



FREQUENTLY ASKED QUESTIONS ABOUT MOLD

What is mold and what causes it to grow?



Molds are types of fungi that can be found almost anywhere – indoors and outdoors. The most common molds found indoors are known as *Cladosporium*, *Penicillium*, *Aspergillus*, and *Alternaria*. When environmental conditions are dry and cool, molds produce spores that can spread through the air and land on new surfaces to grow. When a lot of moisture is present, or indoor humidity levels are high, and/or temperatures are above 65°F, mold spores can become active and start to grow rapidly. Some household conditions that may lead to mold growth include clogged gutters, plumbing or roof leaks, poor ventilation, flooding, and damp basements or crawl spaces. Molds can grow on walls, ceilings, mattresses, furniture, clothing, toys, and many other items. If there is mold growing in your home, there is most likely a moisture or water problem.



What are signs that mold may be growing in my home?



Molds usually appear as small speckled spots scattered over a surface, and they may be black, brown, green, white, pink, orange, or almost any other color. In time, the number and size of spots may increase, and a surface may become completely covered with mold. Molds have a musty, mildew, or earth-like smell. Molded surfaces often look slick or slimy.

What symptoms are associated with mold exposure?

Some people are more affected by mold than others. Some people can live in places with a large amount of mold and not experience any symptoms. Allergic reaction is the most commonly reported health effect of mold exposure. If you cough, wheeze, or have difficulty breathing around mold, you may be sensitive to certain molds. If continuously exposed to mold, some people may develop symptoms such as watery, itchy, burning or red eyes; nose or throat irritation; sneezing; coughing or wheezing; constant headaches; memory problems or mood changes; aches and pains; and in some cases, hives, welts, or skin rash. Mold spores cannot be seen but can be inhaled, which can cause irritation or infection in the lungs and make it harder to breathe.

Are certain people more susceptible to health effects from mold exposure?

Yes – some people are more likely than others to develop symptoms from mold exposure, including young children, the elderly, pregnant women, and people with asthma or other respiratory diseases.

People with suppressed immune systems (e.g. HIV/AIDS infection, organ transplant patients, chemotherapy patients) should avoid heavy mold infestations. If possible, susceptible individuals should not live in buildings where mold is growing, and should consult their family physician if symptoms develop or persist.

Are black molds more harmful than other molds?



If you observe mold that is black in color, this does not imply that it is toxic. Black is a very common color for molds, but not all black molds are harmful. At least one mold species, *Stachybotrys* (Stacky-bo-tress), can produce toxins under very specific circumstances. *Stachybotrys* is not a very common mold, and appears as a slimy, black mold with white edges. This mold can grow on fiberboards, gypsum boards, thermal insulation, paper, ceiling tiles, drywalls, ducts, wood, dust, wet leaves, among other items. There have been a few reported outbreaks of pulmonary

hemosiderosis (bleeding from the lungs) among children who lived in buildings where very high levels of *Stachybotrys* were present. According to current research, exposure to black mold results in the same health effects caused by exposure to other common molds.

Why is mold a problem after a flood?

Floods provide ideal conditions for rapid mold growth in houses, apartments, and other buildings. Floodwaters are absorbed by porous surfaces which act like sponges. Soaked objects are an ideal environment for mold growth because molds and other microorganisms penetrate deeply into wet materials. As materials dry out, the moisture that evaporates keeps indoor humidity very high, providing a perfect environment for molds to grow on walls and other surfaces. Closed buildings can trap moisture inside and also provide favorable mold growing conditions. Mold problems are exacerbated after flood events because buildings are often closed for days or weeks before anyone can gain access to clean them.



What can I do to control molds once I re-enter my flooded house or apartment?

Eliminate all household items which have been water soaked, such as soft furniture, mattresses, carpeting, and anything else that can absorb water and cannot be adequately cleaned. This includes furniture made of pressboard (also known as particleboard or chipboard). Wooden items made of plywood should be discarded. Items that can be thoroughly washed or dry cleaned can be kept after cleaning. In general, porous items such as paper, cardboard boxes, cloth, wallboard, foam rubber, and stuffing in furniture and toys can trap mold spores. Allowing items to dry out will not remove the mold, which can grow again anytime there is a lot of moisture in the air. Hard surface materials such as glass, metal, and plastic, including kitchen utensils can be kept after they are thoroughly washed in hot, soapy water. Any wooden items used to prepare, serve, or contain food should be discarded.

What should I do about floors, walls, and ceilings after flood events?

Vinyl floors, drywall, insulation, and in some cases ceilings should be removed and replaced if mold is present. It takes a long time for water under vinyl floors and in walls to dry out. While they

are wet, water can spread up walls and insulation much higher than the flood water level due to a process called “wicking.” As a result, mold quickly develops in areas where water has spread. Once mold is established in drywall and insulation, it will continue to grow in the future when humidity is high enough. Sealing the surface with paint, polyurethane, or fiberglass is not adequate. Removing the drywall and insulation is the only way to determine the extent of wicking. All water-damaged materials should be removed and discarded.

After drywall and insulation are removed, you should wait until the remaining wood or other building materials in the walls are thoroughly dry. It is recommended that you increase air circulation and use dehumidifiers to accelerate the drying process. Replacing the wall before it is thoroughly dry can result in potential mold problems and structural damage. The most accurate way to determine when the wall can be replaced is to test the wood with a moisture meter.

Can heating and cooling systems be contaminated with mold?



Yes – the ductwork that carries hot or cold air, the blowers, and air handlers can become contaminated if they are under water. Air ducts that are made of sheet metal, or sheet metal with fiberglass insulation on the outside, can be cleaned and disinfected. Air ducts that are made entirely of fiberglass, or have interior fiberglass insulation may have to be removed and replaced. Furnaces and other air handling equipment may also need to be replaced. VDH recommends that you contact a qualified heating and cooling contractor in your area to address this issue.

How do I get rid of mold in my home?

There is no practical way to completely eliminate all in the indoor environment; however, there are some actions you can take to remediate a lot of mold present in a home:

- Determine who should perform cleanup/remediation by assessing the size of the mold problem. If the area of concern is less than 10 square feet, cleanup can be handled yourself by following guidelines from the Environmental Protection Agency (EPA)’s guide on [Mold, Moisture, and Your Home](#). Mold and mildew can be removed with one cup of ordinary household laundry bleach in one gallon of water. Never mix chlorine bleach of any type with ammonia as the mixture produces toxic fumes. The bleach solution should remain in contact with the surface for at least two minutes; afterwards, the surface should be rinsed with water. You should wear long clothing, a head cover, waterproof boots, heavy rubber gloves and safety goggles. The most important protection is to wear a particle-filtering mask, (a 3-M N95 particle removal mask or the equivalent), which is capable of filtering particulates equal to or larger than 0.3 microns.



- It is advised that you correct any water or moisture problems that led to the mold growth. The steps you can take to reduce moisture is to use air conditioners and/or dehumidifiers; inspect and repair the ventilation system; maintain indoor humidity at 30 to 60 percent; use exhaust fans to circulate indoor moisture (from cooking, dishwashing, showering) to the outdoors; and remove carpeting in areas of excess moisture (from cooking, sinks, bathtubs and showers).



- Consider hidden mold: It is possible that mold may be growing on hidden surfaces, such as the back side of dry wall or wallpaper, the top of ceiling tiles, the underside of carpets, walls behind furniture, inside ductwork, or roof materials above ceiling tiles. Investigating hidden mold problems may be difficult and will require caution when the investigation involves disturbing potential sites of mold growth. For example, removal of wallpaper can lead to a massive release of spores from mold growing on the underside of the paper. If you believe there is a hidden mold problem, you may want to consider hiring an experienced professional.

- Check the HVAC system: If you suspect that the heating/ventilation/air conditioning (HVAC) system may be contaminated with mold, consult EPA's guide on air duct cleaning. Many sections of the heating and cooling system may not be accessible for a visible inspection; in this case, it is advised to consult an experienced professional to do the inspection or remediation. Do not run the HVAC system if you know or suspect that it is contaminated with mold - it could spread mold throughout the building.



- Dry wet areas and items within 24-48 hours after a leak/spill: If wet materials are dried within that time frame, in most cases, mold will not grow. Thoroughly dry any spills on carpeting. Consider not using carpet in rooms such as bathrooms or basements that may have a lot of moisture.

- Discard moldy items that can't be cleaned: Mold can grow on or fill in the empty spaces and crevices of porous materials, which may make it difficult to completely remove the mold.

Can ozone air cleaners help remove mold?

No – ozone air cleaners have been used to disinfect water and eliminate odors. However, ozone cleaners can irritate the lungs and is not always effective at controlling mold. We recommend that you avoid using an ozone generator in any occupied air space.

Should I seek professional help to get rid of mold in my home?

For large areas covered with mold, it is best to seek help from a professional. The Commonwealth of Virginia does not require contractors to be licensed to inspect or remediate mold. Contractors should be able to provide a list of referrals and may also hold certifications from private industrial hygiene associations.



Should I have my home sampled for mold?

No - testing for indoor molds can be cost prohibitive and is generally not recommended. There are no federal or state standards for indoor mold levels. In addition, it is nearly impossible to completely eliminate all molds, so any testing will likely find at least some molds. After having your house cleaned, if you see or smell mold again, you should continue to clean it. If you no longer see visible signs of mold or smell musty odors, you have probably done an adequate job of cleaning your house for mold.

Does the health department provide remediation, inspection, or testing for mold problems?

No - county and state public health departments do not have the resources to provide remediation, inspection, or testing for mold problems in homes or schools, and cannot provide recommendations with regard to remediation professionals.

What if I have further questions?

- 1) If you have concerns about mold exposure and your health, contact your healthcare provider.
- 2) Contact the Division of Environmental Epidemiology located at 109 Governor Street, Richmond, VA 23219, by calling (804) 864-8182.

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