



Hidden Hazards in Duct Cleaning


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Presenter




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Disclaimer


This presentation is not intended to be a comprehensive program covering all aspects of this topic. All technicians are encouraged to read and follow all applicable standards, codes and regulations related to this topic.

- ✓ It is the responsibility of each individual contractor to follow local building codes and licensing requirements and to work safely in accordance with OSHA guidelines.
- ✓ It is the contractor's responsibility to take proper precautions on each project to prevent cross contamination. Always take the health and safety of the building occupants into consideration before you conduct any cleaning procedures.
- ✓ All of the following tips are only general tips. They do not cover every situation and it is your responsibility to adapt these tips to the individual system you are working on.
- ✓ The Instructor is not responsible in any way for the work you perform after viewing this slide show. You are responsible for your own work.
- ✓ The views and opinions following are the instructors opinions and not necessarily the official position of the National Air Duct Cleaners Association.





What We'll Learn


- Learn to recognize suspected hazards such as asbestos, lead paint, and others
- Understand common hazards associated with these items
- Understand safety measures to be taken when encountering suspected hazards
- Identification of suspect materials




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- **Cleaning HVAC systems can reduce building occupant's exposure to hazards.**
- **Performing the work can have an opposite affect.**




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- **Forward:** The Standard also focuses on preventing job-related **hazards**, such as exposure to workers and occupants, and cross-contamination to the indoor environment.
- **LIMITATIONS:** This Standard does not specifically address any and all **hazards** or risks that could be encountered when performing work in accordance with this document. Instead, the user is directed to rely on the Authority Having Jurisdiction in such cases.

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- **1.8 Exposure to Hazardous Materials:** If the possibility exists that the inspector or others may be exposed to **hazardous materials**, consultation with a qualified indoor environmental professional (IEP) or other health and safety professional is recommended.
- **3.5.1** Materials deemed to be **hazardous** by governmental agencies shall be handled in strict accordance with any applicable local, regional or national codes.

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- **5.0 Overview:** The purpose of cleanliness verification is to determine the presence of particulate. It does not determine microbial contamination and/or the presence of **hazardous materials**.

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- Our mission is to assess and clean HVAC Systems, not identify all hazardous materials in the building.
- Our mission is to protect employees from the building
- We must have an idea of the Hazards we are encountering or disturbing that can affect occupants.



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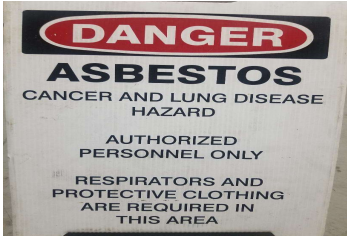
- Asbestos
- Lead
- Histoplasmosis
- Bloodborne Pathogens
- Combustible Dust



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Asbestos – The Miracle Mineral



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Asbestos – The Miracle Mineral

- Asbestos can be found in many building materials
- Pipe Insulation
- Duct Insulation (internal and external)
- Walls
- Flooring
- Ceiling materials of all type
- Siding
- Typically present in buildings built Pre 1980

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Asbestos – The Miracle Mineral

- Asbestosis – scarring of the lungs
- Pleural disease – Non-cancerous lung condition
- Lung Cancer – malignant tumor
- Mesothelioma – rare cancer of the membrane that covers the lungs and chest cavity
- Most of these don't appear until 30 – 40 years after exposure

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Asbestos – The Miracle Mineral

- Always consult and IEP to have areas tested when in question
- Never disturb suspect materials if you aren't qualified to do so
- PPE includes double Tyvek suits, Respirators, and personal air monitoring devices
- Most of this work is highly regulated
- Water is your friend

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Lead and Lead Based Paint



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Lead and Lead Based Paint

Lead is a cumulative and persistent toxic substance that poses a serious health risk. When inhaled or ingested in excessive quantities lead may affect the nervous system, reproductive system, blood, kidneys and cause digestive problems, memory and concentration problems, and muscle and joint pain.



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Lead and Lead Based Paint

Short-term exposure

- Abdominal pain
- Constipated
- Tired
- Headachy
- Irritable
- Memory loss
- Pain or tingling in the hands/feet
- Weak

Long-term exposure

- In addition to the short-term
- Depressed
- Distracted
- Forgetful
- High blood pressure
- Heart disease
- Kidney disease
- Reduced fertility



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Lead and Lead Based Paint

- Paint and surface coatings on interior and exterior surfaces
- Roofing and pipe work
- Solder in plumbing and electrical
- Mortar in brick and stonework in older buildings
- Brass alloys
- Cast iron pipes, gaskets, and connections
- Flashings
- Glazing
- Lead glass, stained glass
- Structural steel primer
- Hospital x-ray rooms



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Lead and Lead Based Paint

- Call and IEP for testing
- Send a sample to your local testing facility
- Work with companies certified for Lead Abatement
- Always wear PPE when working around Suspect Lead
- Water is your friend. Do not allow to become airborne.

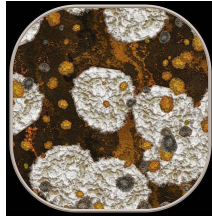




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Histoplasmosis


- An infection caused by breathing in spores of a fungus often found in bird and bat droppings
- The infection is most commonly spread when spores are inhaled during demolition or cleanup projects



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Histoplasmosis




- Fever
- Chills
- Headache
- Muscle aches
- Dry cough
- Chest discomfort
- Fatigue

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Histoplasmosis




- Saturate debris with water to prevent airborne particulate
- Always wear a respirator and PPE
- Source Removal

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Bloodborne Pathogens




- Infectious microorganisms in human blood that can cause disease in humans
- Capable of causing serious illness or death
- Sewage floods or natural disaster floods are a potential source.
- Always wear PPE

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Bloodborne Pathogens

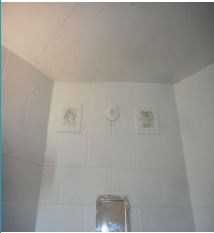
- Hepatitis B
- Hepatitis C
- Human immunodeficiency virus (HIV)



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Bloodborne Pathogens

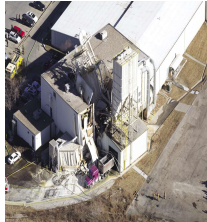


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Combustible Dust

- Essentially, a combustible dust is any fine material that has the ability to catch fire and explode when mixed with air. Combustible dusts can be from:
- most solid organic materials (such as sugar, flour, grain, wood, etc.)
- many metals, and some nonmetallic inorganic materials.





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Combustible Dust

- Have suspect materials tested for your safety
- SDS Sheets can be helpful if available
- Industrial, explosion-proof, high-efficiency particulate air (HEPA) filter equipped vacuums are the main pieces of equipment for this type of cleaning.





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Combustible Dust

- Use cleaning methods that do not generate dust clouds
- Use vacuum cleaners approved for combustible dust collection
- Locate relief valves away from dust hazard areas





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Combustible Dust


- Donning proper personal protection equipment (PPE), including safety lanyards and harnesses, hard hats, safety glasses, ear protection, disposable gloves, special coveralls and steel toe boots, is essential as well.



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Q&A
you have Questions
We have Answers



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Thank you for Participating!

