



ABOUT YOUR HOUSE

THE TENANT'S GUIDE TO MOLD

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This *About Your House* is for people living in rented apartments or houses. An apartment can be in a multi-unit building or a suite in a house. Cleaning up mold can be either the tenant's or the landlord's responsibility—or a responsibility shared by the tenant and landlord.

Understanding mold

- Mold can be harmful or helpful—depending on where it grows.
- Mold needs moisture to grow.
- Mold does not grow on dry materials.
- Mold growing inside an apartment or home can affect occupants' health.
- Occupants can learn to recognize mold.

What are molds?

Molds are microscopic fungi. They are part of the same family as yeasts, toadstools and mushrooms. Fungi grow and reproduce rapidly and as

they grow they produce spores—specialized reproductive cells—and mycelia—fine, white filaments or threads.

You encounter mold every day. Foods spoil because of mold. Leaves decay and wood on the ground rots because of mold activity. The fuzzy black growth on wet windowsills is mold. Paper or fabrics stored in a damp place get a musty smell, which is caused by molds.

Molds, when carefully chosen and grown under careful control, are useful. We get penicillin from one type of mold. Mold action helps make some foods and beverages.

Molds are undesirable when they grow where we don't want them—such as in the places we live in. Researchers have identified more than 270 species of mold as living in Canadian homes.

What makes molds grow?

Molds will grow when they have moisture and nutrients. If we keep things dry, molds do not grow. High moisture levels can be the

result of water coming in from the outside, through the floor, walls, roof or plumbing leaks—when there is a weakness or failure in the structure. High moisture can also result when there is not enough ventilation to expel moisture produced by occupants' daily activities like bathing, washing clothes or cooking.

Various kinds of molds grow on different materials. Certain kinds of molds like an extremely wet environment. Other kinds of molds may be growing even if no water can be seen. Dampness inside a material can be enough to allow them to grow.

Why molds are a concern?

Damage to materials is one concern. Mold can stain or discolour material and, over time, ruin it. Moldy paper and cardboard disintegrate over time. Fabrics are damaged. Continued mold growth can be a sign that moisture conditions are favourable for the growth of fungi that cause wood rot and structural damage.

Molds inside a house or apartment can cause health problems. They release spores as well as chemicals, and both can affect people.

Health experts say the effects of mold can range from being insignificant to causing allergic reactions and illness. Their effect depends on the type of mold, the amount and degree of exposure and the general health of the occupants.

Pregnant women, infants, the elderly and people with respiratory disease or weakened immune systems are more at risk when exposed to mold. If you believe that you or someone in your family is at risk, consult your family physician.

How can you tell if it is mold?

Discoloration

One sign of mold is discoloration. Not all discoloration is mold. Carpeting near baseboards, for example, can be stained by outdoor pollution entering the dwelling. Smoke from burning candles or cigarettes may also cause stains or soot.

Mold may be any colour: black, white, red, orange, yellow, blue or violet. Dab a drop of household bleach onto a suspected spot. If the stain loses its colour or disappears, it may be mold. If there is no change, it probably isn't mold.

Smell

Sometimes molds are hidden. A musty or earthy smell is often a sign that there is mold. But not all molds create an odour. Even when you

don't notice a smell, wet spots, dampness or signs of a water leak indicate moisture problems that can be followed by mold growth.

Is there a mold problem?

Molds are always found in outdoor air and in all buildings. They come into an apartment or house in many ways—through open windows or doors, on clothing, pets, food or furniture. The problem starts when mold grows inside the unit.

The presence of mold is a sign that there is too much moisture—a situation which must be corrected.

Some mold, for example on a windowsill but not elsewhere, is not a major cause for concern—it can be removed as part of routine cleaning. Mold on grout in bathroom tiles may or may not be a concern. Some discoloration between tiles but not elsewhere can simply be a sign that these areas are moist most of the time. The moldy spots can be cleaned with a brush and unscented detergent. In every case you must take further steps to prevent the mold from coming back. But if the grout is extensively discoloured and there is staining or damage to the ceiling or walls, there may be a more serious mold problem.

Regularly look for signs of mold—staining, discoloration or water damage—in your apartment or house. If you find signs of mold, you have to determine the extent of the mold by estimating the size of the affected area.

How much mold is there?

“Small” area

A small area is a patch no larger than a square metre—about 10 sq. ft. There should be no more than three small patches in your apartment or house

“Moderate” area

A moderate area is more than three square metre patches, or one or more isolated patches larger than a square metre but smaller than 3 m²—about the size of a 4 x 8 ft. sheet of plywood.

“Extensive” area

An extensive mold area is an area larger than 3 m²—about the size of a 4 x 8 ft. sheet of plywood. This much mold is a health risk.

You've found mold—now what?

Tell your landlord or building superintendent that there is mold in your house or apartment. Don't try to clean even small areas of mold without your landlord's permission. It is more difficult to get something done if the signs of mold are removed. Furthermore, you are a tenant and there is a limit to what you can do. Cleaning moderate and extensive areas of mold requires safety precautions.

Once you have notified your landlord or building superintendent, you can clean small areas as part of your regular cleaning with a solution of unscented detergent and water. Wear household rubber gloves and a dust mask for protection and follow the steps in “How to clean up small mold problems,” page 3.

Mold will return if you do not reduce moisture levels. If mold comes back after repeated cleaning, the conditions that caused the mold to grow must be changed. The changes may be things you can do yourself or may be work the landlord has to do.

Should you hire a professional?

Before you consider hiring someone to inspect for mold, you should have contacted your landlord and explained the problem. Some landlords are more aware than others of the dangers of mold and moisture and know that failing to correct moisture problems can cause structural damage. They are more likely to act. Suggest that your landlord get information, such as the CMHC publications *Fighting Mold: The Homeowners' Guide* or *Clean-up Procedures for Mold in Houses*. (Both are available from the CMHC website at: www.cmhc.ca, or by calling CMHC's toll-free number: 1 800 668-2642.)

Ideally, your landlord should hire an indoor air quality (IAQ) investigator to find what is causing the mold and recommend solutions. If there are problems with the building envelope, the landlord may hire a building envelope specialist.

Contact your public health unit and ask for an inspection if your landlord doesn't act and if:

- there is a lot of mold;
- the apartment or house is very damp and moist;
- mold comes back after repeated cleaning;

- you or a family member has asthma or difficulty breathing—or other health problems—that seem to be worse inside the apartment or house.

Should you hire your own IAQ investigator?

You would pay for the IAQ (Indoor Air Quality) investigator yourself. An IAQ investigator who has completed the CMHC IAQ Investigator Training Program and who follows the CMHC Investigation Procedure will give you a written report telling you what is causing the mold and recommending clean-up solutions.

As a tenant, you can take simple measures, such as always using the bathroom fan and cleaning the bathroom tiles. But solutions relating to the building—gutting a wall or installing a bathroom fan, for instance, are your landlord's responsibility.

You could wind up paying for an inspection that recommends measures that you cannot do yourself.

What's more, hiring an IAQ investigator without your landlord's knowledge or permission can lead to a situation where the landlord hires another consultant whose report is pitted against your consultant's report.

Sometimes, when tenants feel their landlord is ignoring their concerns, they hire their own expert to test the air for molds. They frequently submit the test results to rental tribunals to get them out of a lease or to support mold-damage claims.

Generally, CMHC does not recommend testing the air for molds. Laboratory tests are costly and interpreting the results is not simple and may not be conclusive. For more information, see CMHC's *About Your House* – “Should you test your home's air for mold?”

If you feel strongly that you need to document mold contamination, take detailed photographs of the affected areas. You can also ask a public health inspector or IAQ investigator to take actual (bulk) samples of the mold and send the samples to a laboratory for identification. Analysing bulk samples is much easier than testing the air.

Getting professional help

Your local CMHC office has a list of people who have completed the CMHC Residential Indoor Air Quality Investigator program. A trained IAQ investigator examines your home's indoor air quality, identifies the problems, finds their sources and suggests solutions in a written report.

How to clean up small mold problems

The minimum protective wear is:

- safety glasses or goggles
- a disposable dust mask (3M 8210 or equivalent)
- household rubber gloves

Infants and family members with asthma, allergies or other health problems should not be in or near the work area when you clean.

	Washable surfaces	Moldy drywall
Step 1	Vacuum the surface with a HEPA vacuum cleaner, if possible.	
Step 2	<p>Scrub with an unscented detergent solution</p> <p>Then sponge with a clean, wet rag and dry quickly.</p> <p><i>Using an unscented detergent will make it easier for you to detect residual moldy odours</i></p>	<p>Clean the surface with a damp rag using baking soda or a bit of detergent. Do not allow the drywall to get wet.</p> <p>Staining that is not removed by this method should be reported to your landlord.</p>
Step 3	Vacuum the cleaned area and surroundings with a HEPA vacuum cleaner.	

Mold that comes back after cleaning is usually a sign that a moisture source has not been removed. Use the checklist in “Mold-proofing,” page 5, to identify possible causes.

Dealing with a continuing mold problem

Your situation may require looking at other options. Some of the other situations are:

1—Mold comes back after repeated cleaning

Check to see if the moisture is coming from inside your house or apartment or from something that you are doing. Follow the checklists in “Mold-proofing,” page 5. Be prepared to give up some things and make some adjustments.

2—Water entering the building is causing mold

The building owner is responsible for repairing the building envelope to stop moisture from entering the building.

3—You are renting a basement apartment

Basements have higher humidity levels than upper floors. In the summer, the wall surfaces are cooler and moisture can condense. Most basement floors have neither a moisture barrier nor insulation and dampness can migrate upwards from the soil.

There are building techniques (such as exterior insulated foundations, good drainage) and measures (such as continuous dehumidification, supplemental heat outside the heating season) to reduce mold. Many basement apartments do not have these safeguards. When you are apartment hunting, put a basement apartment at the bottom of your list.

4—Your apartment or house has an old, musty-smelling or water-damaged carpet that your landlord does not intend to remove.

You are either experiencing discomfort, worried about getting sick or you believe you are already suffering health problems from the

mold. Ask your physician to help you document your health problem and its possible relation to the mold.

Your best option may be to find another place to live. The longer you stay in a moldy apartment, it is more likely that your personal belongings will also get moldy. You don't want to take moldy belongings to your new place.

What to do until the problem is fixed

It is not always possible to relocate immediately. You may have no other option but continue to stay in the apartment. While you are waiting to move, you can reduce your exposure to mold.

- Wearing a dust mask and gloves, discard moldy or damaged materials, such as mattresses, carpets or sofas that have been water damaged or stored in damp conditions. Use this opportunity to reduce furnishings—it means fewer materials to absorb moisture and grow mold. Store cleaned clothes and other fabric materials in sealed plastic bags to prevent re-contamination.
- Buy a HEPA vacuum cleaner and vacuum frequently. Settled dust contains mold spores. Walking, activities inside the apartment and even air movement can re-distribute these mold spores into the air you breathe. By thoroughly vacuuming floors, walls, ceilings, shelves and non-washable furnishings, you can

reduce your exposure. Carpeted floors may require multiple passes to remove particles and dusts lodged in the fibres.

- Keep moisture generated within the unit to a minimum by carefully and regularly following the prevention steps in “Preventing mold,” below.
- Dry areas that get wet. Monitor the relative humidity of the air. Use a portable dehumidifier, if necessary. Empty the condensate drain pan of the dehumidifier regularly.
- If the mold is limited to one area, isolate the area if possible. Cover affected surfaces with plastic sheeting and duct-tape the edges. Remember: this is a temporary measure only.

Preventing mold

Mold needs moisture to grow. Controlling moisture and keeping the home dry prevents the growth of mold.

- Ask your landlord to find and fix water leaks promptly.
- Keep the apartment dry. Think of the different ways activities such as cooking or bathing produce moisture inside the home. Exhaust fans remove moisture as it is produced. If there are no fans, open windows for a short time, but remember that moist outdoor conditions will not dry the inside air and wind can push the moisture to other parts of the unit.

- Measure how much moisture is in the air. To find the relative humidity, you'll need a hygrometer. You can buy one at a hardware store or electronics store. A hygrometer costs from \$5 to \$20. Your home's relative humidity should be under 45 per cent (or lower to avoid condensation on windows) in the winter. If necessary, use a dehumidifier to lower the relative humidity.
- Discard clutter and excess stored materials. Molds grow on fabrics, paper, wood and practically anything that collects dust and holds moisture.
- Keep the apartment clean by vacuuming regularly.
- Adopt lifestyle practices that reduce moisture.

Mold-proofing

All living areas

- Separate footwear worn outside from footwear worn inside.
- Allow good air circulation by reducing the amount of furnishings.
- Heat areas of the apartment adequately. Condensation occurs on cold walls in unheated rooms or in apartments that are kept too cool.
- Vacuum often. If you are buying a vacuum cleaner, get one with a HEPA filter. (*See* “What are the advantages of a HEPA vacuum?” page 7.)

- Clean hard floors with a damp mop.
- Do not bring anything into your house that is moldy or that has been stored in a moldy place.
- Cut down the number of potted plants in the apartment—soil is a good place for mold. Frequent watering of plants adds moisture to the air. Aquariums are also moisture sources.
- Recognize conditions that lead to excess moisture and mold—overcrowding or too many pets. Increase ventilation (open windows and or use exhaust fans) when there are more occupants than the unit was designed for.
- Don't hang-dry laundry inside the apartment or vent a dryer into the unit.
- Don't use unvented space heaters, such as kerosene or oil heaters. They not only produce moisture, but other contaminants.

Kitchen

- If there is a fan over the stove, ask your landlord if it exhausts outside. Use it when you cook. Recirculating fans do not remove moisture produced from cooking.
- Regularly wash the exhaust fan's grease filter.
- Minimize open and prolonged boiling.
- Keep your drains in good shape. Follow the steps in “bathrooms.”

- There's a drip pan at the back of the refrigerator. Pull the refrigerator out to clean the drip pan. At the same time, vacuum dust from the coils at the back of the refrigerator.
- Check under the kitchen sink to make sure there are no leaks.
- Take out the garbage daily to prevent odours and spoiling.

Bathrooms

- If there is a bathroom fan, check that it is able to exhaust air. The fan should be able to pull a piece of tissue paper held over the grille towards itself. Another fan exhaust test is determining how quickly it clears a mirror that usually fogs after a hot shower. Turn the fan on when you shower or bathe and keep it running for a few minutes or longer after you finish.
- Keep the exhaust grille free of debris.
- If there is no bathroom fan but there is a window, open the window after a shower when possible. Note that moist outside conditions will not dry the bathroom. Wind may also push moisture to other parts of the unit.
- If there is no fan or window, consider a small, portable dehumidifier.
- Keep surfaces that get wet, such as the walls around the bathtub and shower, clean and dry.
- Hang wet laundry to dry in the bathroom as infrequently as possible.

- Condensation or dampness in the bathroom may be due to temperature being kept too low. Make sure there is heat.
- If the bathroom has a carpet, ask the landlord to remove it.
- Check for water leaks.
- Keep drains in good shape by removing debris from them.

To clean a drain

- Pour a handful of baking soda into the drain.
- Add a cup of vinegar.
- Put the plug in the drain.
- Let the vinegar and baking soda work for about 20 minutes.
- Run fresh water into the drain.
- If the drain is still clogged, ask your landlord for help.

Closets and bedrooms

- Get rid of unused clothes and other stored items. Keeping your closets and bedrooms tidy makes it easier for air to circulate—and harder for mold to grow.
- Do not humidify unless necessary. If your physician advises you to humidify, measure the relative humidity first. Cycle the humidifier on and off to maintain the desired relative humidity. Allow the room to dry the following morning.

Basement or crawl space

Note: This section, the "Furnace room," "Laundry areas" and "Exterior" sections, apply to rented

houses, basement apartments and small apartment buildings. Talk with your landlord to establish who is responsible for the tasks—the tenants or the landlord.

- Reduce the number of clothes, paper and furnishings stored in the basement. Throw out badly damaged materials. Eliminate clutter to improve air circulation. Only washable items should be stored.
- Dehumidify the basement as soon as the heating system is turned off until it is turned on again in the fall
- Avoid carpets on slab-on-grade or below-grade floors.
- Regularly clean the drain in your basement floor. You can clean the drain with baking soda and vinegar as above, using a freezer gel pack or plastic to temporarily seal the drain. Keep the drain trap filled with water.
- Avoid standing water. Keep sump pits covered (you can use plywood wrapped with plastic).

Furnace room

- Furnace filters must be replaced regularly. Use pleated, one-inch filters, not coarse filters.
- If there is a heat recovery ventilator (HRV), clean the filter inside the HRV often.
- If you notice molds or signs of dampness, such as water on your windows or wet spots elsewhere, do not humidify. Disconnect furnace humidifiers that are no longer used.

Laundry areas

- Check that the clothes dryer exhausts to the outside.
- Remove lint every time you use the dryer.
- Don't hang-dry laundry indoors.
- Dry your laundry tub and washing machine after you use them.

Exterior

- Regularly check the condition of the roof and exterior finish for any places where water might enter.
- Make sure that eavestroughs and downspouts are connected, work properly and are free of debris.
- Install downspout extensions to lead water away from the building.
- Deal promptly with any problems that you find.

Tips in selecting an apartment that is not moldy

When you look for an apartment, there's a lot to consider. Location combined with availability may be a determining factor. The "Relocating" section of *The Clean Air Guide* is a good starting point for selecting apartments with good indoor air quality. If mold is a major concern for you, avoid apartments with one or more of these features:

- Located in a basement

- Located on an upper floor of a building with a wet, moldy basement
- No bathroom fan, or fan doesn't work
- No kitchen exhaust fan or fan is a recirculating fan
- An old carpet
- Known history of roof or plumbing leaks
- Difficult to heat because it is leaky or inadequately insulated

Frequently asked questions about mold

The air feels dry—can I humidify?

Before you add moisture to the air, measure the relative humidity. Air that feels dry may not really be dry. It may be moldy. High relative humidity (over 45 per cent) promotes the growth of molds and dust mites. The moisture in the air may condense on colder exterior walls where molds start to grow.

What are the advantages of a HEPA vacuum?

Ordinary vacuums capture large particles only, which allows small mold spores to pass through the vacuum exhaust back into the air. HEPA vacuums have, in addition to a regular filter, special filters to capture small particles. A central vacuum cleaner that exhausts to the outside also prevents re-distribution of fine particles into the air. A regular portable vacuum is useful only if its exhaust goes outside the home.

Vacuuming removes settled dust that contains an accumulation of mold spores over time. Reducing the settled dust reduces molds. Vacuuming with any vacuum cleaner (ordinary, central or HEPA) stirs dust and mold during the process. Wear a dust mask so you will not be breathing more mold.

Is vacuuming with a HEPA or externally exhausted vacuum cleaner recommended for serious mold problems only?

Vacuuming regularly with a HEPA or externally exhausted vacuum cleaner to prevent the ongoing accumulation of dust and molds is beneficial for any dwelling, with or without mold. The need for HEPA or external exhaust vacuuming increases with the severity of the mold problem.

If a furnishing has been wet at some time in the past or exposed to dampness over a prolonged period, vacuuming with a HEPA or externally exhausted vacuum is unlikely to remove the mold growing beneath the surface. It is better to discard the item.

Where do you find a HEPA vacuum cleaner?

Vacuum cleaner dealers carry HEPA vacuums. Consider purchasing one as an upgrade. A HEPA vacuum is a good investment in the long term whether you have mold or not. Better-built HEPA vacuum cleaners have airtight housing that prevents fine dust from leaking out.

Does painting over a moldy surface take care of the mold?

Painting over mold only masks the problem. Paint neither kills the mold nor stops it from growing. Clean washable surfaces with a detergent solution, following the procedure suggested in "How to clean up small mold problems," page 3 and "Dealing with a continuing mold problem," page 4 and allow the wall to dry. If you are going to paint, remove mold first.

Does cleaning stop mold growth?

Mold will reappear until you remove its source of moisture. High moisture levels that are not corrected can allow the molds grow back quickly. Cleaning is a temporary, but essential, measure.

You can help by making a conscious effort to keep your home dry. Obviously, water must be prevented from entering the home. But you can help by controlling moisture that you produce.

How can moldy clothes be cleaned?

Dry clean non-washable clothing.

Wash clothes with a detergent solution to which a cup of bleach is added. Make sure the detergent you use does not contain ammonia. Repeat as necessary until the moldy odour is gone.

Store cleaned clothes and other items in sealed plastic bags to prevent re-contamination.

To find more About Your House fact sheets plus a wide variety of information products, visit our Web site at www.cmhc.ca. You can also reach us by telephone at 1 800 668-2642 or by fax at 1 800 245-9274.

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<i>Investigating, Diagnosing and Treating Your Damp Basement</i>	Order No. 61065
<i>Clean Up Procedures for Mold in Houses</i>	Order No. 61091
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