Mould and your health

health

Community factsheet April 2010

What is mould?

Mould is a type of fungi that lives on plant and animal matter. Mould grows best in damp and poorly ventilated areas, and reproduces by making spores.

Airborne mould spores are commonly found in both indoor and outdoor environments. When they land on damp spots indoors, they may begin to grow and spread.

There is no practical way to eliminate all mould indoors; the way to control indoor mould growth is to control the source of moisture.

What does mould look like?

Mould is not always easy to recognize. It often looks like ‘fuzz’ or appears to be a stain, smudge or discoloration. The most common moulds are black, green or white. However, mould can be many other colours ranging from grey to orange to brown.

How does mould affect people?

Mould associated with damp buildings can trigger nasal congestion, sneezing, cough, wheeze, respiratory infections and worsen asthma and allergic conditions [1].

People with weakened immune systems; allergies; severe asthma; chronic, obstructive, or allergic lung diseases are more susceptible to these symptoms and other serious health effects.

People that are more susceptible should seek medical advice if they are concerned about mould.

Controlling mould growth

Generally, if you can see or smell mould, you need to clean up and remove the mould immediately because mould can damage what it grows on. The longer it grows the more damage it can cause.

Mould only grows when there is sufficient moisture. When mould appears the first task is to try to establish where the moisture is coming from.

Parts of the house that get wet or have poor ventilation are prone to mould growth, such as:

- kitchens, bathrooms and laundries because of condensation or high humidity and leaking pipes
- cupboards and corners because of restricted ventilation
- walls or windows that are exposed to hot indoor air and cold outdoor air
- walls and ceilings due to insufficient insulation or rain seeping through the roof.

Avoid conditions encouraging mould growth, by using heat, insulation and ventilation.

The cheapest and easiest way of reducing moisture and humidity levels is by ventilating a room by opening a door or window. Use exhaust fans where available.

Rising damp issues

Rising damp is ground moisture rising up a brick or stone wall.

Poor sub floor ventilation or moisture in the sub floor area will worsen the problem.

Rising damp can be fixed by installing a new damp-course or waterproof barrier in the wall.

Ensure the weep holes and air vents at the base of your home are uncovered.

An experienced building consultant can recommend ways to fix the problem.

Actions you can take

- If mould is a problem in your home, you need to eliminate sources of moisture and clean up the mould.
- Wash mould off hard surfaces and dry completely. Absorbent materials, such as carpet may need to be replaced if they are contaminated with mould.
- Fix leaky plumbing and other building faults.
- Use exhaust fans or open windows in the bathroom and kitchen when showering, cooking or using the dishwasher.
- Vent clothes dryers to the outside.
- Avoid conditions that encourage mould growth by using heat insulation and ventilation.
- Vacuum cleaning using a HEPA filter[1].

Small areas of mould can be cleaned using a damp wipe with detergent solution, vinegar solution or alcohol solution (one part vinegar or alcohol to three parts water). Commercially available mould treatments can bleach the mould white, but may not remove the mould.

Wear safety glasses and long rubber gloves and take care not to splash the cleaning solution. Ensure the area is well ventilated. If you are sensitive to mould you should consider wearing a 'P1' or 'P2' respirator during clean up. They are available at most hardware stores.

Don't dry brush the mouldy area as the brush can flick mould spores into the air, which may cause health problems.

If the mould affected room is to be painted, you will need to clean the area (see above) and allow it to dry thoroughly before painting. Use low sheen, semi gloss or gloss enamel rather than flat acrylic paint. Mould resistant paint and additives are available from paint stores.

Prevent the mould from returning by reducing moisture. Fungi need moisture to grow!

[1] A HEPA (high efficiency particulate air) filter is a type of filter that can trap a large amount of very small particles that other vacuum cleaners would simply recirculate back into the air of your home.

I live in a rental property which has mould. Where can I go for help?

The owner should remedy mould caused by faults in gutters or other fixtures, but the tenant must ensure there is adequate ventilation throughout, to help avoid mould problems during winter.

Note that the cause of the mould growth may be due to a building fault that may not be easily rectified.

If you have taken measures to ensure the building is properly ventilated and mould is still growing, you should raise the issue with the owner. Tenants seeking further advice on their rights as a tenant may wish to contact the Tenants Union of Victoria on 9416 2577.

Should I test my home for mould?

It is generally not considered necessary to test for mould in the home, as it can be visually identified.

However, not all mould is visible as contamination may be in cavities or the ceiling.

If you suspect mould contamination but cannot find the source of the problem, or if you have already taken measures to prevent mould from growing and you are still having problems, you could employ an occupational hygienist or environmental health and safety professional. For a fee, these professionals can provide specialist mould testing and consultancy services.

Special advice for mould growth after flooding

Flooding, excess moisture and pooled water can contribute to the growth of mould in your home, which may be a health risk for you and your family.

When returning to your home, be aware of any visible mould or a musty smell. High mould levels are likely if the house has been flooded for more than two days.

The key to preventing mould growth is to clean up and dry out the house as quickly as possible (within 24 to 48 hours).

Before you plan your cleanup, remember that not everyone is suited to working in damp, potentially mouldy conditions.

Check that family members and volunteers who offer assistance are not sensitive to mould.

The following people should avoid being present during post-flood cleaning or repair works:

- children (under 12 years, particularly infants)
- pregnant women
- people over 65 years
- those with weakened immune systems; allergies; severe asthma; chronic, obstructive, or allergic lung diseases.

You do not need to test for mould. It is better to assume that the building's interior is contaminated with mould when:

- it has been flooded for more than two days
- visible mould growth is extensive (more than before the flood)
- visible water damage is present or musty odours are strong.

The more extensive the contamination, the greater the personal risk of exposure during the clean up process, so consider using professional cleaners that can remove the mould if the area to clean is large.

Before cleaning or disposing of water or mould-damaged items, always seek expert advice from your insurance company.

What should I wear to protect myself from mould in a flooded home?

Just visiting:

If you are visiting your house to collect belongings, visually inspect for damage or to do basic clean-up over short periods:

- wear sturdy footwear, and rubber or leather gloves
- it is preferable that footwear is waterproof and has rubber soles
- it is not usually necessary to wear a respirator unless you are sensitive to mould.

Cleaning up mould:

If you plan to be inside the house for a while, or you intend to clean up mouldy areas, also wear a shower cap, goggles and a particulate respirator to prevent breathing in mould spores.

'P1' or 'P2' respirators are suitable for filtering out airborne mould spores. They are available at most hardware stores.

Before deciding to wear a particulate respirator, consider the following:

- they can be hot and uncomfortable to wear
- if the seal around the face and mouth is poor (for example people with beards may not get a good seal), the respirator is much less effective
- the respirator does not filter out gases such as carbon monoxide
- they can make it harder for you to breathe normally, so anyone with a pre-existing heart or lung condition should seek medical advice before using them.

If you are asthmatic and intend to do the clean up work, keep your asthma medication with you at all times. If you show any signs of an asthma attack, seek immediate medical treatment.

Steps to minimise mould after a flood

Mould removal efforts should focus on:

1. removing all sources of pooled water or excessive moisture from the home
2. removing all wet or flood damaged materials or items, including wallpaper, plasterboard, carpet, rugs, bedding, mattresses, furniture, stuffed toys, clothing, and other wet or damaged materials that cannot be adequately dried or cleaned
3. removing all porous (that is. soft or absorbent) materials with mould growth
4. temporarily storing damaged or discarded items outside the home (in a safe, clean, dry place such as a shed or garage) until your insurance claim is processed
5. cleaning and disinfecting all affected surfaces inside the house (see next page), including floors, walls, the kitchen, bathroom and laundry
6. allowing the house to dry throughout by airing or active drying (for example fans or dehumidifiers).

Drying out the house after a flood

When returning to your home after a flood, open doors and windows to let the house air out for as long as possible.

Once reliable, safe power is restored use fans and dehumidifiers to dry out the house.

Air conditioning or central heating should not be used unless they are undamaged and uncontaminated by the floodwaters. If you suspect contamination with mould or floodwaters, do not use until these systems have been cleaned and checked by a qualified person.

Removing small areas of mould after a flood

Step 1 - Clean

In many cases household cleaning products can do the job if used correctly. Check the product's label to see how much to use, which surfaces they can be used on, as well as cautionary advice about mixing with other chemicals.

Tackle one room at a time. A two-bucket approach is most efficient: use one bucket for rinse water and the other for the cleaner. Rinse out your sponge, mop, or cleaning cloth in the rinse bucket. Wring it as dry as possible and keep it rolled up tight as you put it in the cleaner bucket. Using two buckets keeps most of the dirty rinse water out of your cleaning solution. Replace the rinse water frequently.

Apply cleaner and give it time to work before you mop or sponge it up. After cleaning a room or item, go over it again with a disinfectant to kill the germs and remove the smell left by floodwaters.

If the cleaner you are using does not remove the mould, try a solution of:

- 1.5 cups of household chlorine bleach in 10 Litres of water (the volume of a household bucket).

Never mix bleach with ammonia, ammonia containing, or any other cleaning product or detergent.

Do not use a bleach-based solution on aluminium, stainless steel surfaces or linoleum. Use a household detergent.

Step 2 - Disinfect

Disinfect surfaces with a disinfectant product. Alternatively, use:

- 0.5 cups of household chlorine bleach in 10 Litres of water (the volume of a household bucket).

Further information

- If you or anyone in your family feels unwell, seek medical advice from your local doctor.
- For further information and advice, contact the Environmental Health section of your local council.

Additional resources

Australian

- EMA 2005, *What to do before during and after a flood*, Emergency Management Australia, Attorney-General's Department, Australian Government. (http://www.ema.gov.au/)
- Housing NSW 2007, *Treating mould in your home*, Department of Housing, Government of New South Wales.

  (http://www.housing.nsw.gov.au/)
- SA Health 2008, *Household mould: prevention and management*, Department of Health, Government of South Australia. (http://www.health.sa.gov.au/PEHS/topics/public-health-factsheets.htm)
- WA Department of Health 2009, *Mould. The homeowners guide to fighting mould*, Department of Health, Government of Western Australia. (www.public.health.wa.gov.au)

International

- CDC 2010, *Facts about mold and dampness*, Centers for Disease Control and Prevention, USA Government. (http://www.cdc.gov/mold/dampness_facts.htm)
- CDC 2006, 'Mold prevention strategies and possible health effects in the aftermath of hurricanes and major floods', *Morbidity and Mortality Weekly Report,* vol. 55, no. RR-8,

Centers for Disease Control and Prevention, USA Government. (http://www.cdc.gov/MMWR/PDF/rr/rr5508.pdf)

- NIOSH 2009, *Indoor environmental quality: dampness and mould in buildings*, National Institute for Occupational Safety and Health, USA Government. (http://www.cdc.gov/niosh/topics/indoorenv/mold.html)
- US EPA 2008, *A brief guide to mold, moisture, and your home*, United States Environmental Protection Agency. (http://www.epa.gov/mold/pdfs/moldguide.pdf)
- WHO 2009, *Damp and Mould. Health risks, prevention and remedial actions. Information brochure*, World Health Organisation. (http://www.euro.who.int/document/hoh/damp_mould_brochure.pdf)

References

1. WHO 2009, *WHO guidelines for indoor air quality: dampness and mould*, World Health Organization. (http://www.euro.who.int/document/E92645.pdf)