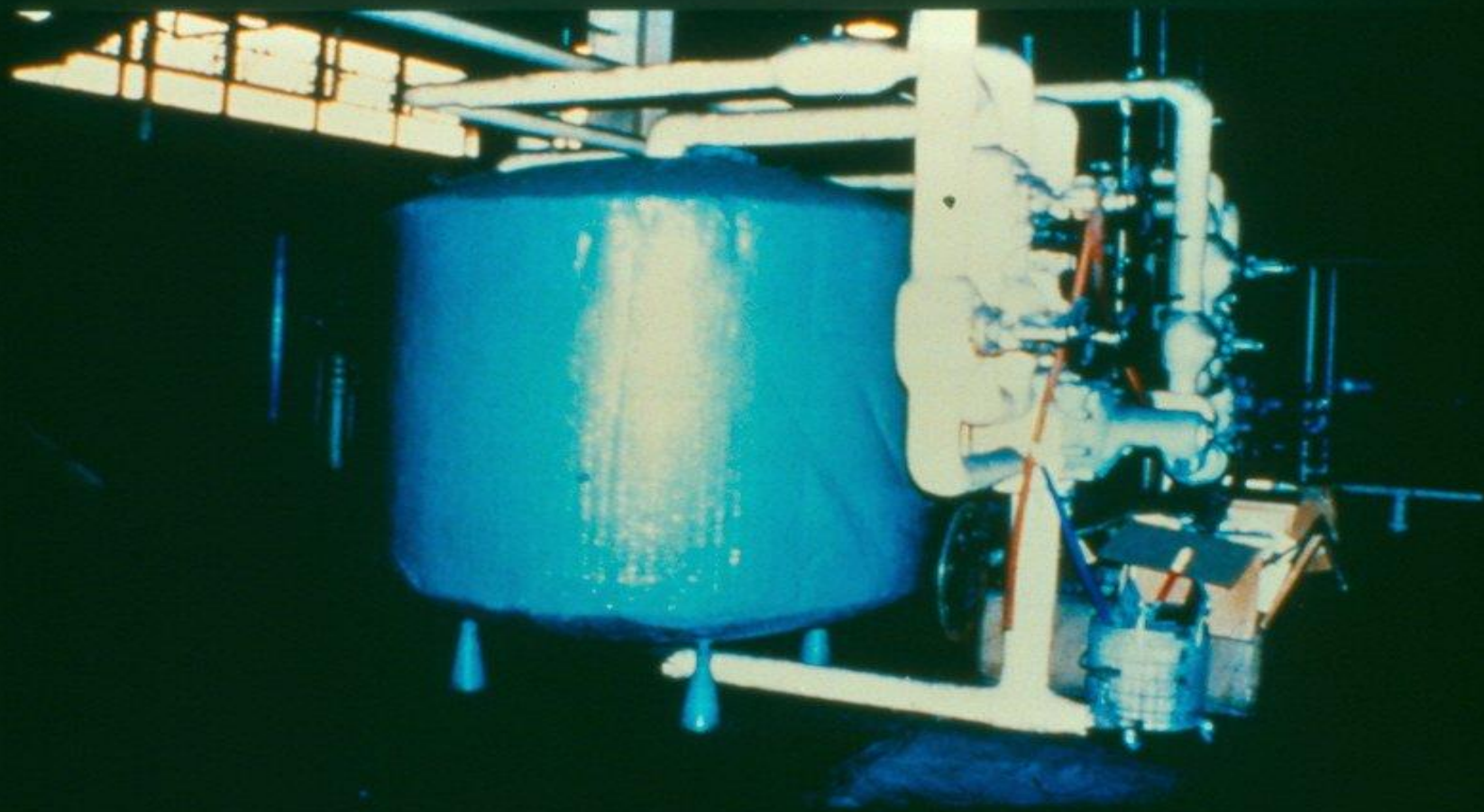


THERMAL SYSTEM INSULATION (TSI)

- Asbestos containing materials applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

TSI ACM contains more than 1% asbestos.







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MISCELLANEOUS

- Any other type of asbestos containing material.





Health Effects of Exposure to Asbestos

Asbestos Diseases






Asbestos can Kill You...

- When you work around asbestos, you must work carefully. Avoiding accidental disturbances is important.
- When asbestos is in the air, it gets into your body when you breathe and when you swallow.



When is Asbestos Dangerous?

- Asbestos is silent and deadly. You cannot see, hear, feel, taste, smell, or touch the small asbestos fibers that enter your body.
- It doesn't make you cough or sneeze, nor make you throat or skin itch.
- But if it is in the air, you can breath it. That's when asbestos is dangerous!



How do we know that asbestos can make you sick?

- We have been accumulating information for decades, tracking life and death histories of workers who's jobs involved exposure to asbestos.
- Over time it has become apparent that workers who were exposed to asbestos developed and died from diseases we now know are caused by asbestos.



Asbestos Diseases

Asbestosis

Lung Cancer

Mesothelioma

Other (GI) Cancers



How much asbestos is dangerous?

- There is no safe level of exposure to asbestos.
- But we do know that most diseases associated with the exposure to asbestos are dose-related.
- Asbestosis, Lung Cancer and Digestive System cancers are all dose-related.
- Mesothelioma is different. It appears to be incidence related, with dose not being much of a factor.



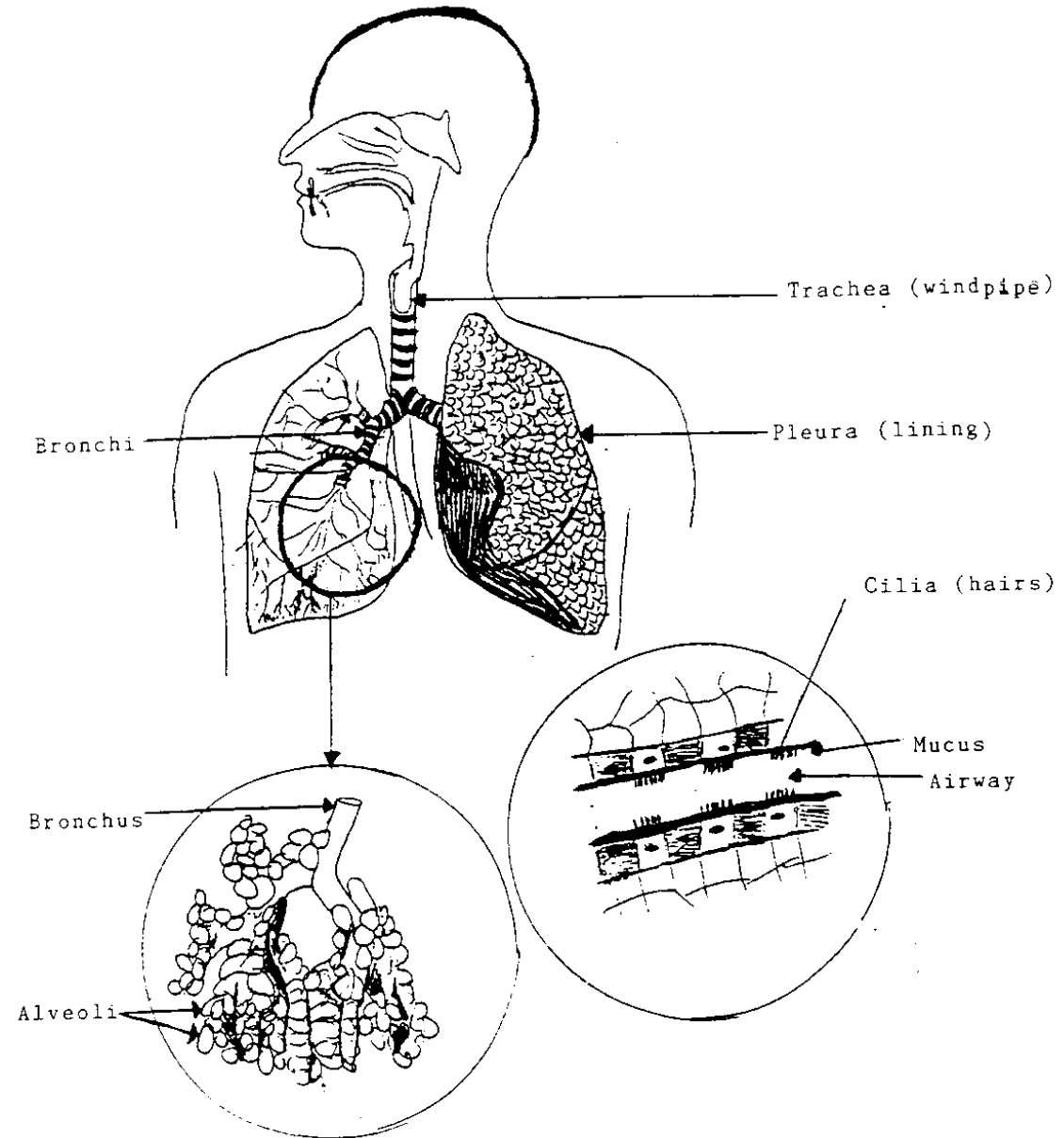
Latency Period

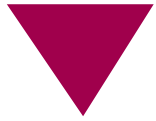
- The time between when a person is exposed to a hazard and when the symptoms develop from the exposure.
- The latency period is between 10 to 40 years

Your body has its own natural defense to help eliminate asbestos

But some of the tiny fiber can still pass through these defenses







Asbestosis

Scarring of the Lung Tissue

Specifically the Alveoli membranes



Lung Cancer

Cancer in the Lung

Usually in the pipes at a turn or junction.



Mesothelioma

Cancer of the Plural Lining(s)

Pleural mesothelioma

Chest cavity

Peritoneal mesothelioma

Abdomen (belly)



Mesothelioma

- This is also the one disease that is only caused by exposure to asbestos.
- It is often referred to as the "Marker Disease" for exposure to asbestos sometime in a worker's past.



Other Cancers

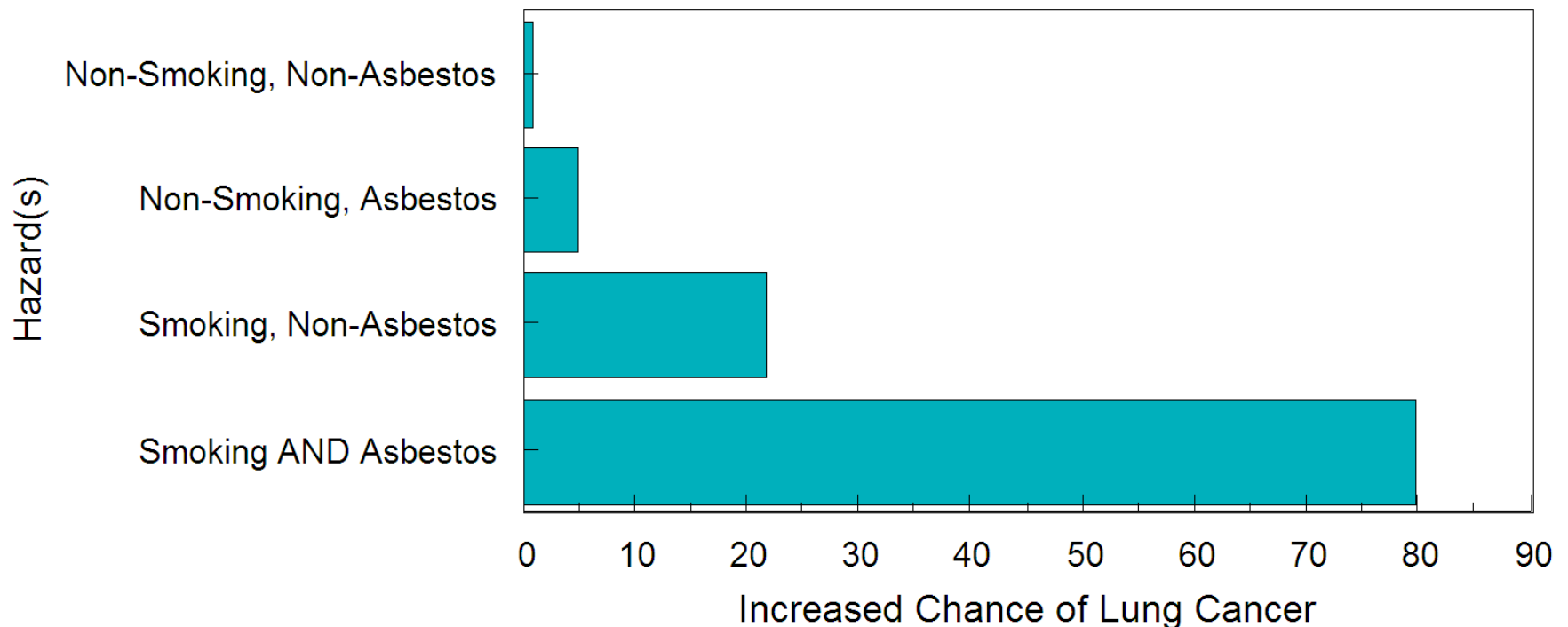
Other Cancers can include:

Mouth, tongue, throat, voicebox, esophagus, stomach, intestinal, colon, rectal, and liver cancer.

Smoking and Asbestos Exposure

- The Synergistic Effect - Multiplying Effect

Synergistic Effect of Combining Smoking and Asbestos Hazards



People who work with Asbestos over a certain period of time will be required to have medical exams

These exams come at no cost to the worker





How is it determined if a material contains Asbestos?

- First off, most materials are “guilty” until proven otherwise by sampling.
- Samples is sent to a lab for testing.
- This sample must be collected by an MDH certified Asbestos Inspector.
- The sample is analyzed under a Polarized Light Microscope (PLM) to determine content.
- The lab sends out a report indicating if the sample contains Asbestos and at what %.



Let's see what we find in our room

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____



Thank You for joining us!

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