

# Molds in your home

Michigan Department of Community Health (1-800-648-6942)

## Important Mold Facts:

- *Mold spores are found just about everywhere.*
- *The best way to control mold is to control moisture. Stopping the source of water or humidity is the most important step in cleanup and prevention.*
- *There is no practical way to remove all the mold or mold spores in your home.*

## **Fact Sheet Highlights:**

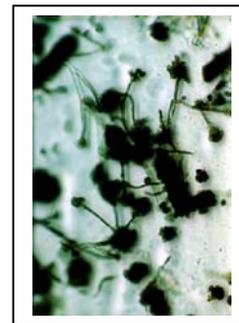
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## *Molds 101*

Molds are microscopic fungi that are found almost everywhere, inside and outdoors, year round. Molds act as nature's decomposers, breaking down organic matter, and can be most any color—white, orange, green, or black. Molds release spores into the air, which then enter our homes through windows, doors, cracks, and vents. Mold spores can also be carried in on clothing, pets, and foot traffic.

When mold spores land on damp material they may thrive. Mold needs moisture to grow. Stopping water from coming into your home is the most important step you can take to ensure your home remains mold free.

Some molds can produce compounds called mycotoxins. As the name suggests, these compounds can be harmful to your health. Not all molds make mycotoxins. However, the tests to determine the exact species of mold in your home can be expensive. Also,



*Stachybotrys sp.*

there are no official standards regarding safe levels. We recommend that unless identification is essential, you forgo it and simply treat any mold as potentially hazardous and handle with caution. Cleanup is largely the same no matter the type of mold.

Most molds can be found visually, however if indications of mold (musty smell) continue without obvious moldy areas, the mold may be hidden and a professional should be consulted.

## *Health Effects of Mold*

Sensitivity to mold varies from person to person. One person may react severely to levels that would cause no symptoms in another. In general, the following groups are most susceptible to mold:

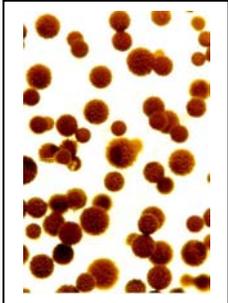
- **infants and children**
- **the elderly**
- **immune compromised patients**
- **people with respiratory problems such as allergies and asthma**

Exposure to mold and mold spores can cause a range of allergic reactions. These include: eye irritation (watery, burning, itchy, blurred vision), runny nose, sore throat, sneezing, nasal and sinus congestion, coughing, wheezing, difficulty breathing, rhinitis, asthmatic episodes, headaches, and fatigue.

Although certain types are more hazardous than others, treat all molds with caution.



## Cleaning up mold, the inside story



*Aspergillus Niger*

Having someone test for mold is not a necessary first step and can be expensive. If you can see or smell mold, you probably have a mold problem. Mold is typically found in areas of the home with chronic moisture problems such as basements, bathrooms, windowsills, and in areas where there is condensation because of pipes or a chimney. Start your search there.

Mold may also be hidden behind walls, wallpaper, paneling, or embedded in porous material. If it absorbs water, it is considered porous. Look for a discoloration of the material and leaching from plaster.

It is important to start early. If you are dealing with a flood event, cleanup should begin within 24 hours, before much mold growth can occur. Waiting will only make the mold, and eventual cleanup, worse. Porous material that is wet for more than 24 hours may need to be thrown out.

Any treatment of mold must begin with stopping the water coming into the area, whether it is by leak, condensation, excessive humidity, or flood. If an area is cleaned, but the moisture problem remains, the mold will return.

Cleaning will dramatically increase the amount of mold and mold spores in the air. **Use disposable rubber gloves, goggles, and a respirator**, available at your local hardware, that will filter particles (N-95 or TC-21C cartridge types) during cleaning. Also **be sure the area is well ventilated**, open windows and doors and use fans to create a path of fresh air into the cleanup area that exits through the nearest opening to the outdoors, NOT through the rest of your house.

### FOLLOW THESE STEPS TO CLEAN UP MOLD:

1. Identify and correct the moisture problem.
2. Remove, bag, and discard non-essential porous material that has

been heavily contaminated (i.e., ceiling tiles, leather, cloth, sheetrock, plaster, paneling, wood products, paper, carpet, padding, etc.). When removing drywall or sheetrock, cut at least 12 inches beyond the area of visible mold. Hard material such as glass, plastic, or metal can be kept after cleaning and disinfection.

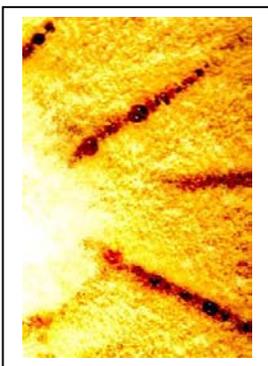
3. Use a non-ammonia soap or detergent in hot water and scrub the affected area. Use a stiff brush or cleaning pad on block walls or uneven surfaces.
4. Thoroughly rinse the area with hot water. A wet-dry vacuum is an easy way to pick up excess water.
5. Disinfect the area with a dilute solution of 10 percent household bleach (*do not mix with ammonia or other chemicals*). Do not use straight bleach—it will not be more effective. Avoid runoff or standing liquid.
6. Completely dry the area for two or three days. Raising the temperature and using dehumidifiers will help.
7. Vacuum your home thoroughly, preferably with a HEPA or filtered vacuum.

Remember, cleaning will increase your exposure to mold and bleach fumes. **If you have respiratory problems (like asthma or emphysema), or the affected area is large (>2 square feet), consult with a professional.**

After cleaning, you may still have mold odors. It is possible the mold is hidden within walls or behind wall coverings. As all buildings breathe, it is important that these sources are found and cleaned.



*Stopping water coming into your home is the single most important step you can take to ensure your home remains mold free.*

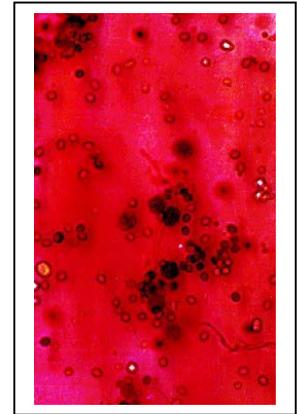


*Penicillium sp.*

## PREVENTION - 10 THINGS YOU CAN DO

The most powerful tool you have in preventing mold is controlling moisture. Here are some recommendations:

- ① 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.
- ② Exhaust showers, baths, and cooking areas to allow steam to escape outdoors. Also, be sure your clothes dryer is vented outdoors and avoid regular drying of your clothing on indoor drying lines or racks.
- ③ Promptly attend to leaking pipes, flooded basements, roof leaks, ice dams, and other sources of water infiltration.
- ④ Humidifiers increase the moisture in your homes. If you use a humidifier, ensure that it is set properly to prevent excessive humidity.
- ⑤ Insulate pipes and install chimney liners to prevent condensation.
- ⑥ Put a plastic cover over dirt in crawlspaces to prevent moisture coming up from the ground.
- ⑦ Use area rugs on concrete floors that can be taken up and washed often. A vapor barrier may be necessary if carpet is installed over concrete.
- ⑧ Have your heating and cooling systems inspected and serviced regularly.
- ⑨ Use storm windows to limit window condensation.
- ⑩ Add mold inhibitors to paint when repainting.



*Asci sp.*

*Having someone test for mold is not a necessary first step and can be expensive.*





## What about Black Mold?

Black mold has received much media attention in recent years. The mold they are often referring to is *Stachybotrys chartarum* (or *Stachybotrys atra*), or SC for short. SC is a rare, white or greenish-black to black mold that grows on materials with a high cellulose content that has been wet for several days. Cellulose rich materials include drywall, wood, paper, and drop ceiling tiles. Under certain conditions, SC, like some other molds, can produce chemicals called mycotoxins that may be harmful to your health. The health effects of breathing mycotoxins are not well understood.

### IMPORTANT THINGS TO KNOW ABOUT "BLACK MOLD"

- Not all black molds are SC, and SC does not always produce mycotoxins
- While alive, SC is slimy and does not release many spores or mycotoxins. Exposure is low unless it dries up, when spores and mycotoxins (if present) are released into the air.
- There is no test to determine if you are currently exposed to SC.

## Questions?

### ONLINE RESOURCES:

- ☛ U.S. Environmental Protection Agency's (EPA) Indoor Air Quality: [www.epa.gov/iaq](http://www.epa.gov/iaq) and [www.epa.gov/iaq/pubs/moldresources.html](http://www.epa.gov/iaq/pubs/moldresources.html)
- ☛ Centers for Disease Control and Prevention (CDC), National Center for Environmental Health, Questions and Answers on *Stachybotrus chartarum* and other molds: <http://www.cdc.gov/nceh/asthma/factsheets/molds/default.htm>
- ☛ Minnesota Department of Health [www.health.state.mn.us](http://www.health.state.mn.us) and [www.health.state.mn.us/divs/eh/aialr/iair/moldweb.html](http://www.health.state.mn.us/divs/eh/aialr/iair/moldweb.html)
- ☛ California Department of Health Services, Environmental Health Investigations Branch [www.dhs.ca.gov](http://www.dhs.ca.gov) and <http://www.dhs.ca.gov/deodc/ehib/EHIB2/topics/mold.html>

### PHONE:

**Local Health Department:** check the [Blue Pages](#) of your telephone directory.

**Michigan Department of Community Health:** 1-800-648-6942

**Specialists or contractors:** check your telephone directory under "Environment"

Visit the Michigan  
Department of Community  
Health Online:

[www.mdch.state.mi.us](http://www.mdch.state.mi.us)

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