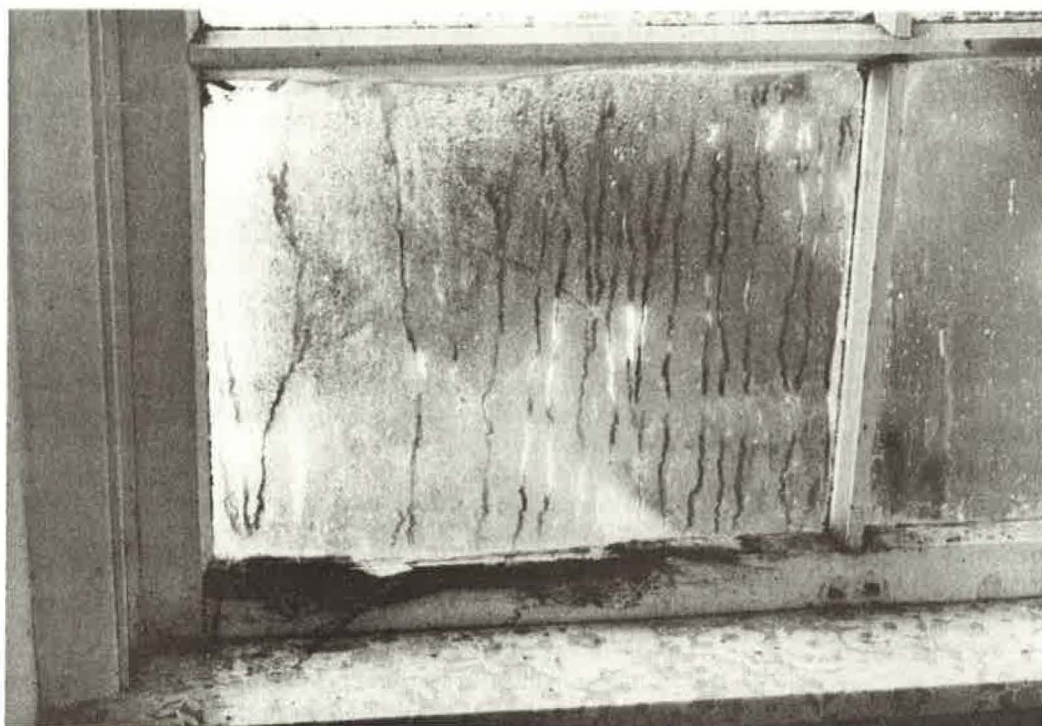


Preventing Dampness in Houses - 2. Condensation and Mildew



**Rotting window
joinery resulting
from condensation**

This Bulletin on preventing dampness in houses covers some aspects that builders and subtrades may occasionally be required to deal with. It is, however, also intended for general guidance to householders.

WHEN DO CONDENSATION AND MILDEW OCCUR?

Condensation and mildew are mainly winter problems. A BRANZ survey showed that mildew occurs in 46 per cent of homes. One home in five has repeated or prolonged attacks and, in one home in seven, condensation leads to damp wall linings.

Condensation is widespread but is generally heavier in colder climates. It occurs on walls, ceilings and windows, and on any cold surfaces such as doors, mirrors etc. Condensation can leave water stains and, if persistent, can promote mildew growth and help rot set in.

Mildew occurs commonly in any type of building both in mild and severe climates. It occurs on wallpaper, curtains, and ceiling linings, also on shoes, clothes and other items in cupboards.

WHAT CAUSES CONDENSATION?

All air contains water vapour but can hold only a limited

amount without becoming saturated. The higher the air temperature, the more it can hold. If there is too much moisture in the air for the temperature to cope with it some will condense on cold surfaces.

WHAT CAUSES MILDEW?

Mildew is a primitive form of fungal growth which grows from spores that abound everywhere. It will grow in any home where humidity remains high, but will have difficulty surviving in one with low humidity. If there is no moisture available, mildew cannot grow.

HOW CAN HUMIDITY BE KEPT DOWN?

There are two ways to reduce humidity — by heating and ventilation. Heating will raise the temperature and allow the air to hold more moisture. Ventilation takes away the moisture to the outside. Constant ventilation is the most basic requirement and if there is not enough, the moisture cannot be removed from the air. However, too much ventilation is not the answer because it prevents the house from getting warm.

Insulation helps to keep surfaces warm and so lowers the risk of condensation on these surfaces. Heating and insulation help lessen the chances of persistent condensation

and mildew but will not prevent them unless there is also enough ventilation.

HOW AND WHEN TO VENTILATE

Ventilating a little (that is, having many windows slightly open) and all the time is preferable. If windows continue to steam up, then open them wider.

Short bursts of vigorous ventilation help to flush out large quantities of moist air released from cooking, clothes-drying, showers etc. Most people close doors when taking a shower or bath, and this helps prevent steam spreading to other rooms. Afterwards, opening windows while keeping the door shut allows the steam to escape to the outside. This can also be done in kitchens and laundries, when large amounts of steam are being produced. An extract fan over a stove or shower will help get rid of moisture provided that it discharges right outside and never into the roof space, underfloor space, wall cavity or other enclosed area such as a conservatory. Clothes driers can be vented so that the moisture is removed directly to the outside.

HOW TO CONTROL CONDENSATION AND PREVENT MILDEW

- Make sure that there is some ventilation in all rooms at all times. Many windows slightly open are better than one window fully open.
- Keep the house warm, not too hot, and try to keep the indoor temperature in winter constantly 5°C warmer than outside. A little heating kept on continuously does more good than a lot of heating during evening only. It is the combination of simultaneous heating and ventilating that works. For example, demisting the windows in a motor vehicle is done by venting and heating.
- Avoid large amounts of steam spreading through the house from such things as pots and pans boiling longer or harder than needed, clothes drying indoors and showers or baths. Open windows wider and close doors to other rooms if the production of large amounts of steam cannot be avoided. Vent clothes driers direct to the outside.
- Use windows as a guide and if too much moisture starts collecting, open them a little wider.
- Wipe the moisture off glass when condensation has occurred and then take the wet cloth away to dry out.

- Provide permanent ventilation to wardrobes by such means as louvre doors, ventilators or leaving doors ajar. Cupboard heaters can also help in wardrobes where mildew is particularly likely to occur. Damp lumpy salt or sugar can be a sign that the air in the house is too damp.
- Insulate ceilings of existing homes and ensure that new homes are insulated as required by the building code.

HOW TO DEAL WITH MILDEW ATTACK

If mildew grows on wallpaper, clean it down with a damp cloth and household bleach solution (1 part bleach and 4 parts water). Try a small area to make sure that the bleach does not take the colour out of the wallpaper. If the colour is affected, try a fungicide solution available from a paint shop.

If stains cannot be removed in this way and repapering the wall is desirable, strip the old paper first. This is best done as follows:

Apply 2 or 3 coats of warm water to the wallpaper by brush or roller at 5 to 10 minute intervals. Then remove the old paper immediately — it will usually come off quite easily. Some methylated spirits in hot water will help in removal of difficult patches.

Next, paint the wall with a fungicide solution. Then when it is properly dry, rehang wallpaper using a paste containing a fungicide.

Gloss-painted surfaces can be wiped down with bleach (1:4). Matt-painted surfaces can be wiped with an appropriate fungicide solution to avoid taking out the colour.

Never paint directly over mildew.

Slight mildew on curtains or clothing can usually be washed out. However, if this is not done in time, permanent stains may result.

When repairs have been completed, make sure mildew does not recur by keeping the house moderately ventilated and warm throughout. Avoid producing large amounts of moisture. If this cannot be avoided, take the precautions suggested to remove it to the outside.