

Condensation

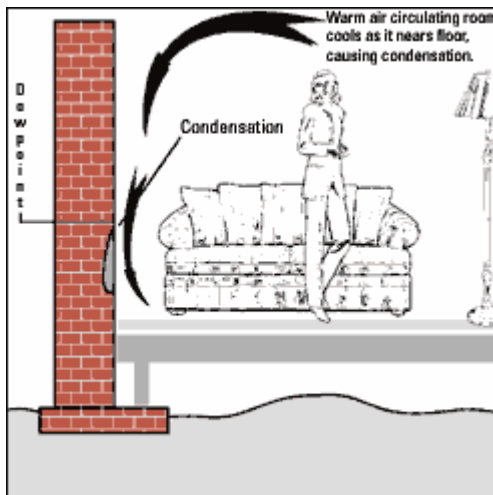
Condensation is by far the most common cause of 'dampness' in buildings, probably accounting for the majority of 'damp' problems reported. It affects both old and new buildings, but it appears to be a significant problem where the building has been modernised.

Condensation is directly associated with mould growth. It is this that the occupier sees first, and it gives an indication of the potential scale of the problem. The mould is usually found on decorative surfaces, especially wallpapers, where it can cause severe and permanent spoiling. In many cases, the mould and its spores ('seeds') give rise to complaints about health, and cause the "musty" odour frequently associated with a damp house.

The obvious places for condensation to occur are on cold walls, windows and floors, but it can also occur in roof spaces and in sub-floor areas where there is a timber suspended floor; in the latter case, it can lead to dry rot or wet rot developing in floor timbers.

The Cause

How Condensation Occurs



It is a fact that warm air can hold more water as vapour than cool air. Condensation is caused when moisture-laden air comes into contact with a cold surface - the air is cooled to the point where it can no longer hold its burden of water vapour. At this point, known as the "dew point," water begins to drop out of the air, and is seen as condensation on surfaces. On impervious surfaces such as glass and gloss paint, beads or a film of water collect. On permeable surfaces such as wallpaper and porous plaster, the condensing water is absorbed into the material. Therefore, the problem is not always initially obvious.

Identification

Condensation is very much a seasonal problem, occurring during the colder months - October to April. During the summer, the problem is seen to go away.

During the winter, ventilation of the house is usually low (due to windows and doors being closed, draught-proofing takes place). This allows build up of water vapour in the house, which, in some cases is sufficient to cause condensation. This condensation becomes apparent from the following symptoms:

- Water droplets form on cold, impervious surfaces such as glass and paint.
- Slightly damp wallpaper (often not noticed).
- Development of moulds, usually black mould.

In some cases, condensation may be long term, but intermittent, forming only at certain times of the day or night. In these cases, the only sign of condensation may be mould growth, as the moisture may have evaporated by the time moisture measurements are taken.

One should also be aware that the problem can occur well away from the site of most water vapour production. E.g. water vapour produced in the kitchen may diffuse through the house into a cold bedroom where it will condense on cold walls.

Control of Condensation

The control of condensation is based on two very simple primary measures, supported by a number of secondary measures.

Primary Measure 1 - Improve Ventilation

This will sweep away the internal moisture-laden air and replace it with drier air from the outside (yes, external air is drier than internal air most of the year!)

Ventilation can be achieved by opening a few windows, careful positioning of air vents and using extractor fans. But please note

Negative ventilation in problem areas will have the reverse affect of creating condensation by a reduction in room temperature.

Primary Measure 2 - Improve Heating

Coupled with ventilation, heating should be set or applied to give a low-level background heat. This will ensure no rapid temperature changes to the environment, and will facilitate slight warming of wall surfaces over a period of time, thus reducing the risk of condensation.

Secondary Measures - In most cases, implementing the primary measures above will effectively control a condensation problem

- Remove excess moisture sources - e.g. paraffin heaters, indoor drying of clothes.
- Insulate cold surfaces.
- Prevent possible water penetration.
- Install a dehumidifier.
- Use an anti-mould paint.

Treatment and how to help yourself

- Treat and remove the mould - there are various products on the market that will help such as fungicidal products available in DIY stores.
- Wipe down windows, frames and other affected areas with a fungicidal (mould-killing wash) that carries a Health and Safety Executive 'approval number'. Make sure you follow the manufacturer's instructions precisely. Dry-clean mildewed clothes and shampoo mouldy carpets.
- After treating mould-affected areas, redecorate using a good-quality fungicidal paint. Where possible remove lining paper and wallpaper, treat the plaster and then paint or paper the area again.
- There is a balance between heating and ventilation and a dehumidifier may help.

Where to find assistance with heating

Age Concern

Age concern produce a number of useful factsheets including 'Help with heating' and can offer telephone advice for older people. You can contact them on Freephone 0800 009 966 between 7am and 7pm.

British Gas

British Gas provide some useful hints and tips on how to reduce your energy bills and help protect the environment.

- Make your home more efficient with their free energy efficiency home audit.
- Review their range of energy efficient products.
- Learn how you can make significant savings on your energy bills.

Carillion Energy Services Limited

This organisation provides grants and advice on how to reduce your fuel bills, keep your home warm and free of damp and reduce carbon dioxide emissions through lower energy use. You can contact them on 0191 676 3000

Energycare Network

A SEEBOARD funded initiative providing grants and discounts for loft and cavity wall insulation. Grants are 100% if you are over 60 and on benefits, 80% if you are over 60 and not on benefits and 50% if you are under 60. Call 0800 389 1945 to find out if you are eligible.

SEEBOARD Energy Efficiency Advice Service

For advice on the efficient use of energy call 0800 581 255 between 8:30am and 4.30pm Monday to Friday.