

Molds are small organisms found almost everywhere, inside and outside, including on plants, foods and dry leaves. They can be nearly any color – white, orange, green or black. Molds are beneficial to the environment and are needed to break down dead material. Very tiny and lightweight, mold spores travel easily through the air.

Most building surfaces can provide adequate nutrients to support the growth of mold. When mold spores land on material that is damp – for example, walls, floors, appliances (such as humidifiers or air conditioners), carpet or furniture – they can begin to multiply. When molds are present in large numbers, they may cause allergic symptoms similar to those caused by plant pollen.

What does mold need to grow?

Mold needs –

- a food source such as leaves, paper, wood or dirt
- a source of moisture
- a place to grow

What are sources of moisture in my home?

Many sources can cause moisture in your home, including –

- flooding
- leaky roofs
- humidifiers
- damp basement or crawl spaces
- constant plumbing leaks
- clothes dryers vented indoors

How can I be exposed to molds?

You are exposed to some mold every day, usually by touching, eating or breathing it. When mold is growing on a surface, spores can be released into the air where they can be easily inhaled. A person who ingests or inhales a large number of spores may suffer adverse health effects.

What health effects can be caused by exposure to mold?

Some people are more sensitive to molds than others. These include –

- infants and children
- elderly persons
- immune compromised patients (people with HIV infection, cancer, liver disease, etc., or who are undergoing chemotherapy)
- individuals with existing respiratory conditions, such as allergies and asthma

The same amount of mold may cause health effects in one person, but not in another. Exposure to molds can cause allergic symptoms such as watery eyes, a runny nose, sneezing, nasal congestion, itching, coughing, wheezing, difficulty breathing, headache and fatigue.

Should I be concerned about mold in my home?

When airborne mold spores are present in large numbers, they can cause skin irritation, allergic reactions, asthma episodes, infections and other respiratory problems for people. Exposure to high spore levels can cause the development of an allergy to the mold. Mold also can cause structural damage to your home.

What is Stachybotrys?

Stachybotrys is a greenish-black, slimy mold found only on cellulose products (such as wood or paper) that have remained wet for several days or more. Stachybotrys does not grow on concrete, linoleum or tile. According to the U.S. Centers for Disease Control and Prevention (CDC), all molds should be treated the same with respect to potential health risks and removal. Exposure to any mold could cause health effects under the right conditions. All molds should be handled with caution.

In 1994, the CDC investigated whether exposure to Stachybotrys might be related to pulmonary hemorrhage, also known as bleeding lungs, in infants in Cleveland, Ohio. They concluded that there was a strong association between Stachybotrys and bleeding lungs.

Because this conclusion was disputed by experts in the scientific community, the CDC organized a panel to review the study results. In the March 10, 1999, *Morbidity and Mortality Weekly Report*, the expert panel concluded that an association between exposure to Stachybotrys and bleeding lungs in infants was not proven.

Can my home be tested for mold?

Testing for molds is very difficult and expensive. Homeowners must hire a contractor to test their homes. Even if testing is done, no standards exist to judge what are acceptable amounts of mold. Testing cannot determine whether health effects will occur. Mold is normally found outdoors and counts fluctuate from day to day depending on the season. Due to the uncertainties associated with testing for molds, IDPH does not recommend it in most cases.

If you can see or smell mold, testing is usually not necessary. It needs to be cleaned up.

What can I save and what should I get rid of?

Substances that are porous, such as paper, rags, wallboard and rotten wood, can trap molds and should be thrown out. If the home has been flooded, remove all drywall to at least 12 inches above or around any water mark. Harder, non-porous materials such as glass, plastic or metal can be kept after they are cleaned and disinfected. Carpeting can be a difficult problem because drying does not remove the spores. Disposal of the carpet should be considered.

How can I clean moldy surfaces?

It is important to make sure that the source of moisture is stopped before the mold is cleaned up. If this is not done, the mold will grow again. How you clean up areas contaminated with mold depends on the surface where the mold is growing. A professional should be consulted if large areas (more than 30 square feet) are contaminated with mold. If the surface is non-porous (varnished wood, tile, etc.), you can take the following steps.

1. The surfaces first need to be cleaned with soap.
 - Use a non-ammonia soap or detergent in hot water and scrub the entire area affected by the mold. **Never mix bleach with ammonia; the fumes are toxic.**
 - Use a stiff brush or cleaning pad on block walls or uneven surfaces.
 - Rinse clean with water.
2. The next step is to disinfect the surfaces to help prevent mold from coming back.
 - Disinfect the area with a solution of water and bleach (½ cup of bleach per gallon of water). Straight bleach will *not* be more effective. When mixing or using the solution, make sure the windows are open.
 - For spraying large exterior areas, a garden hose and nozzle can be used.
 - Let disinfecting areas dry naturally. This extended time is important to kill all the mold.

How can I reduce my exposure to the mold while cleaning it up?

During the cleanup of molds, many spores may be released into the air. Mold counts in air are typically 10 to 1,000 times higher than background levels during the cleaning and removal of mold-damaged materials. To prevent health effects, there are several ways you can protect yourself while cleaning up the mold.

- Anyone with a chronic illness, such as asthma or emphysema, should *not* do the cleanup.
- Use a HEPA filter respirator purchased from a hardware store to reduce the mold spores you breathe in.
- Wear protective clothing that is easily cleaned or discarded.
- Wear rubber gloves.
- Do not allow family members or bystanders to be present when you are doing the cleanup.
- Work over short time spans and take breaks in a fresh air location.
- Open the windows in your house during and after the cleanup.
- Shut off heat or air conditioning to prevent mold spores from being spread around the home.
- Tightly cover the air return vent if there is one in the affected area.
- Turn on an exhaust fan or place a fan in a window to blow air out of the affected room to the outside (make sure the air is being blown *outside* the home, not into another room).
- Double bag materials before you remove them from the contaminated area.

Where can I get more information?

Illinois Department of Public Health
Division of Environmental Health
525 W. Jefferson St.
Springfield, IL 62761
217-782-5830
TTY (hearing impaired use only) 800-547-0466

Additional References

Web Sites

U.S. Centers for Disease Control and Prevention
<http://www.cdc.gov>

U.S. Environmental Protection Agency
<http://www.epa.gov>

American Conference of Governmental Industrial Hygienists Inc.
<http://www.acgih.org>

American Industrial Hygienist Association
<http://www.aiha.org>

Books

Indoor Biological Pollutants. 1992. Washington, D.C.: U.S. Environmental Protection Agency

Burge, Harriet A. 1995. *Bioaerosols*. Boca Raton, Fla.: Lewis Publishers

Macher, Janet. 1999. *Bioaerosols: Assessment and Control*. Cincinnati, Ohio: American Conference of Governmental Industrial Hygienists



Mold and Mildew

**Environmental
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**Illinois Department
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