

Asbestos Exposure and Removal

Asbestos is a known health risk, and exposure to asbestos is known to be the sole cause of several diseases, and one cause of several types of cancer. Asbestos is dangerous because it is composed of mineral fibers that can be inhaled into the lungs if the fibers become airborne. Asbestos fibers are almost indestructible, and the body is unable to expel them once they have been inhaled. Over time, inhaled asbestos fibers cause chronic inflammation that can lead to the development of several diseases.



Currently an estimated 10,000 people die every year due to diseases caused by exposure to asbestos. The majority of these deaths are people who were exposed to asbestos at work during the peak period of asbestos use, between 1945 and 1980.

Known Health Risks of Asbestos Exposure

Asbestosis develops only in the lungs of people who are repeatedly exposed to airborne asbestos fibers. Over time these fibers become lodged in the lungs, where they cause chronic irritation and inflammation. The lungs eventually become irreversibly damaged, leading to difficulty breathing, painful breathing, and coughing. Currently four in every 10,000 Americans is affected by asbestosis.

Mesothelioma is a type of cancer that develops only in people who have been exposed to asbestos. The cancer generally develops in the sac that lines lungs, but may also originate in the lining of the abdominal cavity or heart. Around three thousand new cases of mesothelioma are diagnosed each year. Asbestosis and mesothelioma are devastating diseases that are difficult to detect and treat. Asbestos exposure is also a known cause of lung cancer. For more information on [asbestos cancer](#) and [mesothelioma treatment](#) see the resources at [Asbestos.com](#).

Exposure Risks

Asbestos is likely to be present in any home that was built between the 1940s and the 1980s. Older homes renovated or repaired during this period are also likely contain some asbestos construction materials. A wide variety of construction materials were made using asbestos, including the following.

- Roofing materials, including tiles, felting, and adhesives.
- Insulation of all kinds, including wall insulation, electrical tape and wadding, thermal insulation around furnaces and stoves, and as pipe covering.
- Flooring was used in tile and sheet vinyl form. Adhesives used to affix flooring also contained asbestos.
- Textured plaster was used as an acoustical ceiling treatment and as a decorative element for walls and ceilings.
- Millboard, rollboard and other sheet products were used for wall framing. Joint compounds and plaster used to patch holes and seams also contained asbestos.



For further information about asbestos-containing materials, please see "[Products Containing Asbestos.](#)"

Asbestos-containing materials that are intact and in good condition do not present a high risk of asbestos exposure, as asbestos fibers are unlikely to become airborne. However, materials that are in poor condition or are beginning to deteriorate may need to be repaired. Asbestos-containing materials that are friable (able to be broken by hand) may need to be completely removed. Home renovations, repairs and demolition may also necessitate the removal of asbestos.

Repair and Removal

Managing the risk of asbestos generally requires either repairing or removing asbestos-containing materials. In most situations, repairing materials is the preferred option, as often removal of asbestos-containing materials poses a higher health risk than leaving materials undisturbed.

Repairing asbestos materials involves covering or sealing them to prevent further release of asbestos fibers.

- Encapsulation: the asbestos is covered with a sealant that traps asbestos fibers and prevents their release.
- Enclosing: the asbestos is covered with a protective wrap to prevent the release of asbestos fibers.

How to Deal With and Safely Remove Asbestos

If you live in a home that was built prior to 1980, there is a good chance that you will find asbestos in your home. Many of the materials that were used in building homes before 1980 contained asbestos because of its insulating and fire-resistant properties. It was used in ceiling and wall plasters, wallboard, floor and ceiling tiles, floor mastics, some vinyl floor backings and many other places.

In most cases, there is no danger from the asbestos in your home. As long as the materials that contain the asbestos are intact and undamaged, there is no reason to worry. Asbestos is only a health hazard when tiny fibers of it become airborne. This can happen if you disturb asbestos containing materials during renovations or repairs, or if a material containing asbestos becomes damaged.

What to Do if You Think Your Home Contains Asbestos

Unless the materials containing asbestos are clearly labeled, it's very difficult to identify them. A licensed asbestos surveyor can test materials that you suspect contain asbestos. Testing for asbestos yourself is not recommended because of the danger of releasing asbestos fibers into the air while obtaining samples. If you choose not to have testing done, you should assume that the material does contain asbestos and treat it with all safety precautions listed below.

Completely removing materials that contain asbestos is a last resort because of the risk of releasing asbestos fibers. There are several other ways to deal with asbestos in your home safely without the need to remove it. The EPA recommends the following:

1. If the material is not damaged or likely to be disturbed, just leave it alone. Any attempt to remove it increases the risk that asbestos will be released into the air.
2. Encapsulate the material. Encapsulation is a method of sealing the surface of materials that contain asbestos to prevent fibers from becoming airborne. Encapsulation is suitable if the material is in good repair and is not soft or crumbly. It is not recommended for material that has begun to deteriorate.
3. Enclose (cover) the asbestos containing material. Covering involves putting something over or around the asbestos containing material, such as a sleeve over asbestos pipe insulation or a new floor over an existing one of asbestos tiles.

Repairing asbestos with methods like encapsulation or enclosure should both be done by professionals with training and licensing. You can find a licensed professional in the Yellow Pages under Asbestos Removal.

Removing Asbestos

In general, removing asbestos-containing materials from your home yourself is not recommended. Asbestos is extremely hazardous, and there is no safe level of exposure to asbestos. Even a few fibers

have the potential to be inhaled and eventually cause asbestosis, mesothelioma or another cancer. For additional information on [asbestos cancer](#) please see the resources at Asbestos.com

Before you consider removing asbestos from your home yourself, consider the following cautions:

1. Never sand, drill or saw asbestos containing materials. Do not use power tools on asbestos containing materials.
2. Seek professional advice if you're considering removing materials containing asbestos, or are planning renovations that may disturb materials that contain asbestos.
3. Do not attempt to remove asbestos spray coatings, insulation or insulation board by yourself. These are complex jobs that require the training and equipment available to professionals.

Doing it Yourself

In many states, a homeowner may legally remove asbestos containing materials from the home's interior, but not the exterior. It is not recommended unless you are experienced in the techniques described below. If you do choose to attempt asbestos removal as a do-it-yourself project, you'll need to take all safety precautions seriously, and follow them precisely. The EPA and various state organizations have publications available that describe the approved methods for containing asbestos, protecting yourself and your home from contamination and disposing of asbestos properly.

Important Precautions

Before you begin work:

- Clear the area where the asbestos is to be removed to cut down on the risk of contaminating furniture, clothing and other items with asbestos fibers.
- Cover anything that can't be removed with thick polyethylene sheeting.
- Isolate the area where work is to be done from the rest of the house by building a containment area and air lock of polyethylene sheeting.
- Cover walls and floors in the area where asbestos is to be removed with polyethylene sheeting.
- Post signs to alert visitors, family and friends of the work in process and the possible exposure risk.

Protecting yourself while you work:

- Wear a respirator that is approved for asbestos removal at all times that you are in the containment area.
- Wear a disposable coverall, disposable rubber gloves, rubber boots and protective eye goggles the entire time that you are in the containment area.

- Remove all protective clothing and gear inside the air lock before you leave the containment area. This will prevent the spread of asbestos fibers outside the containment area.

Handling Asbestos During Removal

- Never handle asbestos with your bare hands. Wear disposable rubber gloves.
- Place all removed materials into asbestos waste disposal bags for later disposal.
- Keep the floor and any debris on it damp while you work to reduce the amount of dust in the air.
- Remove the asbestos without breaking it up.

Cleanup and Decontamination

- Double bag and seal all debris containing asbestos. Use approved bags, and seal each bag separately, then place in a second bag and seal the second bag.
- Wipe down all surfaces with a damp cloth. Do not sweep or use a vacuum to clean up debris that may contain asbestos.
- Carefully fold and roll the polyethylene sheeting on the floor and dispose of it in the same way as the debris (double bagged and sealed).
- Wipe down all tools and equipment with clean, soft rags and water. Do not reuse rags. Dispose of each rag after use and use a new rag to continue cleaning.
- Do not remove protective masks and equipment until all cleanup is completed.
- Bag disposable gloves, coveralls and boots in asbestos waste bags.
- Wash hands and face and shower thoroughly.

Disposal of Asbestos

Asbestos containing waste may only be disposed of at approved landfills that have the capacity to deal with it. Call the state EPA office for a list of approved landfill sites that can handle construction wastes.

- All materials that contain asbestos must be double-bagged and sealed in approved asbestos waste disposal bags printed with the appropriate warnings.
- All asbestos-containing waste must be transported in a covered truck to avoid releasing asbestos dust into the air.

For more information on asbestos exposure and abatement please visit the [Asbestos and Mesothelioma Center](#).

Respirator Use

Due to the known health risks of inhalation asbestos fibers, a respirator should always be used in any situation where exposure to asbestos may occur. This includes both repair and removal of asbestos, and any other situation in which airborne asbestos fibers may be present in the environment.

When working with asbestos-containing materials of any kind, a respirator with a High Efficiency Particulate (HEPA) filter should be used.



Other Precautions

Prior to repair or removal of asbestos, precautions should be taken to prevent asbestos fibers becoming airborne. The danger of this occurring will depend on the location of the asbestos and the type and condition of the materials involved.

- Limit or entirely cease activity in the area where asbestos-containing materials will be repaired or removed, to prevent further damage and release of fibers.
- Don't sweep, dust, or vacuum near asbestos-containing materials.
- Avoid sanding, scraping, or otherwise breaking or disturbing asbestos-containing materials.

The most vital way of preventing asbestos exposure is to hire an accredited professional for any repair and removal operations. Even a minor disturbance can cause the release of asbestos fibers, and while the use of a respirator may provide temporary protection, only knowledge of proper procedures and precautions for working with asbestos will provide complete protection.