

MOISTURE AND CONDENSATION



INFORMATION SHEET

HOW TO REDUCE IT AROUND THE HOME

It's a sad fact that many New Zealand homes are cold and damp. These conditions contribute significantly to health problems such as asthma and respiratory illness, which have a disproportionate impact on children and older adults.

Mould thrives in a cold and damp environment. These conditions can exist in a home for a number of reasons:

- poor design and construction;
- inadequate ventilation;
- lack of or not using extractor fans;
- drying washing indoors;
- the use of un-flued gas heaters;
- rising damp from beneath the floor;
- leaks in walls or roofs.

Because many New Zealanders do not adequately heat their homes, we are unwittingly providing the conditions for mould to thrive.

Research indicates that many of our homes are not heated to the World Health Organisation recommended minimums of 18°C for living spaces and 16°C for bedrooms. The higher the temperature the less likely condensation and mould will develop.



Healthy levels of relative humidity within homes can vary between 30% and 65%. At the high end of this range and above, mould and dust mites can thrive.

Addressing the problems of a cold, damp home include the following strategies:

1. minimise or eliminate the sources of moisture;
2. insulate and heat your home adequately;
3. manage the conditions for health and comfort.

MINIMISE OR ELIMINATE SOURCES OF MOISTURE

- Do not air washing indoors. Ensure that clothes driers are vented outside;
- Do not use un-flued gas heaters;
- Use an extractor fan and pot lids while cooking. The best range hoods are larger than the cooking area, are vented outside, and have quiet motors;
- Ensure adequate drainage around the perimeter of your home. Contact a specialist if you suspect water is flowing underneath the structure.
- If your home is on piles and the basement is fully enclosed, install a ground vapour barrier such as heavy-grade polythene to prevent rising damp;
- Limit indoor pot plants and cover fish tanks;
- Check gutters and downpipes for signs of leaks;
- Use an extractor fan while showering and keep showers short. Better yet, install an automatic timer so the fan runs for 10 minutes after you leave, and make sure the bathroom door is closed when you do.



Choose an extractor fan with good air flow volume, and if it struggles to ventilate the space, ensure there is enough inward air flow (either through an open window or a gap under the bathroom door).

INSULATE AND HEAT YOUR HOME

Adequate insulation and tightly fitted, lined curtains will make it easier and more cost effective to heat your home. Please see Information Sheets: **Insulation; Windows; Curtains & Blinds;** and **Insulation: How effective is it?** (North Island and South Island).

Depending on your location, the three most cost effective options for heating a home are a heat pump, a flued mains gas heater or a wood burner. Running one of these in combination with insulation and good curtaining will allow you to heat your home to a healthy temperature at the lowest cost.

MANAGE CONDITIONS FOR HEALTH AND COMFORT

- Keep beds and furniture at least a hand-width from external walls;
- Wipe condensation from windows as soon as you see it;
- Leave wardrobe doors slightly ajar to allow air circulation;
- Regularly check for mould behind curtains and furniture, and in corners;
- Wash the affected areas with warm soapy water, scrubbing hard with an old toothbrush, scrubbing-brush or cloth to get all mould off the surface. Rinse well and dry. Cleaning regularly after this is strongly recommended.
- If there is no extractor fan in the bathroom, open windows when showering or bathing.
- Flush your home with fresh air once or twice each day for 10 to 20 minutes by opening windows and doors. During winter months the best time to do this is around mid-day when outdoor temperatures are highest. It is better to fully flush the home with fresh air than to leave windows ajar all day and night.
- Run a dehumidifier as needed. This is the most effective in a small to medium sized room. Ensure that the windows are closed.



Only consider a positive pressure or dilution ventilation system as a last resort. They are not suitable for all houses and can cause more problems than they solve.

FOR FURTHER INFORMATION

Contact your nearest Eco Design Advisor
Visit our website ecodesignadvisor.org.nz

View helpful resources at:

- smarterhomes.org.nz
- Sustainable building authority Level: level.org.nz
- Energy Efficiency and Conservation Authority: eeca.govt.nz
- Building Research Association of New Zealand: branz.co.nz
- Building and Housing, MBIE: building.govt.nz
- Beacon Pathway: beaconpathway.co.nz