
ENVIRONMENTAL Fact Sheet



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Lead and Asbestos Exposure from Airborne Dust

What is the hazard?

The renovation of older homes and buildings can result in a number of unintended health hazards. For instance, buildings constructed before 1990 may contain asbestos and those built before 1978 may contain lead-based paint. During the renovation process if methods such as sanding, scraping and sandblasting are used to remove coatings like paint from various surfaces, it can produce large amounts of airborne dust. If this dust is breathed in or swallowed, it could be harmful to your health. There are steps that can be taken to reduce your exposure and minimize your risk. These steps are detailed below. Links to several helpful resources are also included.

Asbestos

Asbestos is the common name used for a group of naturally occurring mineral fibers. Buildings constructed prior to 1990 may have asbestos-containing materials. Asbestos was used in commercial products like insulation, floor and ceiling tiles, roof shingles, brick mortar, window glazing and caulking and joint compound due to its durability and insulating properties.

Lead

Lead is a naturally occurring metal found in all parts of our environment, including air, water and soil. It was previously used in products like caulking and lead-based paint, especially in buildings constructed before 1978. This includes painted window frames and sashes, shutters, door frames, trim and building exteriors.

How can I be exposed?

Sanding, scraping and sandblasting painted surfaces can produce airborne dust particles that can be breathed in or swallowed. This dust can also be tracked into homes through dust-contaminated shoes and clothing.

Exposure to asbestos

Asbestos fibers can be released into the air when asbestos-containing materials are disturbed. These fibers can remain in the air for multiple days after the initial disturbance. Because of their small size, these fibers can be breathed in and travel deep into the lungs, where they can lodge in the lung tissue.

Exposure to lead

Sandblasting lead-based paint can result in lead-contaminated dust particles becoming airborne where they can be breathed in or can contaminate shoes and clothing. Contaminated dust can also get on hands or into your mouth and nose and swallowed. Soil can become contaminated when exterior lead-based paint is disturbed. This contaminated soil can be ingested as a result of hand-to-mouth activity or breathed in if resuspended in the air or tracked into your home.

What health effects are associated with exposure to these contaminants?

Being exposed to lead and asbestos does not mean that you will develop health problems. Many factors can affect your risk, including:

- How long and how frequently you were exposed.
- How much you were exposed to.
- How long it has been since your exposure.

If you think you may have been exposed to lead or asbestos, a doctor can help you determine whether you are at risk for developing health problems from that exposure and may recommend further testing.

Asbestos-related health effects

Asbestos exposure affects the lungs and can lead to negative health impacts like lung cancer, asbestosis (scarring of the lung tissue) and mesothelioma (cancer of the lining of the lungs). Your risk of developing an asbestos-related lung disease increases with the amount of asbestos you breathe in. Symptoms will typically appear years after you were exposed.

- Children are more susceptible to asbestos-related diseases.
- Smokers exposed to asbestos have a greater risk of developing lung cancer.
- Lung conditions like COPD or asthma can increase your risk.

Lead-related health effects

Lead can affect almost every organ and system in the body, especially the nervous system and brain.

- Children six years old and younger are the most susceptible to the effects of lead, which can result in negative health impacts (e.g. behavior and learning problems, slowed growth, lower IQ and hyperactivity).
- Pregnant and breastfeeding women can pass lead on to the developing fetus or breastfeeding infant.
- Adult exposure to lead can result in cardiovascular effects, increased blood pressure and decreased kidney function.

How can I reduce my exposure?

Keep asbestos and lead-contaminated dust levels low in the home:

- Use wet cleaning methods on hard floors and furniture and high efficiency particulate air (HEPA) vacuums on carpets and fabrics.
- Use doormats and remove shoes and contaminated clothing before entering.
- Keep windows closed on windy days to keep asbestos and lead-contaminated dust out.
- Practice good personal hygiene habits (e.g. handwashing).

Reduce exposure to asbestos and lead-contaminated dust outside:

- Avoid disturbing asbestos-containing materials.
- Use water to wet soil before gardening or playing in the yard.
- Keep children and pets away from bare soil areas.
- Spray off patios with water instead of sweeping them.
- Stay on pavement or ground covered with grass or mulch.
- Avoid working or playing in the yard on windy days, when dust can be stirred up.
- Avoid eating or drinking while working in the yard or garden.
- Wash hands after working in the yard or garden.

Helpful resources:

- Asbestos – ToxFAQs™: <https://www.atsdr.cdc.gov/toxfaqs/tfacts61.pdf>
- Asbestos in Your Environment: What Can You Do to Limit Your Exposure: https://www.atsdr.cdc.gov/docs/limitingenvironmentalexposures_factsheet-508.pdf
- Asbestos and Health: Frequently Asked Questions: https://www.atsdr.cdc.gov/asbestos/docs/asbestos_factsheet_508.pdf
- Asbestos: What Homeowners, Contractors, Property Managers and Landlords Need to Know: <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/ard-59.pdf>
- Lead – ToxFAQs™: <https://www.atsdr.cdc.gov/toxfaqs/tfacts13.pdf>
- Health Effects of Lead Exposure: <https://www.cdc.gov/nceh/lead/prevention/health-effects.htm>
- NH DHHS Lead Poisoning Prevention Program: <https://www.dhhs.nh.gov/programs-services/environmental-health-and-you/lead-poisoning-prevention-program>
- Lead Poisoning – Lead and Children: <https://www.dhhs.nh.gov/sites/g/files/ehbemt476/files/documents/2021-11/hhlppp-children.pdf>
- NHDES provides free soil screening for lead through soilSHOP events. Upcoming events can be found on the NH APPLETREE webpage: <https://www.des.nh.gov/home-and-recreation/your-health-and-environment/new-hampshire-appletree>

Please do not hesitate to contact the Environmental Health Program (EHP) by calling [\(603\) 271-6802](tel:6032716802) if you have any questions about asbestos or lead or the information provided.