



# Condensation advice



## What is condensation?

Air contains water in the form of vapour and warm air holds more water vapour than cold air. When warm air comes into contact with a colder surface, it cools down and so can't retain the same amount of water vapour. The excess water vapour is released onto the cold surface as condensation (or water droplets).

Water vapour is produced in many ways; normal daily activities (such as taking showers and baths, washing and drying clothes, cooking and boiling kettles) produce warm air containing a large amount of water vapour. It is also produced when you breathe, as the materials used in the home's construction dry out, when you burn unvented heating appliances such as paraffin stoves and LPG gas heaters etc.

Just by normal breathing, one person produces at least 0.3 litres of moisture in a day and other domestic activities can greatly exceed this amount. Clothes washing and drying constitute a major source of moisture input. Drying a normal wash for a family of five can generate as much as 5 litres of moisture.

## Why are some homes affected by condensation while others are not?

Modern homes are built so that they don't waste energy - better insulation, draught proofing on doors and sealed window units minimise draughts and stop heat escaping from your home. But this also reduces water vapour escaping, which can increase the risk of condensation. If the warm air can't escape through an open window or air vent, it moves around until it finds a cold surface where it cools and forms condensation. Failure to use ventilation properly (for example, keeping windows or trickle vents closed or not using extractor fans) makes this situation worse.

Homes that are heated intermittently are more likely to suffer with condensation problems than homes that are heated continuously. This is because continuous heating keeps the surfaces of the rooms warm which reduces the risk of condensation forming on them.

The way that a house is occupied and the practices of people living in it will affect the potential for condensation to occur. For example, clothes drying indoors or allowing bathroom or kitchen steam to circulate throughout the house.

## Where does condensation occur in the home and what does it look like?

Condensation is most likely to appear on windows, colder parts of walls, around external door and window openings, and where ceilings and floors meet with outer walls. It can also appear in areas where air circulation is restricted, such as inside

cupboards and behind furniture that is placed against an outside wall.

If condensation keeps on occurring in the same place, it can sometimes cause black fungal mould growth. The spores of fungi are ever-present in the air in most buildings and so are nutrients; thus, the factor controlling growth is this supply of moisture.

Fungi are usually dark in colour, often green or black, and both disfigure and cause deterioration of furnishings, fabrics, wallpapers and many decorative coatings. They can form on stored clothing and bed-linen, particularly when these are in unheated, unventilated built-in cupboards on external walls.



## How can I reduce condensation?

Controlling water vapour levels to reduce it to a level so that it doesn't cause problems is the key. The following advice should help you to achieve this.

### Produce less moisture

- Put lids on saucepans while you are cooking to reduce steam.
- Avoid drying laundry on a clothes airer or radiator. If you need to dry clothes indoors, open the window and close the door of the room where the clothes are drying so that moisture can escape outside rather than circulate around your home.
- If you use a vented tumble drier, make sure it is properly vented to an open window or through an outside wall.

### Stop moisture spreading through your home

- While cooking, bathing or washing, use an extractor fan and/or open a window and keep the door closed. Keep the extractor fan on and/or the window open for about 20 minutes after you have finished (with the door closed).
- When condensation appears on surfaces, wipe it away.

## Ventilate moisture away

- Leave trickle vents (slotted vents in the window frames) open when rooms are occupied – even in the winter when your heating is on. These vents provide constant ventilation which removes water vapour.
- If you can, put free-standing wardrobes and other furniture against internal walls, leaving a gap between the wall and the furniture so that air can circulate around the room.
- Try not to overfill cupboards, wardrobes and drawers so that air can circulate around the contents.
- Mechanical extraction should be used to remove moisture from high emission areas, such as kitchens, bathrooms and drying cupboards.

## Provide even heating

- Keep your home warm to avoid cold surfaces, and remember that it can take a long time for a building to warm up.
- If your home is unoccupied during the day, make sure the heating timer is set so that your home is warm by the time you return home. During very cold weather it is better to leave the heating on during the day to maintain an even temperature.
- The temperature can be set a few degrees lower while you are out and turned up when you return.
- If you don't usually use all of the rooms in your home, you should still keep them heated to avoid cold areas. It is better to keep all rooms heated to a low temperature than to have some rooms heated to a high temperature while others have the heating turned off.

## How do I treat mould arising from condensation?

Take the following steps to treat mould:

- If you notice mould growing in your home, you should treat it straight away to stop it from spreading and causing more damage.
- Sterilise the affected area with a suitable fungicidal wash (available from most DIY stores), following the manufacturer's instructions. Keep checking the affected area for at least a week. If the mould reappears, wash it down again with the fungicidal wash to make sure the area is thoroughly sterilised.
- If the treatment appears to have been successful, you can carry out any necessary redecoration. If painting, use a good quality fungicidal paint to help prevent mould, but remember that this will not be effective if it is later covered by ordinary paint or wallpaper. If wallpapering, use a paste containing a fungicide to prevent further mould growth.
- If mould or mildew is growing on clothing or carpets, you should dry clean them.
- Don't disturb mould by brushing or vacuum cleaning, as you can increase the risk of respiratory problems.
- To prevent mould returning, make sure that you control condensation in your home.