

Mold & Moisture in Your Home

What is mold?

Molds are fungi, usually microscopic in size and can be found indoors and outdoors. They reproduce by releasing spores into the air that settle on surfaces and grow under the right conditions. Mold can often be seen as spots of discoloration, ranging from white to orange and green to brown and black. Mold can sometimes be detected by its musty odor. Mildew is a common type of mold.

When mold spores settle on the right surfaces, and temperature, humidity, shade/darkness, and oxygen supply are favorable, they will grow and spread. Mold can even regrow on surfaces that it was previously removed from if the optimal growth conditions still exist.

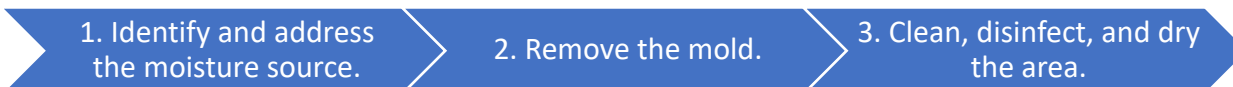
- **Molds thrive on organic materials** like natural fibers (cotton/wool), paper, leather, wood or surfaces coated with even the smallest amount of organic matter such as food, grease, and soil.
- **Molds grow best in warm temperatures:** 77-86°F.
- **Molds require moisture.** The source of moisture can be water leaks, flooding, high relative humidity, and condensation. Relative humidity above 70% promotes mold spore growth. Ideally, **relative humidity in the home should be 30-50%.**

How does mold/moisture in my home affect my family's health?

It is common to find mold spores in the air and growing on damp surfaces. Mold spores typically cause health problems when they become airborne and are inhaled in large numbers. Some people are more sensitive to mold and may have an adverse or allergic reaction to even a small amount of mold, and experience cold-like symptoms. Mold spores small enough to be breathed in go deeply into the lungs and can cause serious illness. It is not healthy to live in a home with high levels of mold.

There are no health-based standards or exposure limits for mold. The basic rule is, **if you can see or smell mold, steps should be taken to remove the mold.**

How can I safely remove mold from my home?



It is **most critical to remove the source of the moisture** to ensure the mold growth will not return. This is especially important before replacing any building materials (i.e. drywall, insulation, etc.).

- **Discard** porous materials like paper, clothing, ceiling tiles, wallpaper, carpet, sheetrock, and insulation. Once contaminated, mold will typically grow throughout these materials and be very difficult to remove. Bag and seal all moldy material before removing from the work area.

Clean & disinfect items made out of glass, plastic or metal. These can be kept after they are properly cleaned.

When deciding what should be kept or discarded, **the most important thing is that the mold is removed.** Simply killing the mold may be inadequate.

CLEAN-UP TIPS:

Exposure to mold can occur during mold removal and cleaning.

- Wear personal protective equipment as necessary: Goggles, gloves, respirator.
- Wear protective clothing that can be cleaned thoroughly or discarded afterwards.
- Those sensitive to mold or with existing respiratory health conditions should temporarily leave the work area.
- Seal off the area as much as possible, including covering any air vents.
- Remove any furnishings from the area to be cleaned later or discarded.
- **Use a HEPA air purifier in the work area.**
- DO NOT replace flooring or begin to rebuild with new finish materials until the area has dried completely.

CLEAN-UP STEPS:

Clean the affected area to remove as much mold (and contaminated materials) as possible.

1. Use a non-ammonia detergent (like Dawn dish soap) with hot water and a scrub brush.
2. Scrub the entire affected area.
3. Rinse the area with clean water.
4. Thoroughly dry the area as quickly as possible.
5. Repeat steps 1-4 as needed to ensure all of the mold is removed.

DISINFECTION STEPS:

After removing as much of the mold as possible, disinfect the area to kill any remaining mold. Follow manufacturer's instructions for mixing disinfectant to achieve the correct strength. For most hard surfaces, a ratio of one cup of bleach to one gallon of water creates the proper disinfectant solution. **NEVER MIX BLEACH AND AMMONIA. When mixed together, bleach and ammonia create toxic fumes.**

1. Use a spray bottle or sponge to apply the disinfectant solution liberally to the entire area, extending a few inches beyond the observed mold. Apply enough, but not too much (Avoid excessive pooling or runoff). The area should be wet with disinfectant for 10–15 minutes.
2. Allow the area to dry naturally. This drying time allows the disinfectant to work, effectively killing the mold and bacteria.

STILL SMELLING MOLD ODORS?

It is possible for mold odors to persist after cleaning and disinfecting.

- Continue drying out the area and search for any areas of mold that may have been missed.
- Make sure the area has good ventilation or air flow. Use a fan if needed.
- If the musty odor continues, the area should be cleaned and disinfected again.

How can I prevent mold from coming back?

Control the moisture and humidity levels to prevent mold from returning.

- Reduce moisture in the home, maintaining a relative humidity between 30-50%. Humidifiers should not be used if levels are above 50%. When taking baths, showers, or cooking, use exhaust fans vented to the outside. If available, a dehumidifier can be used to reduce humidity.
- Keep temperatures below 77°F. Remember, temperatures 77–86°F promote mold growth.
- Prevent excessive condensation on walls/floors by installing adequate insulation.
- Increase air flow to any problem areas. If possible, move furniture away from outside walls to allow air flow and reduce condensation.
- Reduce sources of moisture coming in from the outside. Seal cracks in the walls and foundation.
- Using an air purifier with HEPA filters can remove mold spores from the air before they settle on damp surfaces and start growing.

Questions? Contact Office of Environmental Health & Engineering
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