



# Mould in Housing

## Information for First Nation Occupants

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# Mould in Housing Information for First Nation Occupants

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Cette publication est aussi disponible en français sous le titre : *La moisissure dans les maisons : information pour les occupants des Premières Nations* (n° de produit 67238).

The information in this publication is a result of current research and knowledge. Readers should evaluate the information, materials and techniques cautiously for themselves and consult appropriate professional resources to see if the information, materials and techniques apply to them. The images and text are guides only. Project and site-specific factors (climate, cost, aesthetics) must also be considered.

Mould in Housing: Information for First Nation Occupants

Issued also in French under title: La moisissure dans les maisons : information pour les occupants des Premières Nations

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**INTRODUCTION**

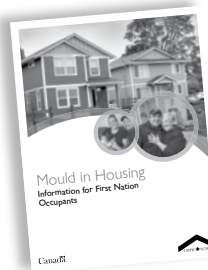
The *Occupants' Manual* is part of the *Mould in Housing* series. The information in this manual will help you to recognize when there is a mould problem and take the necessary steps to deal with the problem. This manual may also be suitable for:

- Chief and Council;
- First Nation housing departments including housing committees, housing managers, maintenance supervisors, property management/maintenance officers, property records clerks, construction supervisors, crew leaders, labourers;
- health providers—community health nurses/representatives and environmental health officers;
- trades—builders, contractors and renovators; and
- technical service providers (inspectors).

Mould can be a problem in houses anywhere, both in and outside First Nation communities. It can be a minor nuisance or it can have major effects on you and your family.

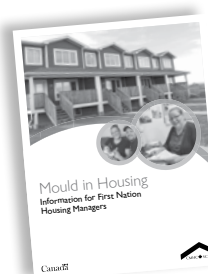
Mould in houses does not happen overnight. The solutions are also not immediate. If you have a mould problem, you will need a plan that includes dealing with existing situations, preventing future problems and planning of new mould-resistant construction.

**ABOUT THE MOULD IN HOUSING SERIES**



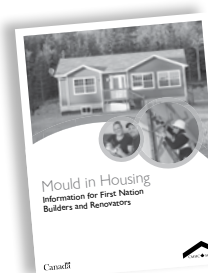
**Occupants' Manual**

This first manual of the series includes information written for home occupants and any other individuals who want to learn basic information about mould (product # 67237).



**Housing Managers' Manual**

This second manual suggests possible roles of key players and identifies the training they need to deal with mould issues. The Manual includes information on specialized topics and is directed to technical service providers and housing managers (product # 67299).



**Builders and Renovators' Manual**

This final manual of the series includes information on technical and specialized topics and is directed to housing managers, builders, contractors, renovators, technical service providers and mould remediation specialists (product # 67301).

**If you have any questions or comments about this document or other CMHC publications, please call 1-800-668-2642.**





## WHAT IS MOULD AND WHY IS IT A PROBLEM?

- Mould can be harmful or helpful depending on where it grows.
- Moisture makes mould grow.
- Mould does not grow on dry materials.
- Mould growing inside your house can affect you and your family.
- You can learn to recognize mould.
- Mould in houses is not the only cause of health problems.



## WHAT IS MOULD?

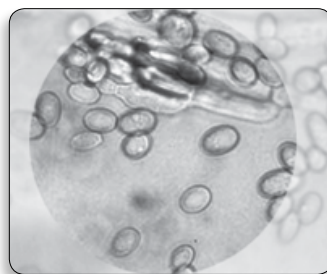
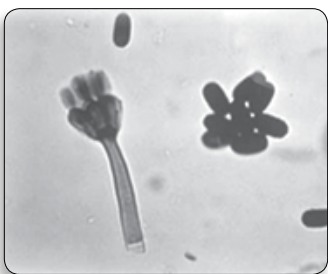
You encounter mould every day. Food can spoil because of mould. Leaves rot because of mould. Pieces of wood lying on the ground rot because of mould. Mushrooms are the same family as mould. That fuzzy black growth on wet window sills is mould. Paper or fabrics stored in a damp place get a musty smell because of mould.

Mould is not always bad. Mould stops waste materials from piling up. For example, mould turns a heap of compost into a small pile of black earth. Mould is nature's way of recycling materials back to the earth.

Mould can be useful to people. Penicillin is obtained from one type of mould. Some food and drinks are made by the actions of mould. The good kinds of mould are grown in controlled ways.

However, mould can also be harmful when it grows where we don't want it, such as in homes.

Mould spores under the microscope



Some food would not exist without the actions of mould



### What makes mould grow?

Mould will grow if we provide it with moisture and nutrients. If we keep things dry, mould does not grow.

Moisture can result from water coming in from outside or from plumbing leaks. High moisture levels can also result from people living in the house and from daily activities like bathing, washing clothes or cooking. Water enters the house when there is a crack or leak in its foundation, floor, walls or roof. Moisture can also build up inside the home when it can't be vented outside.

Plumbing leaks can lead to mould



### Where can mould grow?

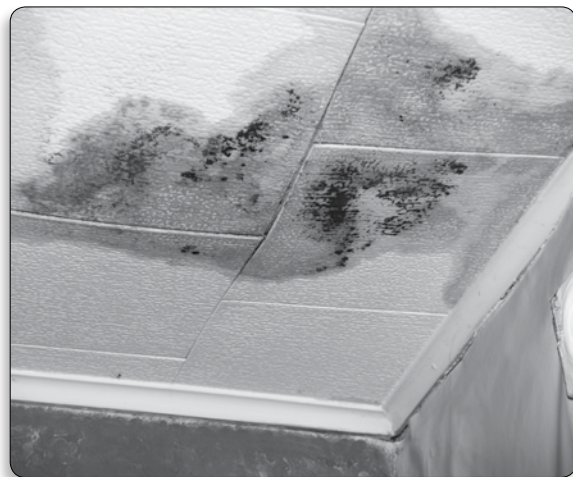
Mould can grow on common building materials such as drywall, wood and wood products, ceiling tiles, wallpaper and carpets. Mould can also grow behind wallpaper; in areas where water may have seeped, like wall cavities, basement subfloors, crawl spaces, and so on; under wall-to-wall carpeting and in areas near to mould that has been discovered before.

Different kinds of mould grow on different materials. Some kinds of mould like it soaking wet, while others may grow even if no water can be seen. Dampness inside a material can be enough for mould to grow. Continued mould growth means that there is too much moisture in the home. In Canada, basements, crawl spaces, bathrooms and cold exterior walls are where most mould growth is found.

Mould can grow on damp drywall



Mould can grow on wet ceiling tiles





## How can I tell if it is mould?

### Stains/discolouration

Discolouration (when a material changes colour) can be a sign of mould. However, all discolouration is not from mould. Carpeting near baseboards, for example, can be stained by outdoor pollution entering the home. Stains or soot may also be from burning candles or cigarette smoke. When a furnace does not work properly it can also produce soot. Mould growth usually looks fuzzy or powdery and is very often light green to brown or black in colour. It can also be white, red, orange, yellow, blue or violet.

Black discolouration of carpeting near baseboards can be a sign of a mould problem



### Smell/odour

Sometimes mould cannot be seen. A musty or earthy smell often means mould. But not all types of mould have a smell. Even when you don't notice a smell, wet spots, dampness or signs of a water leak mean there are moisture problems and mould may follow.

Mould can look powdery white



Smoke from candles can cause stains



Water stains on walls are evidence of a moisture problem



### Why is mould a concern?

Damage to materials is one concern. Mouldy materials like paper, cardboard or fabrics get stained or discoloured and, over time, they are ruined. Ongoing mould growth on wood can lead to wood rot, which can damage windows, siding, and even the structure of the house.

When mould grows inside the house, there may be a problem with indoor air quality. Mould releases chemicals and spores that can be damaging to some people. Health Canada says that mould can cause “allergic reactions such as asthma or allergic rhinitis, non-allergic reactions such as headaches, and other symptoms [including] lung and breathing infections.”<sup>1</sup>

The level of concern depends on the amount of mould, how long it has been around and the health of the occupants. Pregnant women, infants, children, the elderly and those with health problems, like a breathing difficulty (respiratory disease) or a weak immune system, are more at risk from mould. Those who already have health problems or those who spend a lot of time in the house may be affected more than others.

Health Canada considers that mould growth in residential buildings may pose a health hazard and recommends controlling dampness and cleaning up mould regardless of the type of mould.<sup>2</sup>

Water can lead to mould and can damage building materials



Mould growth can lead to wood rot



<sup>1</sup> Health Canada, *Residential Indoor Air Quality Guidelines: Moulds*, (Ottawa: Her Majesty the Queen in Right of Canada, 2007), 2 p.

<sup>2</sup> Federal-Provincial Committee on Environmental and Occupational Health, *Fungal Contamination in Public Buildings: A Guide to Recognition and Management*, (Ottawa: Health Canada, 1995), 76 p.

## Who is at higher risk from mould?

Some individuals may be more at risk from mould exposure. Health Canada advises that the following people should not do any of the cleanup activities and should not be in or even near the work area:

- people with asthma, tuberculosis or other breathing difficulties (respiratory disease);
- people with a mould allergy or chemical sensitivities;
- people with any sort of immune suppression or immunocompromised condition (HIV, chemotherapy, transplant, taking certain medications, and so on);
- people with any virus or bacterial infection, (bronchitis, pneumonia, severe cold or flu)—they should wait until fully recovered before working in mouldy areas;
- pregnant women;
- infants;
- children; and
- the elderly.

Contact your environmental health officer or your community health nurse/representative if you or a family member suffers from asthma or breathing (respiratory) problems or other health problems that get worse inside the house.

Pregnant women, infants, children and the elderly are more at risk when exposed to mould and should not be near the work area during cleanup





## IS THERE A MOULD PROBLEM IN MY HOME?

- Small amounts of mould in a house are common and are easy to take care of if you catch them early.
- Medium or large amounts of mould in a house are harder to clean up and fix.



The outside air always has some mould. Mould comes into the house through open windows or doors, on clothing or pets, or through drafts. It is normal to find some mould in indoor air. The problem starts when mould grows inside the house. The types of mould that grow indoors may be different from the ones found outdoors. A small amount of mould on the window sill, but nowhere else, is not a cause for concern but it may be a sign that there is too much moisture (dampness) in your house. It is important to find where the moisture is coming from because the situation must be fixed.

It is important to figure out how much moisture (dampness) and mould you have in your house and to have a plan to deal with any problems. For example, larger mould problems are harder to solve and you will need professional help.

You can figure out the area of the mould in your home to see if you should take care of the problem yourself or if you should get help. Use the images on page 7 to see if the area of mould in your home is *small*, *medium* or *large*.

Solving larger mould problems requires professional help



The mould area is **small** if there are one, two or three patches of mould and each patch is smaller than one square metre (1 m x 1 m). Mould on window sills are usually small areas.

## ATTENTION



Small mouldy areas in houses can become bigger if ignored, so it is important to clean up even tiny patches of mould.

Many small patches of mould in one area or throughout the house are a sign of moisture problems that need to be investigated and corrected right away. However, in most cases, small areas of mould can be cleaned up by home occupants or housing maintenance staff using proper precautions. See “How do I clean up small mould problems?” on page 8.

The mould area is considered **medium** if there are more than three patches of mould (each smaller than one square metre) but the total mould area is less than three square metres (for example 1 m x 3 m or about the size of a 4 ft. x 8 ft. sheet of plywood). Patches close together are considered as one patch.

## ATTENTION



In many cases, professional help is needed to take care of medium amounts of mould but home occupants may be able to attempt the cleanup with training and proper precautions.

The mould area is **large** if a single patch of mould is larger than three square metres (for example 1 m x 3 m or a standard piece of 4 ft. x 8 ft. plywood) or if there are many medium or large patches of mould all through the house.

## ATTENTION

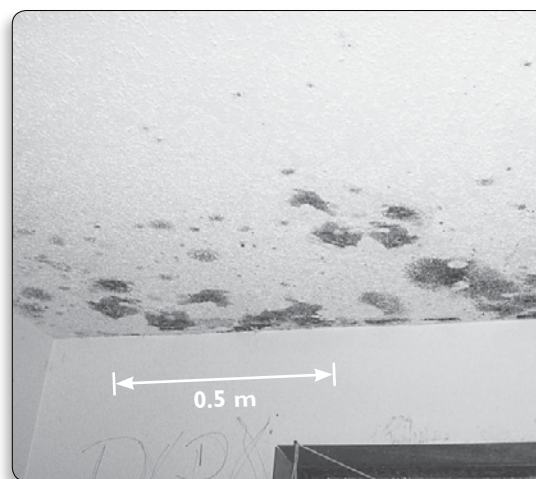


Large mould areas should be left to contractors who are trained to deal with mould cleanup.

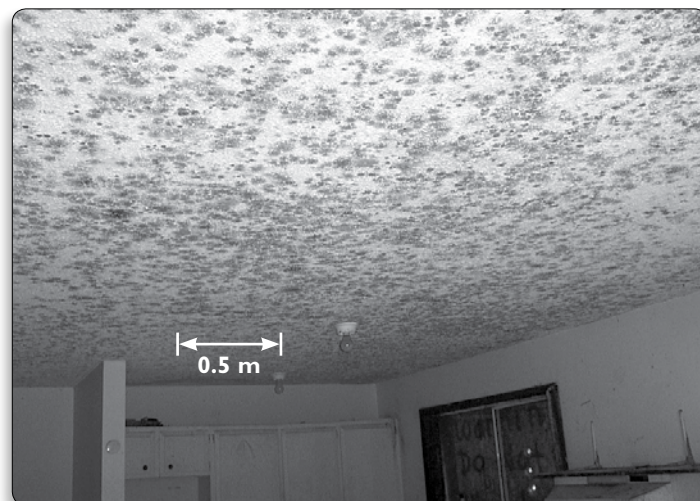
Small mould area



Medium mould area



Large mould area





## WHAT CAN I DO ABOUT MOULD IN MY HOME?

- You can clean up small areas of mould yourself by following these steps and safety precautions.
- Medium and large areas of mould should be cleaned up by people who are trained to clean up mould.
- People at risk from the effects of mould should not clean up mould and should be protected or stay away during cleanup.



## HOW DO I CLEAN UP SMALL MOULD PROBLEMS?

A small mould problem has one, two or three patches of mould and each patch is smaller than one square metre (or the size of a regular black garbage bag folded in half), see page 7.

You can clean up small areas of mould yourself if you are healthy. If you are at risk from the effects of mould you should not clean up mould and you should be protected or stay away during cleanup.

### ATTENTION



**Mould MUST be cleaned up but cleaning alone does not stop the mould growth.**

Cleaning is temporary and mould will come back if you do not take care of the moisture and dampness. You can help by trying to keep your home dry.

## Do not use bleach to clean mould

The best way to clean mould is to use warm water and unscented dishwashing detergent. Chemicals and disinfectants that claim to kill mould, such as bleach, can produce harmful fumes and do not prevent mould from coming back. Using too much bleach and other chemicals can be harmful to the environment.

You can clean a small mould area with a mild unscented dishwashing detergent



## Required protection equipment

- safety glasses or goggles
- a mask (if possible an N95 respirator or equivalent; this type of mask traps small particles like mould better than a regular dust mask)
- household rubber gloves

## Washable surfaces

Examples of washable surfaces are window sills, wood, hard surfaces and tiles.

- Scrub with unscented dishwashing detergent mixed with warm water (using unscented detergent will make it easier for you to smell any mould left after cleaning).
- Sponge with a clean, damp rag and let it dry quickly.

### ATTENTION



Tips on drying surfaces quickly: make sure there is good airflow with nothing blocking it and use a fan to blow air over the surface.

## Painted drywall

The paper surface of drywall grows mould when it gets wet over and over again and does not dry quickly. Cleaning with too much water adds moisture to the paper and can damage the surface.

- Clean the surface with a damp rag using baking soda or a bit of unscented dishwashing detergent mixed with warm water. Do not allow the drywall to get too wet. Wipe off the water quickly.
- If the mould is underneath the paint, the drywall will need to be removed and replaced with new drywall.

### ATTENTION



Painting over a mouldy surface does not take care of mould. Painting over a mouldy surface only hides the problem. Paint does not kill mould and does not stop it from growing.

## Concrete walls and floors

- Scrub with an unscented dishwashing detergent mixed with warm water.
- Sponge with a clean, damp rag and let it dry quickly.
- Remove any carpets or cardboard boxes that have been placed on the concrete floor as these may get damp and allow mould to grow.

It is important to wear protective equipment



## HOW DO I PREPARE FOR A MEDIUM TO LARGE MOULD CLEANUP?

See page 7 for a definition and pictures of medium and large mould problems.

Take these steps to reduce your exposure to mould while you are waiting for medium to large mould cleanup activities or repairs to start in your home.

### Required protection equipment

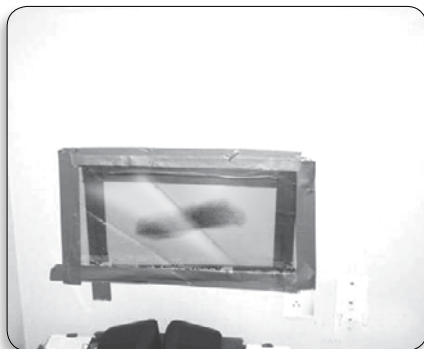
- safety glasses or goggles
- a mask (if possible an N95 respirator or equivalent; this type of mask traps small particles like mould better than a regular dust mask). If you will be working for several hours or days, you should use a half-face respirator with charcoal cartridges instead.
- household rubber gloves

### Step 1: Isolate the area

In case you need to seal an area:

- Cover the mouldy surfaces with plastic sheeting like a clean garbage bag and secure the edges with duct tape. Note that this is only a temporary measure to limit your exposure.
- Place a fan in a window in the room being cleaned that blows the inside air to the outside and helps to keep the mould from moving to the rest of the house. It also provides ventilation for you.

Minimize your exposure to mould by sealing the mouldy area



Moisture and mould can get into soft or upholstered (cushioned) furnishings



Papers and clutter can absorb moisture, grow mould and reduce air circulation



### Step 2: Throw away mouldy or damaged items

- Place and seal all mouldy items in a plastic bag.
- Take the sealed bags outside using the closest exit.

### Soft furnishings

Check non-washable furnishings on a case-by-case basis for mould. Moisture (dampness) and mould can get into soft or upholstered (cushioned) furnishings. Cleaning the surface of such items may not work.

- Furnishings that have been in very moist conditions for several weeks can become mouldy. You might have to throw away carpets, sofas and cushions that got wet or have been exposed to damp conditions.
- Throw away items that you no longer need so that there is less around to absorb moisture and grow mould.
- Do not hang onto mouldy items after the house is cleaned.



### Mattresses, bedding and plush toys

Because many hours are spent in bed, it is important to make sure that mattresses, pillows, blankets and stuffed toys are mould-free. Stuffed toys should be considered as bedding because they are often used as pillows or held close to children's faces. Mould can grow in mattresses and bedding that have been damp for a long period of time. It is not possible to clean a mouldy mattress.

- Throw away mattresses, pillows, stuffed toys or bedding that have been stored in wet basements or crawl spaces.
- Clean mattresses in good condition with a HEPA vacuum or externally exhausted vacuum. It is helpful to place the mattress in full sunlight to dry for several hours, turning it so that both sides are dried.

### Paper and cardboard

Mouldy paper is one of the most difficult materials to clean. Throw away books, paper, cardboard, puzzles, and so on that are mouldy, damp or have been stored in an area where mould is a problem.

- Throw away any books or other paper products that show signs of mould (black or brown fuzzy growth, greenish powdery spots or red to violet stains on some or all of the pages).

### Step 3: Wash and clean

Wash clothes and fabrics like curtains that are mouldy, damp or have been stored in an area where mould is a problem.

- Wash clothes and fabrics with unscented detergent and one cup of bleach. Repeat if the mouldy smell remains after washing and drying.
- Dry clean non-washable clothing and fabrics.
- Store clean clothes and other items that have been washed in closed plastic bags until the mould problem is solved to keep the mould away.

Clean hard washable surfaces that are mouldy, damp or have been stored in the area where mould is a problem.

- Scrub with an unscented dishwashing detergent mixed with warm water. Use unscented detergent to make it easier for you to smell any mould left after cleaning.
- Sponge with a clean, damp rag and let it dry quickly.

Mould-damaged possessions



### Step 4: Vacuum

Vacuuming with the right kind of vacuum helps to take care of dust that may contain mould spores. Taking care of dust reduces your exposure to mould.

- Do not use a regular vacuum for houses with a mould problem. Instead use:
  - a vacuum cleaner with a high efficiency particulate air (HEPA) filter; or
  - a vacuum that is exhausted to the outside (central vacuum systems are often vented outside but be sure to check before using).
- Vacuum all surfaces in the house (floors, walls, ceilings, shelves) slowly and carefully.
- Vacuum all non-washable furnishings (sofas, chairs, mattresses, and so on) slowly and carefully. If the furnishings have been wet or exposed to dampness over a long period, HEPA vacuuming will probably not remove any mould growing under the surface. It is better to throw away the item.

ATTENTION



It is important to use a HEPA vacuum or externally exhausted vacuum cleaner instead of a regular vacuum cleaner.

- HEPA vacuums have special filters that can trap and collect very small particles. Mould spores are captured in the HEPA filter.

- A central vacuum that is exhausted to the outside also removes mould spores from inside the home.
- A regular vacuum cleaner should never be used for mould cleanup unless it can be exhausted outside. A regular vacuum cleaner has filters that let fine particles, like mould spores, pass through the filter and blow back into the room.
- If possible, vacuum regularly with a HEPA vacuum or externally exhausted vacuum to help prevent the buildup of dust and mould.

ATTENTION



Vacuuming with any vacuum cleaner (regular, central or HEPA) stirs up dust and mould. Wear a dust mask (N95 if possible) while vacuuming so you are not breathing in more mould.

### Where do I find a HEPA vacuum cleaner?

HEPA vacuum cleaners are available at most department stores or vacuum cleaner stores. If you buy or rent a vacuum cleaner, think about getting one with a HEPA filter. A HEPA vacuum costs approximately \$300 or more.

HEPA vacuum



Central vacuum





## WHAT CAN I DO TO PREVENT MOULD AND MOISTURE INDOORS?

- Keep your house dry.
- Prevent and repair leaks.
- Control moisture that is produced within your house.
- Use bathroom fans.
- Use range hood fans.
- Store firewood outside.
- Regularly check your house for signs of mould.
- Act quickly to keep small problems from getting bigger.



## WHAT IS RELATIVE HUMIDITY?

Humidity is the amount of water in the air. We need humidity for our comfort and health but too much humidity can lead to mould.

Humidity is measured as relative humidity. Relative humidity is the amount of moisture in the air compared to the maximum amount the air can hold at that temperature (measured as a percentage). Warm air can hold more moisture than cool air, so the relative humidity in a room changes as the temperature changes, even though the amount of moisture in that room stays the same. For example, as the temperature in a room cools, the relative humidity rises.

### ATTENTION



The relative humidity inside your home should be low enough to prevent condensation (“fog”) on the windows. You can use a dehumidifier to lower the relative humidity in your home.

Indoor relative humidity should be between 30% and 50%. When it is below  $-10^{\circ}\text{C}$  ( $14^{\circ}\text{F}$ ) outside, the relative humidity inside should be 30% but it can be as low as 25% in extremely cold regions, to prevent condensation on cold surfaces such as windows.

Use a range hood fan to vent moisture outside



## HOW DO I MEASURE RELATIVE HUMIDITY IN MY HOME?

To find out if you have too much moisture in the air indoors, you can measure the relative humidity using a hygrometer (sometimes called a humidity sensor or humidity indicator). These can be bought for \$10 to \$60 at a hardware store. Your housing manager may have a hygrometer that you can borrow or may be able to measure the humidity for you.

If you can't get a hygrometer, look for these signs that tell you the indoor humidity is too high:

- condensation (water) on windows;
- wet stains on walls and ceilings;
- mouldy bathrooms;
- musty smells; and
- allergic reactions (such as a runny nose, itchy/watery eyes, headaches, wheezing, coughing).

Relative humidity should be low enough to prevent condensation (water) on windows



## WHAT SHOULD I DO IF THERE ARE SIGNS OF EXCESS MOISTURE IN MY HOME?

The following checklist can be used to help you keep mould out of your home by controlling and preventing moisture and sources of mould.

ATTENTION



### **A humidifier can cause excess moisture.**

Humidifiers can cause mould in your home if not installed, used or maintained properly. Do not use a humidifier if you notice mould or signs of dampness, such as water on your windows or wet spots in other areas. If the relative humidity in your home is very low, it is better to seal up your house by weatherstripping and caulking windows and doors. This will keep the dry, cold air from leaking in from outside. Make sure you use your ventilation system for good indoor air quality.

Mouldy bathrooms can be a sign that the indoor humidity is too high



## AROUND THE HOUSE

### NOTES

### **Leaks or floods**

You only have a short time to clean up before mould begins to grow—less than 48 hours.

- Repair leaks right away.
- In the first 48 hours, remove water-damaged items and construction materials to reduce the risk of mould exposure.
- Act right away to save items that will be ruined by mould if left longer.
- Dry wet flooring, walls, furnishings and other items.
- Throw away items that can't be dried.
- Pull carpets and furnishings away from wet walls to let air flow and help dry.
- Carpets and underpads that are mouldy should be thrown away.

### **Musty smell**

#### **Can be a result of mould spores and dust in carpets and on floors**

- Install a central vacuum vented outdoors or use a HEPA vacuum.
- Vacuum often.
- Clean hard floors with a damp mop.
- Have family and friends take off their shoes at the door before entering your house.

#### **Potted plants**

- Reduce the number of potted plants in your house.
- Cover the top of the pots with foil, hard plastic or a thick layer of pebbles to keep the moisture and mould in the soil.

#### **Furniture**

- Do not bring furniture that has been stored in a mouldy place into your house.



**Condensation (water) on windows****Damp wooden window frames and sills**

- Lower the indoor moisture levels. Use bathroom fans and kitchen range hood.
- Keep window coverings open to move the warm air over the windows.
- Heavy curtains or blinds can trap the cold and moisture and cause condensation (water) on your windows.
- Dry your window frames and sills daily to keep water from dripping and causing mould to grow.
- Make sure furniture does not block heat from floor registers or baseboard heaters and keep it from reaching the windows.
- Check the rest of the house for moisture sources like leaks, stored firewood, and so on.
- If you have tried all of these tips to reduce moisture in your home and you still have condensation, your windows may need to be replaced.

NOTES

**IN THE BASEMENT****High indoor relative humidity**

- Run a dehumidifier in your basement. A dehumidifier helps to reduce moisture (dampness) in the basement year round.
- Close the basement windows when the dehumidifier is running.

**Sweating or condensation (moisture) on pipes**

- Check pipes for sweating or condensation.
- Dry off pipes then insulate with foam-type insulation.

**Musty smell****Too many stored items with no airflow**

- Get rid of clutter and keep the basement tidy so air can move freely, especially near outside walls.
- Throw away items you don't need or keep them off the floor.
- Never place cardboard boxes directly on basement floor.
- Store firewood in a shed or garage, not inside the house.



- Remove clothes, blankets, paper products and furniture from the basement. Store these items somewhere else in the house.
- If you must use the basement for storing items, use plastic bins with lids instead of cardboard.
- Remove any carpets from the basement floor.

Too many stored items (clothes, blankets, books, photographs, magazines, boxes) restrict airflow and will collect moisture and allow mould to grow.

### **Earth floors**

- Install a moisture barrier (plastic sheeting) over the earth floor.
- Pour a concrete slab over the moisture barrier to protect it.

### **Floor drains**

- Clean the drain in your basement floor. Pour ½ cup of baking soda and ½ cup of water into drain, then add ½ cup of vinegar. Cover the drain and let the baking soda and vinegar work for 20 minutes then run plenty of water through the drain. Do this as needed.
- Keep the drain trap filled with water.
- Pour mineral oil into the trap to prevent it from drying out.
- Replace the drain with an air-sealing type.

### **Open sump pits**

- Avoid standing (still) water.
- Keep your sump pit covered and sealed.
- Use a tight-fitting cover (use a piece of metal or you can make a good cover by wrapping plywood with a 0.15-mm [6-mil] polyethylene plastic sheet).
- Make sure the pump is working.

### **Outside**

- Make sure that the slope of the ground around the house drains surface water away from the house.
- Make sure that eavestroughs and downspouts are clear and drain roof water away from the house.

## NOTES



## BEDROOMS

### **High indoor relative humidity**

- Keep baseboards or heating vents clear to make sure the heat flows.
- Leave doors open for good air and heat flow.
- Unplug and remove humidifiers.

### **Musty smell**

- Keep beds, bedding and furniture away from outside walls for good airflow.
- Keep closets and storage spaces free and clear, especially if near an outside wall.
- If possible, clean carpets often and well with a HEPA vacuum.

## IN THE BATHROOM

### **High indoor relative humidity**

- Remove the moisture by using an exhaust fan when you shower.
- Keep the fan running for 30 minutes after your shower.
- Make sure the fan exhausts to the outside, not to your attic.
- Clean the fan and grille often.
- If you don't have an exhaust fan get one installed in each bathroom.
- Keep surfaces clean and dry. Squeegee and dry the walls around the bathtub and shower after showers and baths.
- Remove any mould by scrubbing with unscented detergent and water.
- Clean often to prevent mould buildup.
- Repair or replace open/cracked/damaged caulking around shower and tub.

### **Plumbing leaks**

- If you find any leaks, have them repaired.

### **Musty smell**

- Remove any carpeting in your bathroom.
- Use a small bath mat to prevent slipping when getting out of the shower or bath. Hang it to dry after each use.
- Remove dirt and hair in drains.

NOTES



- Clean drains often:
  - 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 plugged, use a small plumbing snake to unplug it.

### **Condensation (water) on toilet tank or bowl (in the summer months)**

- Keep the toilet wiped dry so water does not drip onto the floor.
- Check condition of flooring around toilet.
- Repair any moisture damage or damaged flooring.
- Get an insulated toilet tank.

### **Water seeping behind walls**

#### **Cracked or missing caulking**

- Check often to make sure caulking is in good shape.
- Replace caulking when cracked or missing or notify the housing manager.

## IN THE KITCHEN

### **High indoor relative humidity**

#### **Cooking**

- If the fan over your stove exhausts outside, use it when you cook to remove the moisture from cooking.
- Find out how to clean and maintain your exhaust fan.
- If you don't have a fan, get an exhaust fan installed that vents to the outside.
- Do not boil water in uncovered pots for long.
- Cover boiling pots with a lid when possible.

#### **Plumbing leaks**

- Check under the kitchen sink to make sure there are no leaks in the pipes.
- If you find any leaks, have them repaired.
- Keep the area under your sink free and clear.

NOTES



**Standing (still) water**

- Clean the drip pan under the refrigerator. At the same time, vacuum dust from the coils at the back of the refrigerator. For fridges with coils underneath the fridge you can only vacuum from the front and back of the fridge at the base. Be careful not to damage the coils.

**Unpleasant odours****Dirt in drains**

- Clean drains often:
  - 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 plugged, use a small plumbing snake to unplug it.

**Garbage**

- Take out the garbage daily to prevent odours and spoiling.
- Clean garbage containers often.

**IN CLOSETS AND STORAGE****Musty smell****Too many stored items with no airflow**

- Give away clothes or other stored items that you don't use.
- Keep your closets and bedrooms tidy so it is easier for air to flow—and harder for mould to grow.
- Limit the amount of storage in closets against outside walls.
- Leave closet doors open to allow air to flow.

NOTES

## IN THE LAUNDRY AREA

### **High indoor relative humidity**

#### **Clothes dryer**

- Empty the lint tray every time you use the dryer.
- Check that your clothes dryer vents to the outside. If not, connect your clothes dryer vent to the outside. Seal the joints in the dryer duct with foil tape.
- Occasionally inspect the vent and remove any built-up lint. Make sure nothing is placed in front of the vent outside and that the vent is kept clear.

#### **Laundry tub and washing machine**

- Dry your laundry tub and washing machine after you use them by wiping with a clean rag and hanging it to dry.
- Leave the washing machine door open when not in use so that any water left behind can dry. This will prevent mould and bacteria from growing inside the washing machine.
- Make sure that water from the washing machine flows directly into the laundry sink without dripping or splashing outside of the laundry sink. Use pipe extensions to reduce any splashing.
- Use cold water for laundry whenever possible since this reduces the amount of moisture created. Cold water also kills dust mites.
- Check hoses and connections for leaks.

#### **Wet laundry**

- Don't hang laundry indoors to dry.

## IN COLD ROOMS AND ROOT CELLARS

### **Musty smell**

- Stop using your cold cellar.
- Change your cold cellar to a heated area or close it off from the house and add an entrance from outside.
- Use a refrigerator for cold storage or build a "root" cellar outside.

NOTES



## HEATING SYSTEM

NOTES

### ***Cold, unheated or damp areas***

- Check that heating vents serving the area are open. Ensure dampers in the floor grille and/or ducts are open.
- Ensure baseboard heaters are operating.
- Ensure thermostats are working and are set properly.
- Do not leave areas of the home unheated.
- If your windows have a condensation problem, don't turn the heat down too low at night or when you are away.
- Keep inside doors open for better airflow.
- Make sure that there is no furniture around air intake grilles and heating vents.
- Check thermostat settings.
- Have the heating system checked (serviced) annually.

### ***Musty smell or low airflow***

#### **Filters**

- Filters that are not changed or cleaned often enough can increase the amount of mould spores in the air.
- Inspect furnace filters often (replace them at least every three months). Use a pleated, one-inch filter, not a coarse filter, if possible.
- If you have a heat recovery ventilator (HRV), clean the filter inside the HRV as recommended by the manufacturer—usually the filters should be cleaned every three months and replaced as needed (for example when they stay dirty or black after cleaning).

#### **Electric baseboards that collect dust and mould spores**

- Vacuum baseboards often. Turn off units before vacuuming.
- Inspect and maintain baseboards often.

#### **Furnace humidifiers**

- Furnace-mounted humidifiers can be a source of mould.
- Clean and dry trays often.

#### **Furnace**

- Clean floor and wall grilles.
- Vacuum ducts leading to the grilles.





## OUTSIDE THE HOUSE

### Leaks

- Regularly check the condition of the roof and exterior of the house for any places where water might enter.
- Have suspected leakage points inspected and repaired.

### Water runoff

- Install downspout extensions to drain rainwater and melted snow away from the house.
- Make sure that eavestroughs, downspouts and downspout extensions are connected and working.
- Regularly remove any leaves from eavestroughs, downspouts and downspout extensions that block the water from flowing.
- Water overflowing from eavestroughs may indicate something blocking the flow of water to the downspout.
- Make sure soil, grass and driveway slope away from the house.
- Fix problems as quickly as possible.
- Check window wells and keep them clear of leaves or debris.

NOTES



For more information, including reports, videos, fact sheets, success stories, case studies, visit [www.cmhc.ca/firstnations](http://www.cmhc.ca/firstnations) or contact your CMHC First Nation Housing consultant [www.cmhc.ca/contactfnh](http://www.cmhc.ca/contactfnh)

