Mold or Moisture in My Home: What Do I Do?

(Formerly *Mold in My Home—What Do I Do*)

This factsheet provides information about mold and moisture, health problems from mold or moisture, finding and cleaning up moldy or wet areas and materials, and how to keep mold from growing in your home.

Breathing in the air in places that are moldy or damp can harm your health. This includes places with:

- Visible mold
- Moldy or musty smells
- Materials or surfaces that stay damp or get damp often
- Water damage

Damp, moldy places allow mold spores and other tiny pieces of mold to get into the air, which can cause breathing problems and other health problems. Moist materials allow mold and bacteria to grow, and may also allow chemicals from building materials to get into the air.

Unless mold is controlled, it can damage floors, walls, ceilings, and other structures in your home. Mold can damage your furnishings, such as carpets, chairs and sofas. Clothes and shoes in damp closets can become stained and start to fall apart. The longer that mold grows, the more damage it can cause.

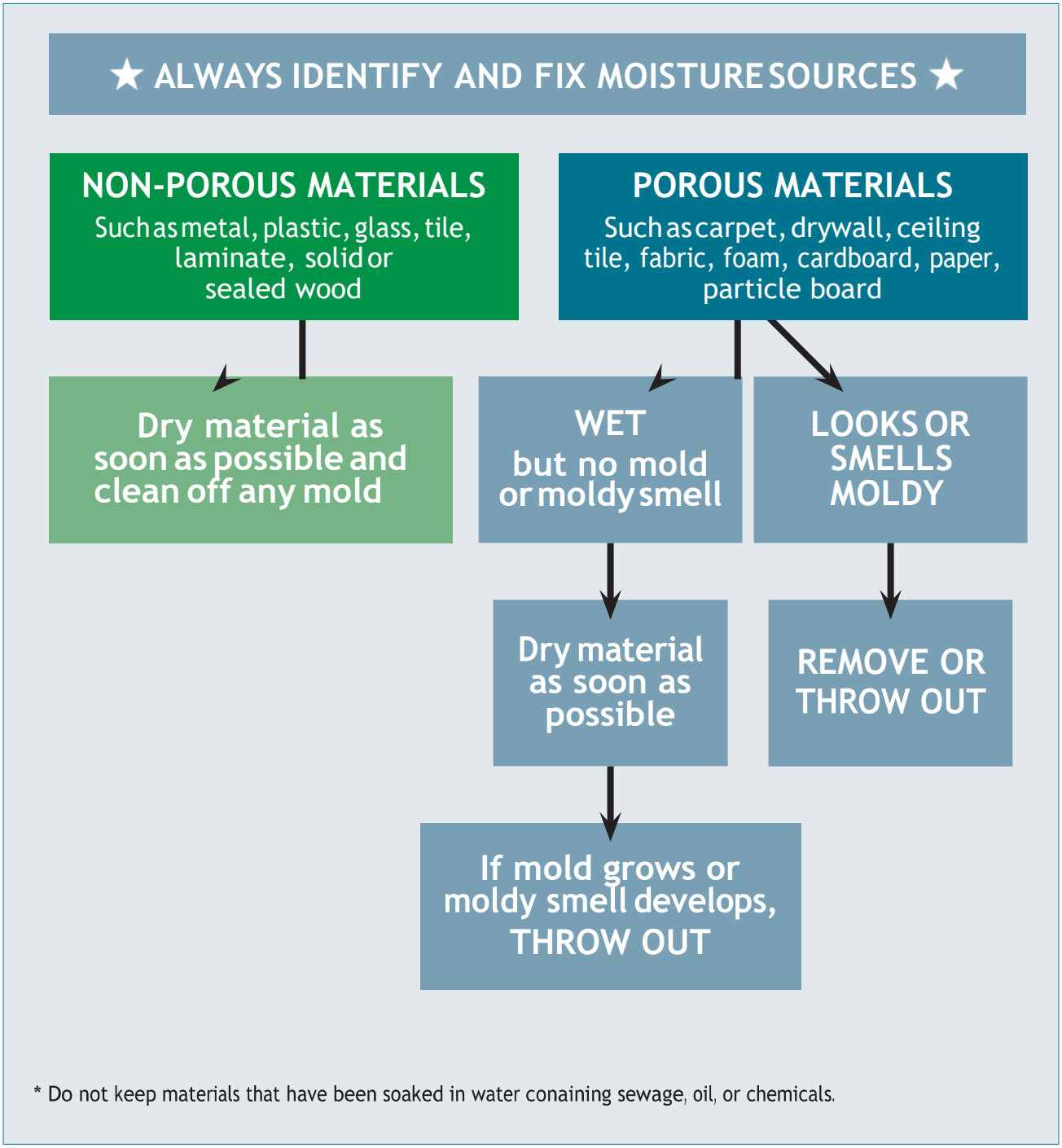
The best way to fix a mold problem is to:

- find where the damp areas and mold are
- fix any leaks or other moisture problems (such as condensation on windows or walls, garden sprinklers too close to your home, or blocked gutters)
- quickly dry out any damp areas or replace any damp materials
- quickly and safely clean up mold and remove any materials that are moldy

The most important thing you can do is get rid of mold and dampness as quickly and safely as possible. Mold problems will not go away unless moisture problems are fixed.

It is *not important* to have someone measure how much mold there is or to find out what kind of mold it is.

Dealing with Wet or Moldy Materials in Your Home



* Do not keep materials that have been soaked in water conaining sewage, oil, or chemicals.

What is mold?

Mold is a kind of microscopic organism. Molds, like mushrooms and yeasts, are fungi and are important because they help break down dead plant and animal material and recycle nutrients in the environment. There are many kinds of mold and they can be found almost everywhere, indoors and outdoors. Mold growing on surfaces can look like a stain, or can be fuzzy or slimy. It is usually white, gray, brown, or black, but can also be green or red or other colors.

How are mold and moisture related?

To grow and reproduce, mold only needs food—any organic matter, such as leaves, wood, paper, or even dust—and moisture. Organic matter is almost always around, so whether mold grows depends mostly on whether or not there is moisture. By fixing moisture problems, you can keep mold from growing in your home.

Mold and Your Health

How am I exposed to indoor mold?

You can get exposed to mold by breathing in mold spores or tiny pieces of mold. Mold spores are like seeds. Spores can be on materials like walls, floors, or furniture, or float in the air. It is common to find spores in the air inside homes. Everyone breathes in some mold every day.

Most mold spores found in indoor air come from outside, but when there is moisture inside buildings, mold can grow quickly and release many spores into the air inside.

Can mold affect your health?

Molds can cause health problems through allergy, inflammation, or, less often, infection.

- Allergic reactions (often called *hay fever*), such as sneezing, runny nose, red eyes, and skin rash, can happen if a person who is allergic to mold breathes in mold.
- Moisture and mold can cause asthma, trigger asthma attacks, and make asthma symptoms, like wheezing and coughing, worse.
- If you have a mold or moisture problem in your home, you may be more likely to get respiratory infections, like colds or flu. In a very small number of people with weakened immune systems, mold can cause fungal infections.

Larger problems with indoor mold and moisture are more likely to cause health problems than smaller problems.

Even if you don't think mold is affecting you, indoor mold and moisture are bad for your health. If you can see or smell mold or have moisture or moisture damage, you should find where the moisture is coming from, fix any problems as soon as possible, and cleanup and remove the mold (see *Cleaning Up Mold*).

If you have a health problem you think is caused by mold or moisture, talk to your health care provider.

How much mold or moisture does it take to make me sick?

Some people are more sensitive and more likely to have health problems from mold or moisture. Sensitive people might have health problems even with exposure to small amounts of mold or moisture. Other people might only have health problems if they are exposed to more, or are exposed for a longer time.

People who are especially likely to have problems from smaller exposures to mold or moisture are:

- People who already have respiratory conditions, such as allergies or asthma, or are sensitive to other things in the air.
- People with weakened immune systems (such as HIV-infected persons or cancer patients who are getting chemotherapy).
- Infants and young children, and seniors.

Does it matter what kind of mold is in my home?

No one knows for sure whether some kinds of mold are more harmful than others. Also, mold affects different people in different ways. The best information we have says that it is not helpful to find out which kinds of mold are in your house. Some businesses offer to test the mold in your home and tell you what molds are there or how much mold there is, but you do not need these tests to know if you have a mold or moisture problem.

Mold and Moisture Problems in Your Home

How do I know if I have mold or moisture problems?

Mold growth may be visible, or it may be hidden underneath water-damaged surfaces (for example, wallpaper), behind furniture, along and behind baseboards, or inside walls, floors, or ceilings.

Signs of a mold or moisture problem in your home are:

- areas on floors ceilings, walls, woodwork or furniture that look stained or discolored, or have mold on them
- an earthy or musty smell
- damp areas or surfaces
- water stains on walls or ceilings
- water damage, such as warped floors, peeling or bubbling paint, or soft, rotting wood

You might also have a mold problem if people who are sensitive or allergic to mold have symptoms when they are in your home.

Condensation on windows or walls also is an important sign of a moisture problem. Because condensation also can be caused by a problem with a gas stove, heater, or dryer, inspect fuel-burning appliances every year, and contact your local utility or a professional heating contractor if you have questions.

How can I avoid mold and moisture problems?

The best way to avoid mold and moisture problems is to watch for common sources of moisture inside and outside your home and then to get rid of any moisture as soon as possible.

- Make sure you have good air flow whenever moisture is being produced, for example:
  - vent clothes driers to the outside,
  - when showering or bathing, use an exhaust fan or open a window (and keep it running for 20-30 minutes after), and
  - when cooking, use an exhaust fan vented to the outside or open a window.
- Don't hang wet clothes indoors unless you can open windows to let moisture out.
- Check crawlspaces and basements for dampness and seal any leaks or cracks.
- Run dehumidifiers to remove excess moisture from damp indoor places, like basements.
- Make sure your roof is in good condition and fix leaks as soon as possible.
- Aim garden sprinkler sprays away from the house.
- Be sure gutters and downspouts are clear, and drain water away from your home.
- Be sure the ground outside, all around the house, slopes away from your house.
- If you have a leak or flooding, take care of moisture immediately:
  - Stop the source of the leak or flooding.
  - Remove excess water with mops or a wet vacuum or a pump.
  - Move wet items to a dry, well-ventilated area or place them outdoors to speed drying.
  - Move rugs and pull up wet carpet as soon as possible.
  - Open closet and cabinet doors and move furniture away from walls to increase airflow.
  - Where walls have gotten wet, remove drywall and baseboards, or pry open wall paneling, if necessary, to allow the area to dry thoroughly. (For more specific information, see additional resources listed under *Flood Cleanup*).
  - Run portable fans to increase air flow (but not if mold has already started to grow, as this could spread mold).
  - Do NOT use your home's central furnace or air-conditioning system if it or any of the ducts were flooded because this could blow mold all around your home.
- If you have a moisture problem in your home that you cannot fix yourself, consider hiring a contractor or building expert to help.

Moisture and Mold in Rental Homes

In California, tenants and landlords each have a part in keeping a home free from moisture and mold. Generally, the landlord must provide a unit that is fit for occupation and follows the building and health codes. The California Housing Code, as of January 1, 2016, says that if there is enough dampness or visible mold (or certain other conditions) in a dwelling that it is a danger to the health of occupants, the dwelling is substandard and must be remedied by the owner. Tell your landlord if you have this kind of problem and ask them to fix it. If the problem is not adequately fixed, you can contact your city or county code enforcement agency to ask for an inspection.

California Department of Consumer Affairs
California Tenants: A Guide to Residential Tenants' and Landlords' Rights and Responsibilities, Pages 36-47. Revised July, 2012.
www.dca.ca.gov/publications/landlordbook/catenant.pdf

U.S. Department of Housing and Urban Development
Tenant Rights, Laws and Protections: California
www.hud.gov/states/california/renting/tenantrights

- Do not depend on particle-removing air filters or air cleaners to solve a mold problem. It is important to identify and fix the underlying moisture problem, and to remove or clean moldy materials. Air cleaners should only be used for a short time to reduce mold in the air. Odor-removing air cleaners will not reduce mold in the air.
- Ozone-producing air cleaners are not effective in controlling indoor molds, even though they are sometimes sold with this claim. In addition, ozone from some air cleaners can irritate and permanently damage your lungs. Ozone can also damage materials such as rubber and plastic items in the home. CDPH strongly recommends that you NOT use an ozone-producing air cleaner. For more information, see Hazardous Ozone-Generating "Air Purifiers" at www.arb.ca.gov/research/indoor/ozone.htm.

Cleaning Up Mold in Your Home

Cleaning up mold quickly and safely is important, but unless you find and fix the source of moisture in your home, your mold problems will return.

Protect yourself and others from mold and chemicals

If you are susceptible to mold, or have a history of mold health effects, or the amount of mold is large, consider having another person or a professional do the work.

Cleaning up mold can expose you to a lot of mold (10 to 1000 times more than usual), and also to irritating detergents or disinfectants. Even though you (or your building manager) can clean up small mold problems—total area less than 10 square feet (about 3 feet by 3 feet)—you may want to try cleaning a small area first to make sure it does not affect your health. For large mold problems—more than 100 square feet (10 feet by 10 feet)—it might be better to hire an experienced contractor (see *Hiring a Contractor*). For medium-size mold problems, make sure you are able to clean up the mold safely and that your health will not be affected, or hire a contractor.

- Keep others out of the work area during clean-up
- Use personal protective equipment
  - Waterproof gloves
  - Goggles or protective glasses
  - N-95 respirator (available at hardware stores) to keep you from breathing in mold. An N-95 respirator has two straps and has a NIOSH approval number printed on it. Make sure the respirator fits tightly around your face.

    Do not wear a "dust mask". It will not protect you from mold.

- Wear clothing that covers as much of your body as possible (including covering hair and shoes) and that can be washed in hot water or thrown out.
- Work for short time periods and rest where you can breathe fresh air.
- Air out your home well during and after the work.

Respirators that protect you from mold spores will not protect you from chemical fumes from disinfectants. Make sure the work area has good air flow.

Never use a gasoline engine indoors (like a gas-powered water pump, pressure washer, or generator). You could expose yourself and your family to toxic carbon monoxide.

Do I Need to Disinfect?

We do not recommend using bleach, or products that contain bleach, to disinfect for mold. They are too hazardous, and not any more effective than safer methods. Using bleach can harm your health. Bleach can irritate the skin, eyes, nose, and throat, and cause breathing problems (like asthma) and injuries. Bleach can also damage clothing, shoes, and other materials. Bleach will not kill mold unless you have cleaned the area first and removed the mold, and then bleach is not necessary. Bleach does not keep mold from growing back.

You cannot completely disinfect porous materials that are moldy, such as carpets, fabric, or drywall (gypsum board). You must remove them. (However, you can reuse washable items like clothing if all mold and staining can be removed.) For smooth nonporous surfaces, scrubbing with detergents and other recommended cleaners will remove mold, without the need to disinfect. (Using bleach to disinfect is only recommended when there is a concern about infection, such as when there is a sewage spill.)

If you are thinking of using bleach despite these warnings:

- Only use bleach or disinfectants on nonporous materials and only AFTER cleaning with soap or detergent.
- Never mix bleach with ammonia or anything other than water (unless product label allows for mixing) because this may produce toxic fumes.
- It is very difficult to completely protect yourself from fumes and skin contact. Handle bleach with caution. Wear eye protection and gloves made to protect your skin from harsh chemicals. Make sure there is very good air circulation or outdoor air ventilation to reduce the fumes.

How to remove mold

- First, fix the moisture problem and remove any excess water—a wet/dry vacuum cleaner may help remove water and clean the area.
- Close off the work area to keep dust and spores from spreading to other areas.
  - Close the door or use plastic sheets to separate the room.
  - Set up a fan to pull the air out through a window or door to the outside.
  - Scrub the entire moldy area with a non-ammonia soap or detergent, or a commercial cleaner, in hot water, using sponges or rags, until all mold is gone.
  - Use a stiff brush or cleaning pad on cement-block walls and other uneven surfaces.
  - Rinse cleaned items with water and dry thoroughly.

For detailed information on cleaning up mold, go to www.epa.gov/mold/mold-cleanup-your-home.

What can I keep?

- Keep items and materials that do not absorb water (made of glass, plastic, metal, or ceramics) and can be cleaned of mold.
- Keep items that do not have mold on them and do not smell moldy.
- Some washable moldy items like clothing and bedding may be cleaned well enough to keep, so it may be worth trying.

What should I throw out?

Mold can grow quickly on porous materials (like fabric, carpet, carpet pads, and foam cushions) that have gotten wet. It's important to dry them as quickly as possible, before mold growth starts. A common rule of thumb is to discard porous materials if they are wet for more than 24-48 hours because they are likely to grow mold. However, if they look or smell moldy even before that, you should discard them. Because spores are more easily released into the air after moldy materials have dried out, remove moldy items as soon as possible.

Remove and throw out:

- Wet materials that absorb water and look or smell moldy, like drywall or gypsum board, ceiling tiles, drapes, upholstered furniture, and products made from particleboard.
- Materials that have dried but look or smell moldy.

Moldy wall-to-wall carpet can be hard to clean well. Throw out if the carpet, backing, or padding is moldy or has a moldy smell. Keep throw rugs that have gotten wet only if they can be thoroughly washed and do not smell moldy once they dry.

If there has been flooding, remove drywall/gypsum board to a level above the high-water mark. Look inside the wall space and throw out any material, like insulation, that is wet, moldy, or has a moldy smell.

If tightly bagged or enclosed, moldy items can be put in the household trash. Materials that have lead or asbestos in them must be taken to a household hazardous waste program. Some materials that might have lead or asbestos are:

- Ceiling tiles
- Vinyl floor tiles
- Painted wood, plaster, or drywall/gypsum board in homes built before 19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