



# ABOUT YOUR HOUSE

## THE CONDOMINIUM OWNERS' GUIDE TO MOLD

CE 36

### Understanding molds

- **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 A CONDO CAN AFFECT THE OCCUPANTS.**
- **OCCUPANTS CAN LEARN TO RECOGNIZE MOLD**

You encounter mold every day. Foods spoil because of mold. Leaves decay and pieces of wood lying on the ground rot due to mold. That fuzzy black growth on wet window sills is mold. Paper or fabrics stored in a damp place get a musty smell that is due to the action of molds.

Molds can be useful to people. The drug Penicillin is obtained from a specific type of mold. Some foods and beverages are made by the actions of molds. The good kinds of molds are selected and grown in a controlled fashion.

Molds are undesirable when they grow where we don't want them, such as in homes. Over 270 species of mold have been identified as living in Canadian homes. Molds that grow inside may be different from the ones found outdoors.



### What are molds?

Molds are microscopic fungi, a group of organisms which also includes mushrooms and yeasts. Fungi are highly adapted to grow and reproduce rapidly, producing spores and mycelia in the process.



### What makes molds grow?

Molds will grow if we provide them with 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 or roof; or from plumbing leaks; or moisture produced by the people living in the condo, through daily activities like bathing, washing clothes or cooking. Water enters the building when there is a weakness or failure in the structure. Moisture accumulates within a condo when there is not enough ventilation to expel that moisture.

Different 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 the material can be enough to allow them to grow.

### Why are molds a concern?

Damage to materials is one concern. Materials get stained or discoloured, and over time they are ruined. Moldy paper and cardboard disintegrate over time. Fabrics are damaged. Continued mold growth can be indicative of moisture conditions favorable for growth of fungi that cause wood rot and structural damage.

When molds are growing inside the home, there may be health concerns. Molds release chemicals and spores.

### How can you tell if it is mold?

#### Discolouration

Discolouration is a sign of mold. However, all discolouration is not due to mold. Carpeting near baseboards, for example, can be stained by outdoor pollution entering the home. Stains or soot may also be caused by the smoke from burning candles or cigarette.

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/Odour

Sometimes molds are hidden and cannot be seen. A musty or earthy smell often indicates the presence of molds. But a smell may not be present for all molds. Even when you don't notice a smell, wet spots, dampness or evidence of a water leak are indications of moisture problems and mold may follow.

Health experts indicate that, depending on the type of mold present in a home, the amount and degree of exposure, and the health condition of the occupant, the health effects of mold can range from being insignificant to causing allergic reactions and illness.

Pregnant women, infants, the elderly and those with health problems, such as respiratory disease or a weakened immune system, are more at risk when exposed to mold. Consult your family physician if you believe there is someone who may be at risk.



## When is mold a problem?

- ESTIMATE HOW MUCH MOLD IS GROWING.
- YOU CAN CLEAN UP A "SMALL AREA" OF MOLD YOURSELF.
- FOR LARGER MOLD AREAS OR RECURRENT MOLD PROBLEMS, SEEK PROFESSIONAL HELP.

## Is there a mold problem?

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

Some mold growing, for example on the window sill but not elsewhere, is not a cause of concern. You can clean the mold yourself. The presence of mold is a sign that there is too much moisture in your condo - a situation which must be corrected.

Mold that is isolated inside walls and which cannot easily come in contact with the occupants is less of an immediate concern but should be dealt with by the Condominium Board.\*

Inspect the condo to find the extent of the mold. Advise your Condominium Board if you suspect a serious mold problem.



## How much mold is growing?

One way is to estimate the area of the mold.

Mold is considered to cover a "small area" if it is no larger than the size of a standard garbage bag folded in half (crosswise or lengthwise). If there is another mold patch beyond two garbage bag lengths away it is considered a separate patch (otherwise it all counts as a larger patch). Clean up small areas yourself using a detergent solution, household rubber gloves and a dust mask for protection.

Small moldy areas may become larger over time if ignored, so it's important to clean up and remove even small patches of mold.

If the patch of mold or all nearby patches (less than two garbage bag lengths apart) combined are larger than a garbage bag folded in half but smaller than a 4 x 8 foot sheet of plywood or drywall, the mold area is considered "moderate." You can clean up moderate amounts of mold but you must follow the proper procedures and use the proper protective equipment.

A mold area is considered "extensive" if a single patch of mold is larger in area than a sheet of plywood. Being exposed to this much mold is not a good idea. Do not attempt to clean up large areas of mold yourself. You need professional help to determine why the mold is there in the first place and how to clean it up.

## When should you seek professional help?

You may need professional help when:

- There is an extensive amount of mold;
- The condo is very damp and moist;
- Mold comes back after repeated cleaning; and
- A family member suffers from asthma or respiratory problems or other health problems that appear to be aggravated inside the condo.

## How do you get professional help?

Advise your Condominium Board of mold problems you may be experiencing. Your Condominium Board will determine if envelope specialists should be consulted to resolve moisture ingress through the envelope.

You may wish to seek advice on how you can improve your own unit. Contact your local CMHC office for a list of individuals who have completed the CMHC Residential Indoor Air Quality Investigator program. A trained IAQ investigator, who operates a private business and sells his/her services, examines the inside indoor air quality conditions of your condo and documents your concerns. He/she identifies the problems, finds their sources and suggests solutions in a written report. Recommendations are provided to you in an action plan that consists of various options to improve the indoor air quality in your home.

Ask your Condominium Board for names of mold clean-up contractors - individuals who have been trained to clean up mold.

\*References to Condominium Board can also be read to mean Strata Council or Property Manager.

## How to clean up small mold problems

- **“SMALL AREAS” OF MOLD CAN BE CLEANED WITH A DETERGENT SOLUTION.**
- **WEAR A MASK, SAFETY GOGGLES, RUBBER GLOVES AND A LONG-SLEEVE SHIRT.**
- **SEEK PROFESSIONAL HELP IF THERE IS A LOT OF MOLD OR IF MOLD COMES BACK AFTER CLEANING.**

### “Small area” clean-up

You can clean up “small areas” of mold (less than the area covered by a garbage bag folded in half) yourself. The minimum protective wear needed is:

- safety glasses or goggles;
- a disposable dust mask (3M 8210 or equivalent);
- household rubber gloves; and
- long-sleeved shirts and old clothes.

Occupants with asthma, allergies or other health problems should be out of the unit during the cleaning.

### Steps to follow in cleaning up small mold areas

#### Washable surfaces

Scrub with a detergent solution; then sponge with a clean, wet rag and dry quickly.

#### Moldy drywall

Clean the surface with a damp rag using baking soda or a bit of detergent. Do not allow the drywall to get too wet.

Mold that comes back after cleaning is usually an indication that a source of moisture has not been removed. Seek professional help from a trained IAQ investigator.

## How to clean up moderate mold problems

- **CLEAN “MODERATE AREAS” OF MOLD, BUT WEAR PROPER PROTECTIVE EQUIPMENT AND FOLLOW PRECAUTIONS.**
- **NOTIFY YOUR CONDOMINIUM BOARD OF REMEDIATION STEPS IN YOUR OWN UNIT.**
- **SEEK PROFESSIONAL HELP IF THERE IS A LOT OF MOLD OR IF MOLD COMES BACK AFTER CLEANING.**

If you follow the proper procedures and use the proper protective equipment, you can clean up “moderate areas” of mold. “Moderate” means the patch of mold or all nearby patches (less than two garbage bag lengths apart) combined is larger than a garbage bag folded in half but smaller than a 4 x 8 foot sheet of plywood.

### a) Safety precautions

- Wear a half-face respirator with charcoal cartridges, safety goggles, heavy-duty rubber gloves, disposable coveralls and head covering, and washable boots.
- Isolate the area to be cleaned with plastic sheeting, taped to walls and ceiling.
- Family members at higher risk should not be in the work area during the clean-up.

### b) General cleaning

Vacuum surfaces with a vacuum cleaner which has a High Efficiency Particulate Air (HEPA) filter or is externally exhausted. Scrub or brush the moldy area with a mild detergent solution. Rinse by sponging with a clean, wet rag. Repeat. Dry quickly.

### c) Cleaning wood surfaces

Vacuum loose mold from wood surfaces using a HEPA or externally exhausted vacuum. Try cleaning the surface of the wood with detergent and water. Rinse with a clean, damp rag and dry quickly. If the staining does not come off, sand and vacuum the surface of the wood with a vacuum/sander combination. It is important to vacuum at the same time to prevent mold spores from being dispersed into the air. Note that wood affected by rot may need to be replaced.

**d) Cleaning concrete surfaces**

Vacuum the concrete surfaces to be cleaned with a HEPA or externally exhausted vacuum cleaner. Clean up surfaces with detergent and water. If the surfaces are visibly moldy, use TSP (trisodium phosphate). Dissolve 1 cup of TSP in two gallons of warm water. Stir for two minutes. Note: TSP must not be allowed to come in contact with skin or eyes. Saturate the moldy concrete surface with the TSP solution using a sponge or rag. Keep the surface wetted for at least 15 minutes. Rinse the concrete surface twice with clean water. Dry thoroughly, as quickly as possible.

**e) Moldy drywall**

The paper facings of gypsum wallboard (drywall) grow mold when they get wet or repeatedly wet and don't dry quickly. Cleaning with water containing detergent not only adds moisture to the paper but also can eventually damage the facing. If the mold is located only on top of the painted surface, remove it by general cleaning (above). If the mold is underneath the paint, the moldy patch and other moldy material behind it are best cut out and the surrounding areas also cleaned. This should be done by a mold clean-up contractor. New materials may become moldy if the moisture entry has not been stopped. If this is the case, replacement of the materials should be deferred until the remediation of the building is completed. The affected areas should be temporarily covered with plastic sheeting and sealed at the edges.

Any areas that show new patches of mold should be cleaned promptly.

Notify your Condominium Board of the extent of mold in your unit.

**Dealing with an ongoing problem**

- **WATER ENTERING UNITS FROM THE OUTSIDE REQUIRES REPAIR TO THE BUILDING ENVELOPE.**
- **OWNERS CAN REDUCE THEIR EXPOSURE TO MOLD IN THEIR OWN UNITS.**

Repair to the building envelope is required if moisture is entering the unit from the outside. Your Condominium Board may already be undertaking the work or is in the process of preparing to carry out the remediation. Condominium owners, meanwhile, can take steps to reduce their exposure to mold in their own units.

1. Discard moldy or damaged materials. Wear a dust mask and gloves. Furnishings, such as mattresses, carpets, or sofas that got wet or have been stored in damp conditions should be discarded. Discard items that are no longer needed. Clothes and other items that have been cleaned should be stored in sealed plastic bags to prevent re-contamination.
2. Proper vacuuming reduces the amount of mold spores. All surfaces in the condo (floors, walls, ceilings, shelves) and non-washable furnishings (such as sofas, chairs, etc.) must be vacuumed thoroughly.
3. Keep moisture generated within the unit to a minimum by conscientiously following the prevention steps.
4. Pull carpets and furnishings away from walls that get wet. Carpets and underpads that are moldy should be cut out and discarded.
5. Take steps to dry up areas that get wet. Monitor the relative humidity of the air. Use a portable dehumidifier, if necessary. Ensure that the condensate drain pan of the dehumidifier is emptied regularly.
6. If the mold is limited to one area, isolate the area if possible. Cover the affected surfaces with plastic sheeting secured at the edges with duct tape. Note that this is only a temporary measure to minimize your exposure.
7. Healthy individuals can regularly clean "small" and "moderate" areas of mold, thus preventing these from getting out of hand, by following the safety precautions and cleaning guidelines.
8. Consider seeking professional help from trained IAQ investigators to identify appropriate remediation steps inside the unit. Removing large amounts of mold will require the services of mold clean-up contractors.

### Preventing mold

- **KEEP THE CONDO DRY.**
- **FIND AND FIX WATER LEAKS.**
- **DISCARD CLUTTER AND EXCESS STORED MATERIALS.**
- **CLEAN AND MAINTAIN THE CONDO REGULARLY.**
- **ENCOURAGE LIFESTYLE PRACTICES THAT REDUCE MOISTURE.**

### Basic steps to prevent and reduce mold growth

- Mold needs moisture to grow. Controlling the moisture and keeping the condo dry prevents the growth of mold.
- Check your condo for signs of moisture and molds.
- Find out if water is coming in from the outside and if substantial moisture is produced inside the condo.
- Report any water leaks, moisture or molds to the Condominium Board promptly.
- Think of the different ways moisture is produced inside the condo (for example, cooking, bathing, numerous indoor plants). Remove the moisture as it is produced by using exhaust fans. In the absence of fans, open windows for a short time, but note that the wind can push the moisture to other parts of the condo.
- Measure how much moisture is in the air. To find the relative humidity in your home, you'll need a hygrometer. You can buy one at a

hardware store or electronics store. A hygrometer costs from \$5 to \$20. Relative humidity in the home should be under 50%. If necessary, use a dehumidifier to lower the relative humidity.

- Reduce the amount of stored materials, especially items that are no longer used. Molds grow on fabrics, paper, wood and practically anything that collects dust and holds moisture.

### Mold-proofing your condominium, room by room

#### Basement or crawl space

*(Note: Although this section was written for homeowners, some of the principles would also apply to basements in condominium buildings. Communicate with your Condominium Board.)*

- Reduce the amount of clothes, paper and furnishings stored in the basement. Discard badly damaged materials. Eliminate clutter to improve air circulation. Only washable items should be stored.
- Avoid carpets on slab-on-grade or below-grade floors.
- Periodically clean the drain in your basement floor. Use half a cup of bleach, let it stand for a few minutes, then flush with plenty of water. Keep the drain trap filled with water.
- Avoid standing water. Keep sump pits covered (you can use plywood wrapped with plastic).

#### Furnace room

- Regularly clean and replace furnace filters. Use a pleated one-inch filter, not a coarse filter.
- If you have 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.
- If you have electric baseboards, vacuum the units, or have a professional clean them for you.

#### Laundry areas

- Check that your 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.

#### Bathrooms

- Check the bathroom fan to make sure it exhausts to the outside.
- Turn the bathroom fan on when you shower. Keep it running for a few minutes after you finish your shower.
- Take short showers.
- Keep surfaces that get wet, such as the walls around the bathtub and shower, clean and dry.
- If there is a carpet in your bathroom, 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 it.*
- *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, use a small plumbing snake.*

### Kitchen

- If the fan over your stove exhausts outside, use it when you cook.
- Minimize open boiling.
- Keep your drains in good shape. Follow the steps in the Bathroom section above.
- There's a drip pan at the back of your 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.

### Closets and bedrooms

- Get rid of clothes and other stored items that you don't use. Keeping your closets and bedrooms tidy makes it easier for air to circulate – and harder for mold to grow.

### Other parts of the condo

- A dehumidifier helps to reduce moisture in the condo during the warmer months. Close the windows when the dehumidifier is running.
- When family and friends come

into the condo, have them take off their shoes.

- Vacuum often. If you are buying a vacuum cleaner, try to get one with a HEPA filter (see below).
- Clean hard floors with a damp mop.
- Do not bring into your condo furniture, clothing, books, etc. that have been stored in a moldy place.
- Cut down the number of potted plants in the house – soil is a good place for mold.

### Exterior

*(Contact your Condominium Board)*

- 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 and working properly and that they are free of debris.
- Install downspout extensions to lead water away from the building.
- Deal promptly with any problems that you find.

### 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 be really dry. It may be moldy. High relative humidity (over 50%) promotes the growth of molds and dust mites. The moisture in the air may condense on colder exterior walls where molds start to grow.

If your physician has advised you to use a humidifier in your child's bedroom at night, monitor the relative humidity.

Turn the humidifier on and off as necessary. In the morning, take steps to make sure the room gets dry. Clean and empty the humidifier after each use.

#### What advantages do HEPA vacuums provide?

Ordinary vacuums capture large particles only - small mold spores pass through the vacuum into the air. HEPA vacuums have special filters that capture small particles. A central vacuum cleaner which is exhausted to the outside also removes mold spores. 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.

Vacuums with any vacuum cleaner (ordinary, central or HEPA) stir 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?

Vacuum regularly with a HEPA or externally exhausted vacuum cleaner to prevent the ongoing accumulation of dust and molds. 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 has been exposed to dampness over a prolonged period of time, vacuuming with 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 to what you may be using. A HEPA vacuum is a good investment in the long term whether you have mold or not. A generic canister HEPA vacuum cleaner costs approximately \$300. Brand name products of the same type may cost more. You may inquire if the dealer has a HEPA vacuum cleaner to rent. Contractors who clean up or renovate houses for mold should also have this equipment.

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

Painting over mold only masks the problem. Paint does not kill the mold nor stop it from growing. Surfaces that

are washable should be cleaned with a detergent solution, following the procedure suggested on page 4, then allowed to dry. If you are going to paint, remove any mold first.

### Does cleaning stop the mold growth?

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

You can help by making a conscious effort to keep the condo dry. For obvious reasons water must be prevented from entering the condominium. But you

can help by controlling moisture that is produced inside the condo.

### How does one clean clothes that are moldy?

Non-washable clothing can be dry cleaned.

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.

Clothes and other items that have been cleaned should be stored in sealed plastic bags to prevent re-contamination.

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