

**PHILIPS HEALTHCARE**

<b>Trainee Name:</b>	
<b>Trainee Signature:</b>	
<b>Date:</b>	

<b>Course Title</b>	<b>Local Course Code</b>	<b>Revision</b>
Asbestos Awareness	PHNA-ASBESTOS	N/A

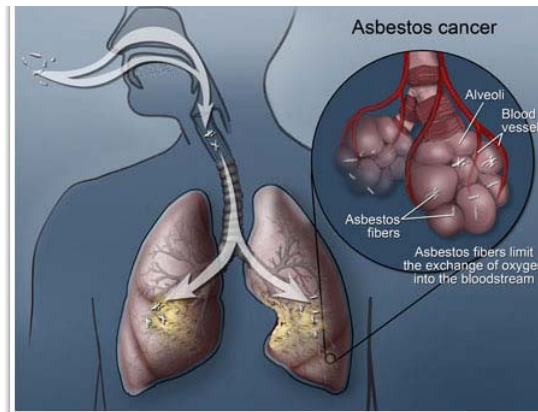
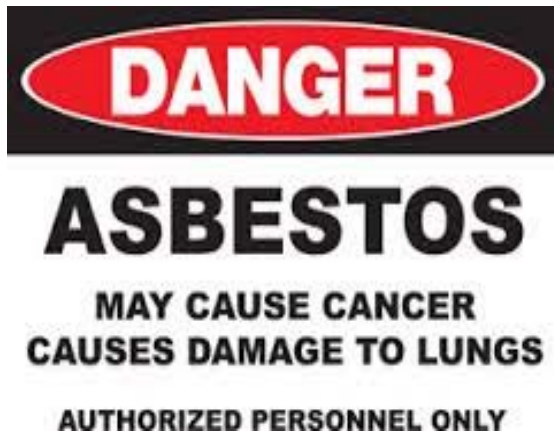
By submitting this form, I agree that I have completed the required training for this course and understand the material and the impact on my job responsibility.

Signed by 3<sup>rd</sup> Party Contractor Training Representative:

\_\_\_\_\_ Date: \_\_\_\_\_

*\*\*This form is to be kept as a formal training record by the 3<sup>rd</sup> Party Contractor Agency\*\**

# PHILIPS



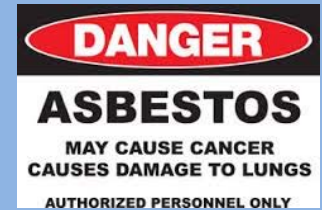
This eLearning module will take approximately 15 minutes to complete.

## Asbestos Awareness

By Amy Wallace, EHS Engineer, Philips Healthcare

# Philips Healthcare – PH North America

## Asbestos Awareness



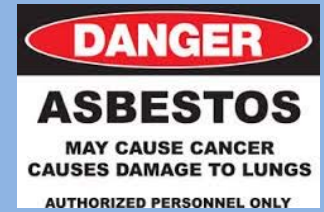
## Lessons

- Lesson 1: Learning Overview and Objectives
- Lesson 2: Why is Asbestos Training Important?
- Lesson 3: Definitions
- Lesson 4: Philips Position
- Lesson 5: What is Asbestos
- Lesson 6: Asbestos Containing Materials
- Lesson 7: Health Hazards of Asbestos
- Lesson 8: Asbestos Related Diseases
- Lesson 9: Communication of Asbestos
- Lesson 10: Identifying an Asbestos Release
- Lesson 11: Facility's Responsibility
- Summary



# Philips Healthcare – PH North America

## Asbestos Awareness



## Lesson 1

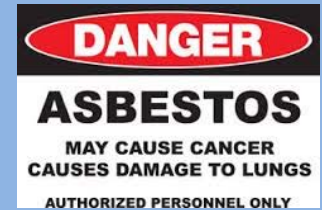
### Learning Objectives and Overview



Course Structure

# Philips Healthcare – PH North America

## Asbestos Awareness



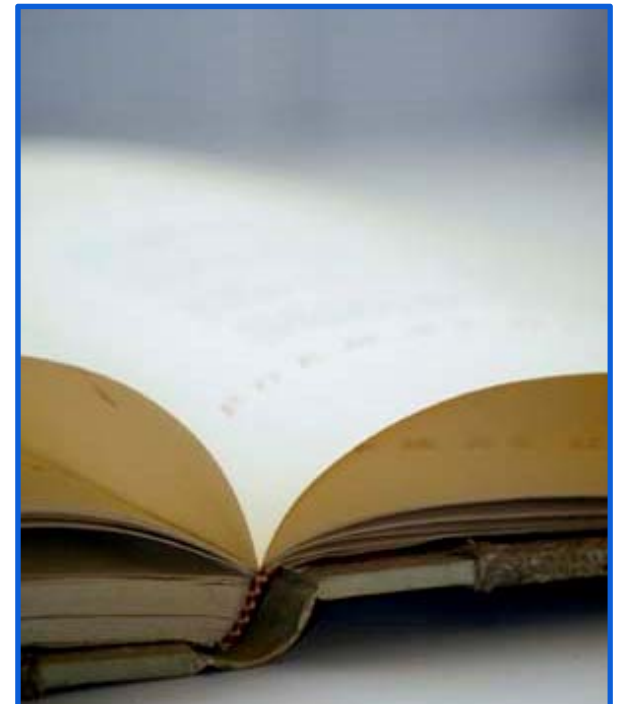
## Lesson 1: Overview

This course is designed as an asbestos awareness training. Successful completion of this course does **NOT** qualify anyone to work with, handle, manipulate or disturb asbestos containing material.

This training is intended to help you identify asbestos containing material and take appropriate control measure to protect yourself.



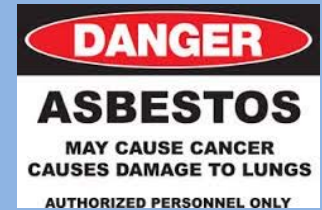
This is a newly released safety awareness training and shall be completed every three years.



Overview

# Philips Healthcare – PH North America

## Asbestos Awareness



### Lesson 1: Learning Objectives

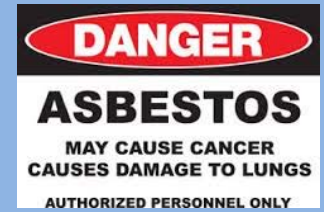


**Upon completion of this course, you will be able to:**

- **Understand Philips Position on Encountering Potential Asbestos Containing Material**
- **Identify Potential or Suspect Asbestos Containing Material (ACM)**
- **Understand Health Hazards & Diseases Caused by Asbestos**
- **Describe Appropriate Control Actions if Non-Encapsulated Asbestos is encountered on Customer Premises**

# Philips Healthcare – PH North America

## Asbestos Awareness



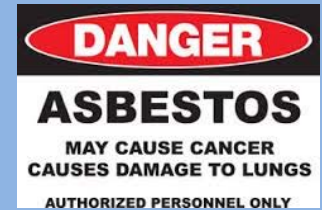
## Lesson 2

### Why is Asbestos Training Important?



# Philips Healthcare – PH North America

## Asbestos Awareness



## Lesson 2: Why is Asbestos Awareness Training Important?

**Asbestos is a dangerous health hazard when it becomes air born. It is very easy to get asbestos in the air by disturbing asbestos containing materials, in any way.**

### AND . . .

- FSEs perform work in older establishments which have the potential to contain asbestos containing materials.
- FSEs may come into contact with these asbestos containing materials during any of the following activities that required interfacing or disturbing building materials:

#### Installation or De-Installation

- Sheet Rock / Wall Board
- Ceiling Insulation
- Pipe insulation
- Ceiling Tiles
- Floor tiles

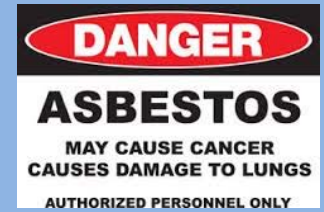
#### Service Activities

- Drilling
- Sanding
- Sawing
- Cutting
- Accessing Ceiling Areas



# Philips Healthcare – PH North America

## Asbestos Awareness



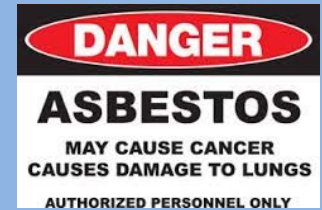
### Lesson 3

## Definitions



# Philips Healthcare – PH North America

## Asbestos Awareness

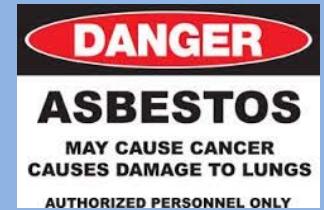


### Lesson 3: Definitions

- **ACM – Asbestos Containing Material** – Any material containing more than 1% Asbestos
- **Friable Asbestos** – ACM which can be crumbled, pulverized or reduced to powder by pressure of the ordinary hand.
- **PACM – Presumed Asbestos Containing Material** - Thermal system insulation and surfacing material found in buildings constructed no later than 1980.
- **Regulated Area** - An area established by the employer to demarcate areas where airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the permissible exposure limits.
- **Surfacing Material** - A 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)** - ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

# Philips Healthcare – PH North America

## Asbestos Awareness



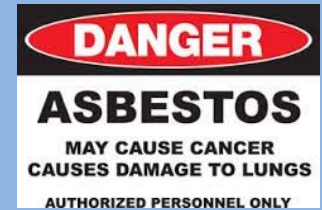
### Lesson 4

## Philips Position on Encountering Asbestos



# Philips Healthcare – PH North America

## Asbestos Awareness



## Lesson 4: Philips Position on Asbestos

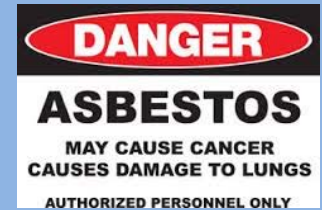
Employees will **NOT, under any circumstances**, work in areas with:  
exposed, non-abated, non-encapsulated or friable asbestos.

### Employee's Shall NOT:

- Work in areas where potential asbestos containing materials look damaged or deteriorated, in any way
- Engage in housekeeping activities such as sweeping, cleaning, vacuuming or attempting to abate any potentially asbestos containing debris
- Saw, sand, scrap or drill holes or disturb any potentially asbestos containing material.

# Philips Healthcare – PH North America

## Asbestos Awareness



## Lesson 4: Philips Position on Asbestos

### Employee's SHALL:

- Avoid damaging any potential asbestos containing materials.
- Immediately notify supervisor or project manager if you notice cracks, breaks, fraying, worn areas or any other sign of damage in Asbestos Material to which you may be exposed.
- Evacuate the area Immediately
- Notify the Customer Representative

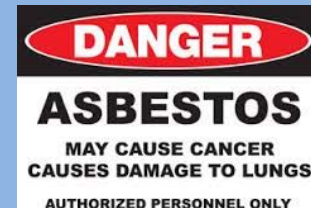
### **REMEMBER:**

**Inhaling loose asbestos fibers is known to cause several serious and even fatal lung diseases.**

**NEVER Disturb Asbestos Containing Material.**

# Philips Healthcare – PH North America

## Asbestos Awareness



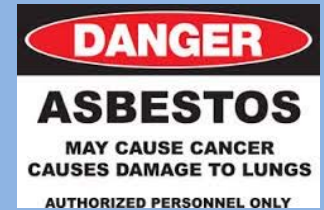
## Lesson 4: Philips Position on Asbestos

### Asbestos Removal, Repair or Abatement

- Only trained and qualified personnel shall be permitted to conduct work tasks that may disturb Asbestos Containing Material.
- FSEs do not have the proper training or PPE to remove, repair, disturb, encapsulate or abate asbestos containing material
- If a customer asks an FSE to clean-up, sweep encapsulate or engage in any activity that may disturb ACM:
  1. Stop Work Immediately
  2. Notify your Manager, Project Manager or EHS Engineer

# Philips Healthcare – PH North America

## Asbestos Awareness



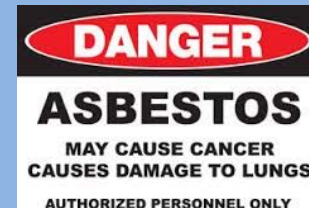
## Lesson 5

### What is Asbestos?



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## Asbestos Awareness



## Lesson 5: What is Asbestos?



**Asbestos  
Fibers**

- Asbestos is a naturally occurring mineral that comes apart into fibers.
- Asbestos became a popular building material in 1950 and used extensively in a variety of products.
- It is commonly found in many buildings today, **including hospitals**, and can take several forms depending on its method of manufacture and application.



**Asbestos Ore**

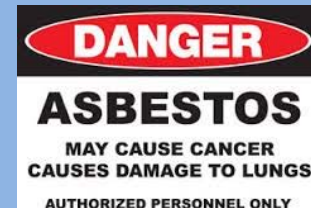
If you are working in an area that contains encapsulated ACM or PACM and you notice cracks, breaks, fraying, worn area's, etc. or any condition that may allow the asbestos to become airborne:

- 1. Notify the Rest of the Team**
- 2. Immediately Leave the Area**
- 3. Notify the Customers Representative.**



# Philips Healthcare – PH North America

## Asbestos Awareness



### Lesson 5: What is Asbestos?

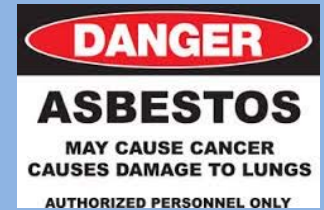


Asbestos became increasingly popular in the late 19<sup>th</sup> century and was widely used because of its sound absorption, average tensile strength, its resistance to fire, heat, electrical and chemical damage, and affordability.

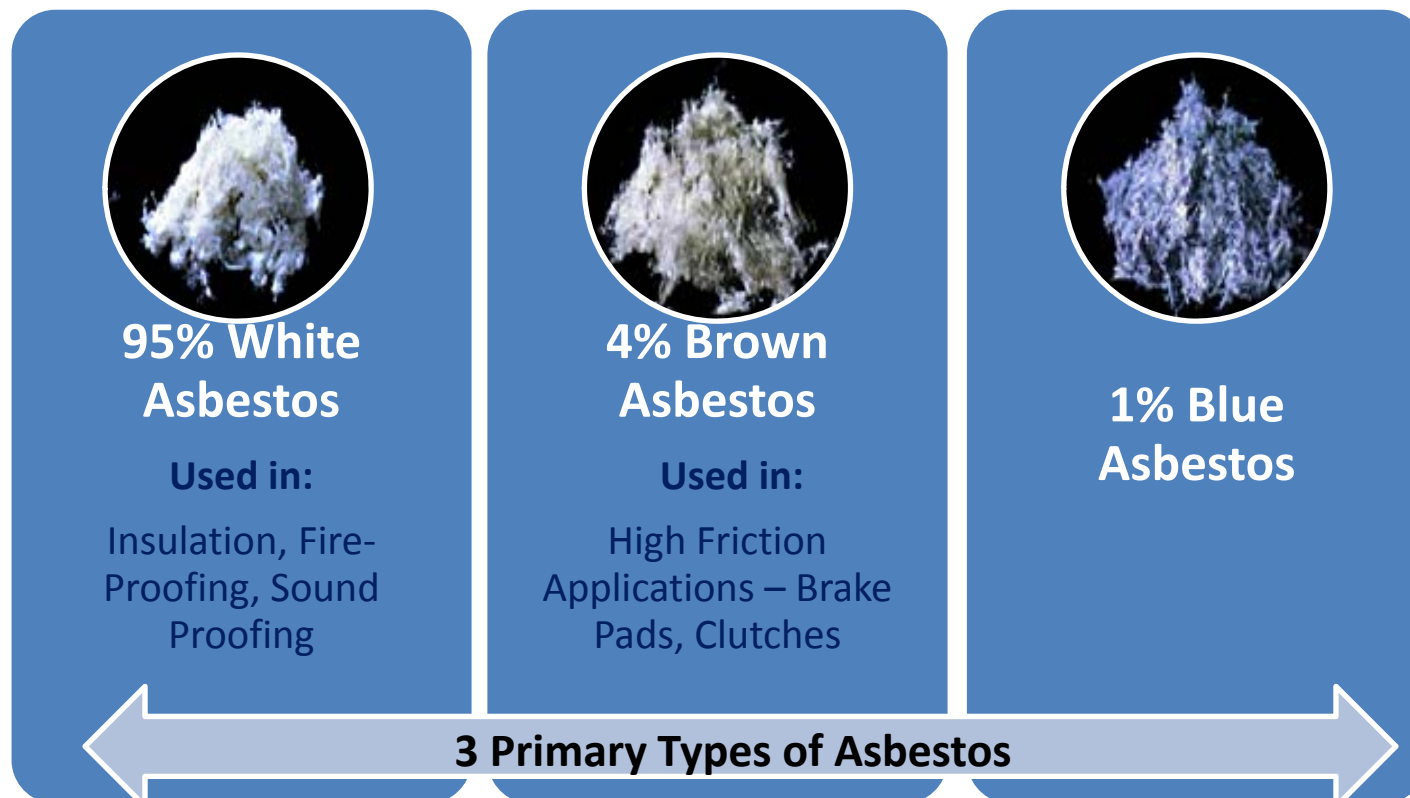
It was used in such applications as electrical insulation for hotplate wiring and building insulation. Asbestos fibers are often mixed with cement, resulting in asbestos cement, or woven into fabric or mats.

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## Asbestos Awareness

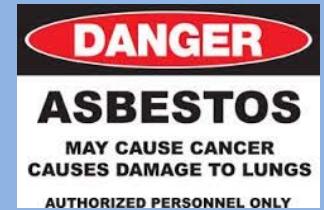


## Lesson 5: What is Asbestos?



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## Asbestos Awareness



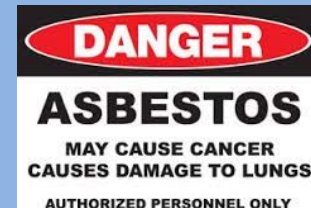
## Lesson 6

### Asbestos Containing Materials



# Philips Healthcare – PH North America

## Asbestos Awareness



## Lesson 6: Asbestos Containing Materials

### Insulation

- HVAC Ducts
- Breaching
- Pipe Insulation
- Spray & Blown-In
- Wiring Insulation
- Boiler Insulation
- Flex Fabric on Ductwork



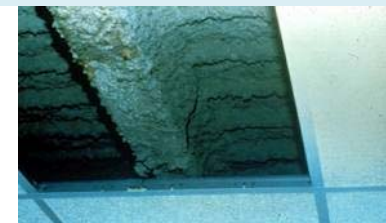
### Electrical

- Panel Partitions
- Electrical Cloth
- Electrical cloth & Insulation
- Wiring



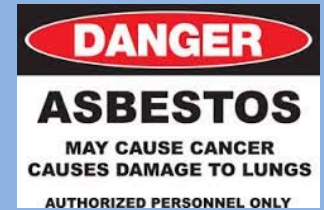
### Fire-Proofing

- Fire Proofing Materials
- Fire Blankets
- Fire Curtains
- High Temp Gaskets
- Fire Doors
- Thermal Paper Products
- Thermal Taping Compounds



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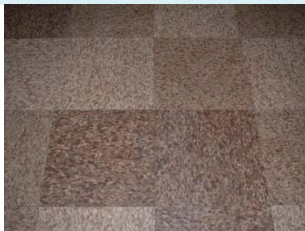
## Asbestos Awareness



## Lesson 6: Asbestos Containing Materials

### Flooring Materials

- Asphalt & Vinyl Floor Tile
- Vinyl Sheet Flooring
- Flooring Backing
- High Temp Gaskets
- Fire Doors
- Thermal Paper Products



### Paints / Coatings

- Acoustic Plaster
- Decorative Plaster
- Textured Paints Coatings
- Flooring Backing
- Joint & Spackling Compound
- Vinyl Wall Coverings
- Wall Board



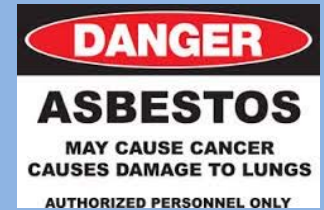
### Other

- Ceiling Tiles
- Elevator Panels & Brake Shoes
- Adhesives
- Cooling Towers
- Caulking / Putties
- Cement Pipes & Wallboard
- Roofing Materials
- Construction Mastics



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## Asbestos Awareness



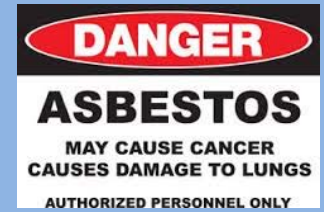
## Lesson 7

### Health Hazards of Asbestos



# Philips Healthcare – PH North America

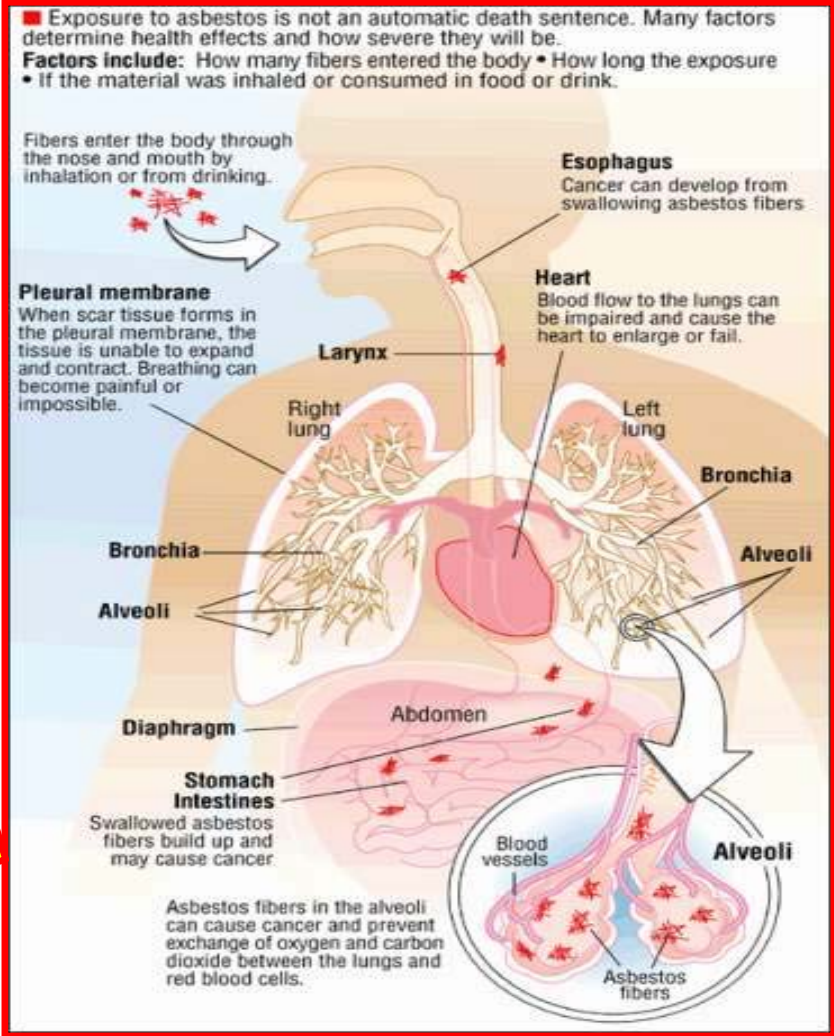
## Asbestos Awareness



### Lesson 7: Health Hazards of Asbestos

**Asbestos is an Inhalation Hazard !!**

**Asbestos is only dangerous if it becomes airborne.**



Tiny airborne fibers enter through nose and mouth

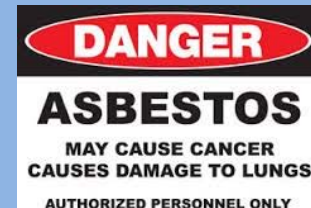
The body's defense cannot break down the fibers

Scar tissue forms around the fibers in the lungs

Lung tissue is unable to expand and take in oxygen

Oxygen in the lungs is restricted and can damage the heart.

Health Effects continue to progress resulting in Asbestos Related Diseases.



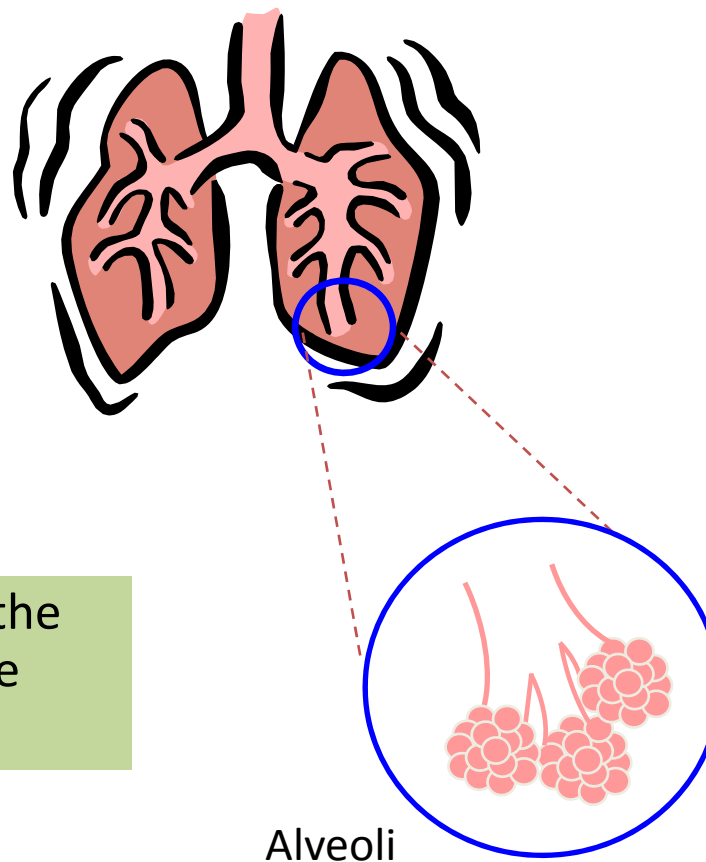
## Lesson 7: Health Hazards of Asbestos

### Asbestos is an Inhalation Hazard

The occurrence of Asbestos related diseases is dependent upon a number of factors including:

- Amount of Fibers Inhaled
- Duration of Exposure
- Whether exposed worker smokes
- Age – Because of delayed effects

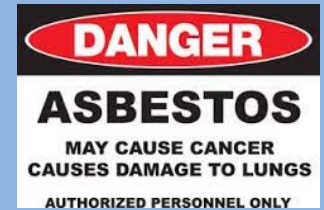
Airborne asbestos fibers inhaled deep into the lung can cause permanent and irreversible damage.





# Philips Healthcare – PH North America

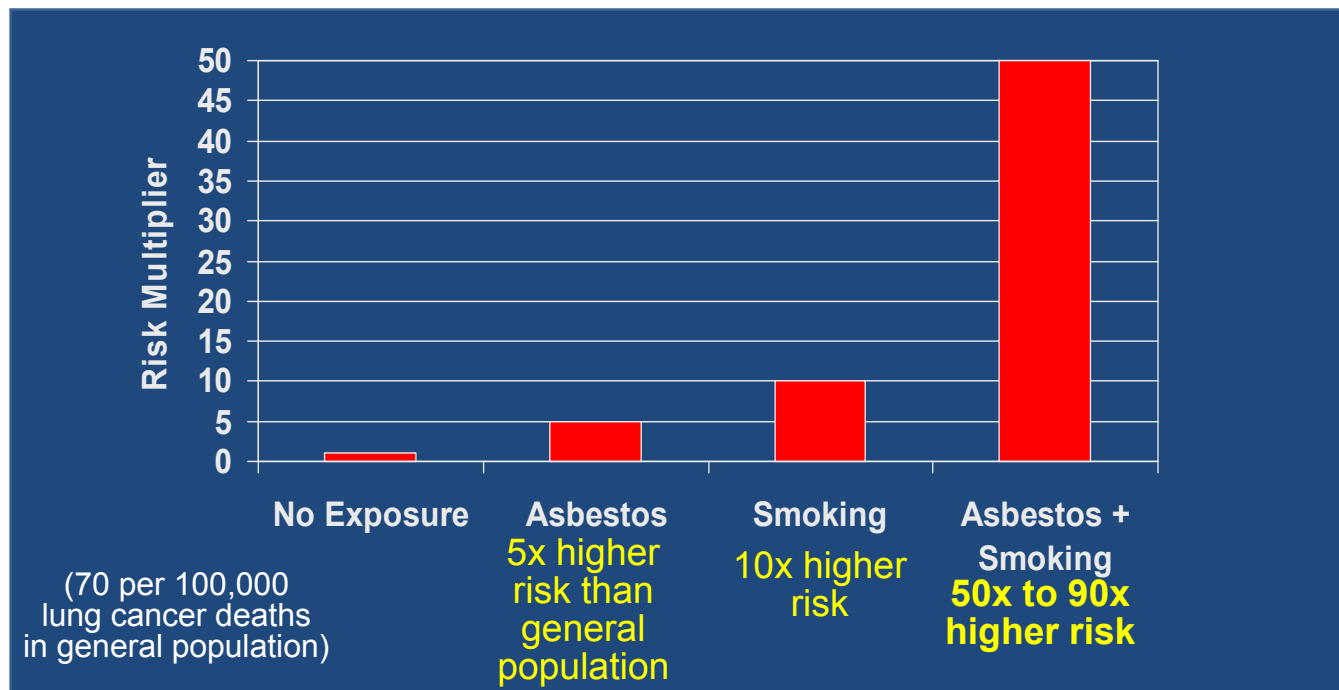
## Asbestos Awareness



## Lesson 7: Health Hazards of Asbestos

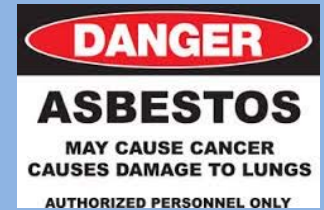
Smoking greatly enhances the risk of lung cancer when combined with exposure to Asbestos.

### Lung Cancer Risks



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## Asbestos Awareness



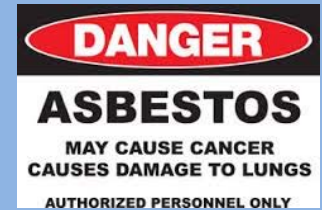
### Lesson 8

## Asbestos Related Diseases



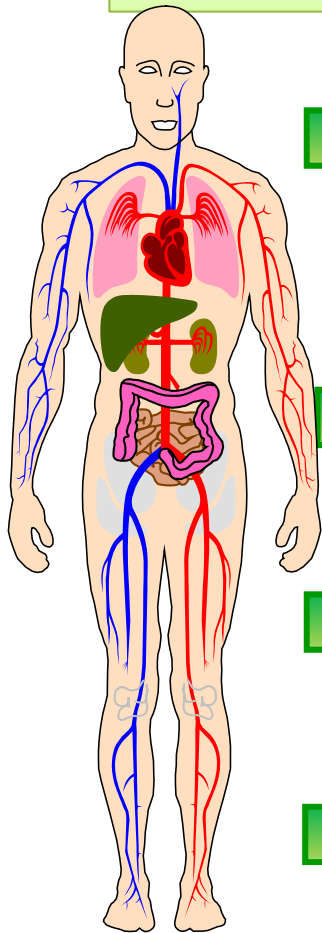
# Philips Healthcare – PH North America

## Asbestos Awareness



## Lesson 8: Asbestos Related Diseases

Asbestos Related diseases can take 15-30 years or more to develop.



**Asbestosis** – Chronic, progressive disease that can lead to disability and death in people exposed to high amounts over long periods of time. When lung tissues scar, it becomes harder and harder to breathe. Symptoms include: shortness of breath, dry crackling sound while breathing, coughing and chest pain.

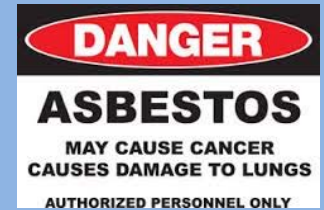
**Mesothelioma** – Cancer of the pleura (thin membrane lining the lungs.) It's invasive, spreads quickly and is always fatal.

**Lung Cancer** – Risks depend on the amount of fibers inhaled, length of exposure, age and smoking.

**Other Cancers** – Ingesting fibers can cause other cancers in the esophagus, larynx, oral cavity, stomach, colon and kidney

# Philips Healthcare – PH North America

## Asbestos Awareness



## Lesson 9

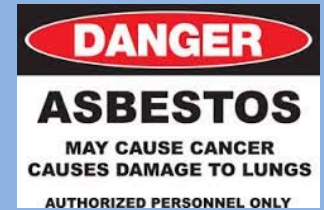
### Communication of Asbestos



Course Structure

# Philips Healthcare – PH North America

## Asbestos Awareness

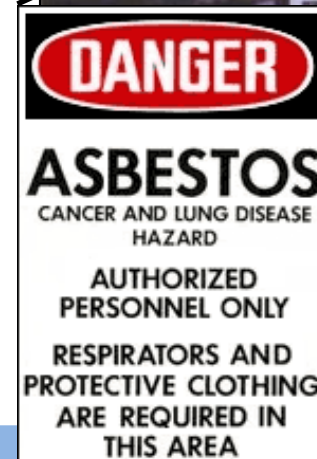


### Lesson 9: Communication of Asbestos



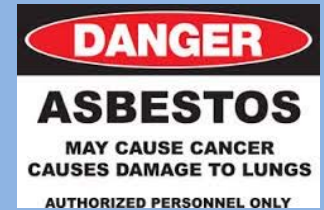
**Warning Signs** Shall Be Posted and Visible Before Entering Regulated Areas or other areas where ACM or PACM is present to inform personnel of the dangers and control measures.

**Warning Labels** shall be attached to all products and their containers



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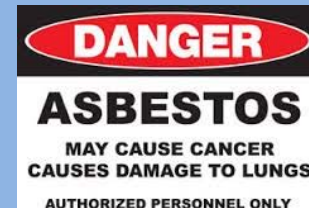
## Asbestos Awareness



## Lesson 10

### Identifying an Asbestos Release





## Lesson 10: Identifying an Asbestos Release

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

### NON - FRIABLE

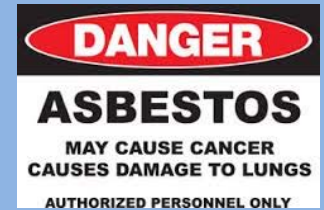
- Usually found in bonded materials like floor, ceiling tiles, house siding, fire doors
- Won't release fibers unless disturbed or damaged in some way.
- Asbestos fibers can still be released by cutting, grinding or sanding.



**You always have the right to refuse to work in an  
area that is unsafe!**

# Philips Healthcare – PH North America

## Asbestos Awareness



## Lesson 11

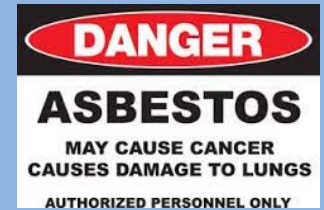
### Facility's Responsibility of Regulated Areas





# Philips Healthcare – PH North America

## Asbestos Awareness



## Lesson 11: Facility's Responsibility of Regulated Areas

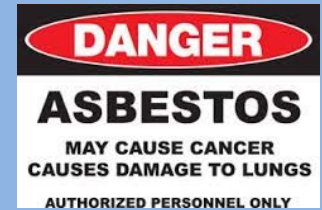
### Building / Facility Owners Shall:

- Determine the presence, location & quantity of asbestos containing material.
- Inform other employers, employees working on-site who may be exposed to potential asbestos containing material.
- Have a “Good Faith” inspection done before starting any bidding or construction/maintenance work where **known** asbestos is contained.
- Permit only certified individuals to perform work that may release asbestos fibers into the air.
- Establish and demarcate all regulated areas and entrances to areas where with ACM or PACM to inform personnel of dangers of Asbestos and appropriate control measures before entering
- Ensure access to regulated areas is controlled to only authorized asbestos workers

**Never enter into a regulated area or perform work in an area where asbestos is not contained !!!**

# Philips Healthcare – PH North America

## Asbestos Awareness



### Summary

- Asbestos is a health hazard and is only dangerous if airborne, ACM in good condition is not harmful.
- Do not disturb asbestos containing materials - Even a small amount of asbestos dust is potentially lethal. Don't start work if you're in any doubt.
- Obey warning signs - Facility owners are required to notify us so we know the location and quantity of ACM.
- You are not to work in an area where there is non-encapsulated or airborne asbestos.
- REMEMBER: You have the right to STOP WORK in an area that is unsafe!

**TAKE AWAY**

Philips Employees have the right to know the presence, location, quantity of asbestos containing material; to verify a good faith inspection has been completed, prior to starting work; and to not work in an area where asbestos is not contained.