



Mold Information for the Public

What is mold?

Mold is found throughout indoor and outdoor environments. Indoors, mold can damage property. Some molds produce chemicals called mycotoxins that may be harmful to your health. It should be removed from indoor spaces. Outdoors, mold plays an important role in helping to break down dead leaves, wood, and other things found in nature.

Mold produces spores, very tiny particles that cannot be seen by the naked eye. Spores are the "seeds" of mold and are common in every home. They can grow into new mold when they land on a wet surface or on food.

How can I tell if I have a mold problem in my house?

You can find a mold problem by using your eyes to see it and nose to smell it.

If you see:

- signs of moisture or water damage such as water leaks, standing water, water stains, discoloration on walls or other surfaces
- white, gray, brown, black, yellow or green growths with a cottony, velvety, granular, or leathery texture

or smell:

- musty or earthy odors



you can assume you have a mold problem. To find mold growths, you may need to look underneath flooring, behind furniture, near stored items, or may need to make an opening in a wall. *If you have not had an obvious water leak or high moisture problems in your home and you do not see mold growing in your home, you likely do not have a mold problem.*

Are there different types of mold?

There are more than 100,000 types of mold. Common indoor mold types are cladosporium, penicillium, alternaria, and aspergillus.

Black mold (*Stachybotrys chartarum*, *Stachybotrys atra*, or SC) has received a lot of television and newspaper coverage in recent years. SC is white or greenish-black to black mold that grows on materials with a high cellulose content that have been wet for several days. High cellulose materials include drywall, cardboard, wood, paper, and drop ceiling tiles. Under certain conditions, SC, like some other molds, can produce mycotoxins that may be harmful to your health.

It is important to remember that not all black molds are SC and that SC does not always produce mycotoxins. While alive, SC is slimy and does not release many spores. Exposure is greatest when SC dries and spores or bits of the mold growth are released into the air.

Should I have mold testing done in my home?

No, it is not recommended that you have mold testing done in your home. Tests are not useful in determining mold-related health risks and can be very expensive. Standards have not been established to determine what is or is not an acceptable level of mold. Because mold spores are everywhere, mold testing results can be very difficult to interpret and often do not help with mold removal efforts.

How can I clean up mold?

Follow these steps to clean up mold:

1. Locate and fix the water leak or moisture problem.
2. Wear disposable rubber gloves, goggles that don't have ventilation holes, and a respirator available at your local hardware store (N-95 or HEPA cartridge types) to reduce your exposure to mold spores. If you have respiratory problems (like asthma or emphysema) or the area is large (over two square feet), check with your doctor before starting cleanup or have someone else do the cleanup.
3. Be sure the area is well ventilated. Open windows and doors and use fans to create a path of fresh air from the cleanup area to the closest door or window leading to the outdoors. Avoid blowing mold spores through the rest of the house.
4. When mold is growing on porous material (for example, ceiling tiles, leather, cloth, drywall, plaster, paneling, wood products, paper, carpet, or padding) remove, bag, and discard the material. When removing drywall, cut at least 12 inches beyond the area of visible mold. Hard (non-porous) material such as glass, plastic, or metal does not need to be thrown out. It can be cleaned and disinfected.
5. Use **non-ammonia** soap or detergent in hot water to scrub non-porous areas. Use a stiff brush or cleaning pad on block walls or uneven surfaces.
6. Thoroughly rinse the area with hot water. Using a wet-dry vacuum is an easy way to pick up excess water. Remove the filter so that it doesn't get wet, creating a place for mold to grow.
7. Disinfect the area with a dilute solution of 10 percent household bleach and water. To avoid skin, eye or lung irritation, **do not mix bleach with ammonia or other chemicals**. Do not use straight bleach – it will not be more effective. Avoid the bleach solution runoff. Wear old clothing – bleach can ruin clothes.
8. Completely dry the area, usually two or three days. Raising the temperature and running a dehumidifier in the area will help.
9. Vacuum your home thoroughly with a HEPA or filtered vacuum.
10. If you still have mold odors after cleaning and ventilating, it is possible the mold is hidden within walls or behind wall coverings. It is important that these sources are found and cleaned.
11. If you have mold damage caused by sewage or other contaminated water, call in a contractor who has experience in cleaning buildings damaged by sewage or contaminated water.
12. If you choose to hire a contractor to do cleanup, make sure the contractor has experience in cleaning up mold. Check the contractor's references. *The State of Michigan does not certify or license contractors for mold removal.*

Does exposure to mold affect my health?

Exposure to mold does not always result in health problems. The average healthy person's immune system usually provides protection from the harmful effects of mold. Most health problems caused by mold are from allergic reactions to it. For example, allergic reactions have

occurred among farmers working around large amounts of moldy hay. People with special health concerns (infants, children, and adults with respiratory conditions or impaired immune systems) may be more sensitive than the general population.

Exposure to mold can occur from:

- breathing in mold spores that have been released into the air
- eye contact with mold spores that have been released into the air
- eating food that has become contaminated with mold
- touching the eyes, nose, or mouth with mold-contaminated fingers

The most common health problems due to mold exposure are:

- runny nose
- sinus congestion
- eye irritation
- cough and congestion
- sore throat
- sneezing
- upper respiratory infections
- headaches
- worsening asthma
- fatigue

**These are common health problems that can be caused by many health conditions.
See your doctor if you feel that exposure to mold is making you sick.**

How can I prevent exposure to mold?

The best way you can prevent exposure to mold is to control moisture and prevent mold from growing. Here are some tips to prevent exposure:

- Throw out moldy food.
- Promptly attend to leaking pipes, flooded basements, roof leaks, ice dams, and other source of water infiltration.
- Run exhaust fans in showers, baths, indoor pool areas, and cooking areas to allow moisture and steam to escape outdoors.
- Not all moisture problems are the result of leaks, condensation, or floods. Humidity levels above 60 percent can promote mold growth. In humid months, try using an air conditioner or dehumidifier to keep the humidity in your home below 50 percent.
- Humidifiers increase the moisture in your home. If you use a humidifier, be sure that it is set properly to prevent excessive humidity.
- Be sure your clothes dryer is vented outdoors. Avoid drying clothing indoors on drying lines or racks.
- Clean bathrooms with mold-killing products.
- Insulate pipes and install chimney liners to limit condensation.
- Use storm windows to limit window condensation.
- Ventilate crawlspaces to prevent moisture build-up.
- Use area rugs that can be washed often. A vapor barrier (like plastic sheeting) may be necessary if carpet is installed over concrete.
- Have your heating and cooling systems inspected and serviced regularly.

Are there laws in the State of Michigan that address mold?

The State of Michigan does not have laws that require anyone to cleanup, remove, or report mold in any indoor environment. The State of Michigan does not have a program to address issues related to mold, other than to provide people basic information about mold clean-up. *The State of Michigan does not certify or license contractors for mold removal.*

However, laws do exist that cover certain situations that can also include mold. The following is a list of situations and suggested government agencies that may be able to provide some level of assistance.

Landlord and tenant relationships: If you are renting an apartment or house, you have the right to expect certain minimum standards referred to as “warranties of habitability” that provide minimum standards of decent, safe, sanitary housing specified in the state or local housing code. For more information on landlord-tenant relationships go to:
http://www.tenant.net/Other_Areas/Michigan/.

Fraud in mold remediation companies: If you believe you are a victim of fraudulent business practices from a company involved in mold remediation, contact:
Michigan Consumer Protection Division
P.O. Box 30213-7713
Lansing, MI 48909
(517) 373-1140
Toll-free (877) 765-8338

Legal issues related to new home construction and mold: If you have questions about laws regarding new housing construction and contractors actions related to mold, contact:

Michigan Department of Labor & Economic Growth
Bureau of Commercial Services/Enforcement Division
P.O. Box 30018
Lansing MI 48909
(517) 241-9202

For more information on mold:

- Michigan Department of Community Health Toxics and Health hotline and website: 1-800-648-6942, www.michigan.gov/mdch-toxics
- Your local public health department, find it at <http://www.malph.org/page.cfm/108/>
- United States Environmental Protection Agency:
<http://www.epa.gov/iaq/molds/moldresources.html>
- Centers for Disease Control: <http://www.cdc.gov/mold/>
- New York City Department of Health and Mental Hygiene:
<http://www.nyc.gov/html/doh/html/epi/moldrpt1.shtml>
- National Center for Housing and the Environment: <http://www.stopmold.org/>