



# Ventilation . . . Why?

- ▶ prevents excessive moisture
- ▶ provides fresh air and oxygen for you, your pets, your plants, and your gas appliances



# Excessive moisture: how do we get it?

Many people have too much moisture in their homes. Most of them think this moisture enters the house from outside - caused by „rising damp” or „sweating walls”, they say.

Yet in reality ... it is proven that most damp comes from inside. Most damp is so-called „living damp”.

People, pets and plants, cooking, hanging out the laundry, dish-washing, watering pots on the heater, the aquarium ... all together may produce as much as 10 to 15 litres of water in the form of steam or damp inside the house.

The remaining question is, how do we get rid of it? This pamphlet will tell you.



# How can you tell there is too much damp in your house?

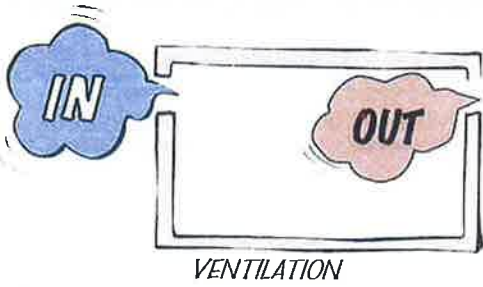
Of course it will be too late when you notice that your walls are damp and the wallpaper is becoming black with moisture. You can sense too much damp in the house much earlier than that.

When it feels „stuffy” inside your house, for example, there is too much damp at a high - often too high - temperature. Steamed up windows are also an indication of too much damp in your house. Single glazing gets steamed up much quicker than double glazing.

But a good hygrometer will show you best. This device indicates the level of humidity in your house. As a rule of thumb the relative humidity should be somewhere between 40 and 70% at room temperature. Since this is influenced by the temperature outside, the ideal relative humidity for several outside temperatures is shown on the back page.



# Most problems related with moisture are solved by...ventilation!



Many people have hunted their houses for cracks and holes in the past few years. It is a good thing to keep the draught out and the heat in, but ... no cracks in the house also means no natural ventilation.

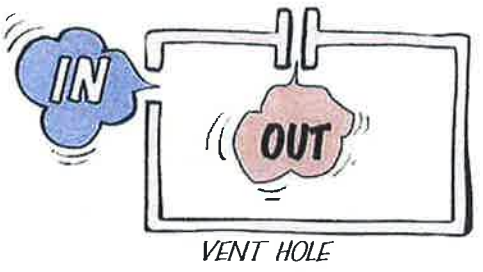
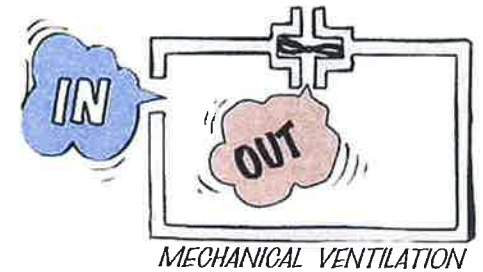
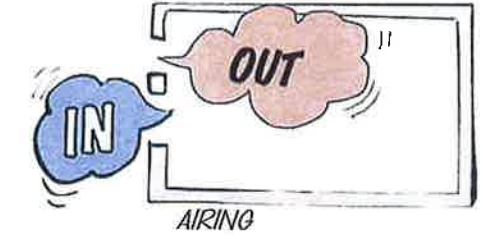
For a healthy environment inside your home you must ventilate it daily yourself. Especially, of course, if much damp or steam is produced, such as when cooking or hanging out the laundry inside.

Ventilate by opening two small, opposite windows. Opening a window on one side only is called „airing”, which takes longer. If you have no serious problems with moisture, ventilating once a day for 20 minutes should be sufficient. You could do this before going to bed in the evening, or in the morning while doing the housekeeping.

While ventilating, turn the heater down or the thermostat to 15°C (60°F).

Turn on the mechanical ventilation in the kitchen preferably 15 minutes before you start cooking - in the highest position.

Never install a ventilator yourself. The result could be more air going out than coming in. And if gas appliances do not get sufficient oxygen, there is a chance that the poisonous carbon monoxide will be formed!



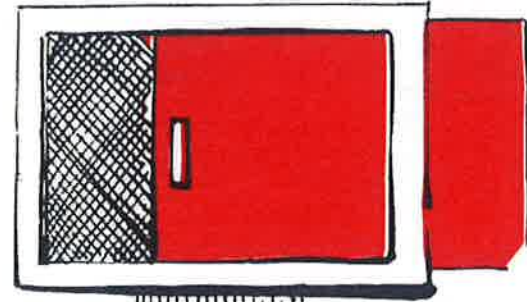
# What to do about excessive moisture?



Excessive moisture may lead to black mould on the walls, and you will always have steamed up windows, even with double glazing. In that case you will need to ventilate the house all day.

You can do this by having two small windows open (an inch thick) or opening ventilation slides. If you have mechanical ventilation, don't turn it off but let it function the whole day. Still open a small window (an inch thick) or a ventilation slide. Of course, do not turn the heat down in this case.

Every now and then, check whether the mechanical ventilation is still working. When holding a slip of paper in front of the opening, it should be sucked „in”. A hood above the cooker needs regular cleaning of its filter.



VENTILATION SLIDE

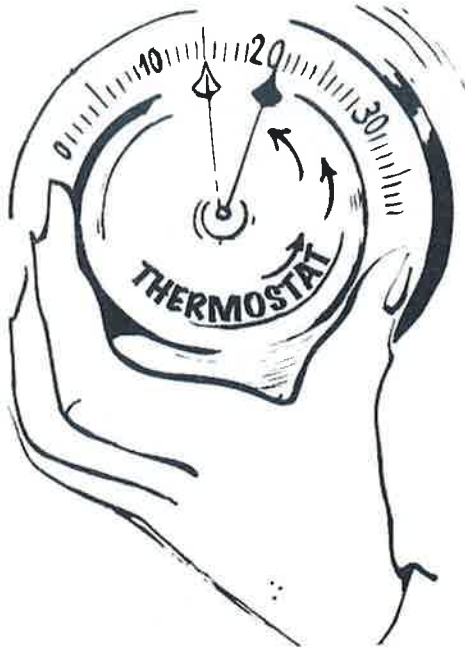


# Turning down the thermostat at night, but no ventilation: what will happen?

Cold air can hold less steam than hot air. If we turn down the heat at night the resulting lower temperature may cause the steam in the air to „settle” on a cold spot in your house.

Prevent this by ventilating the house before going to bed at night. First turn down the heat or the thermostat to 15°C (60°F) and then ventilate for 15 minutes by putting a window or door wide open.

It is advisable to have a window open just a little in your bedroom during the night. This airs the room and gives you fresh air as well.



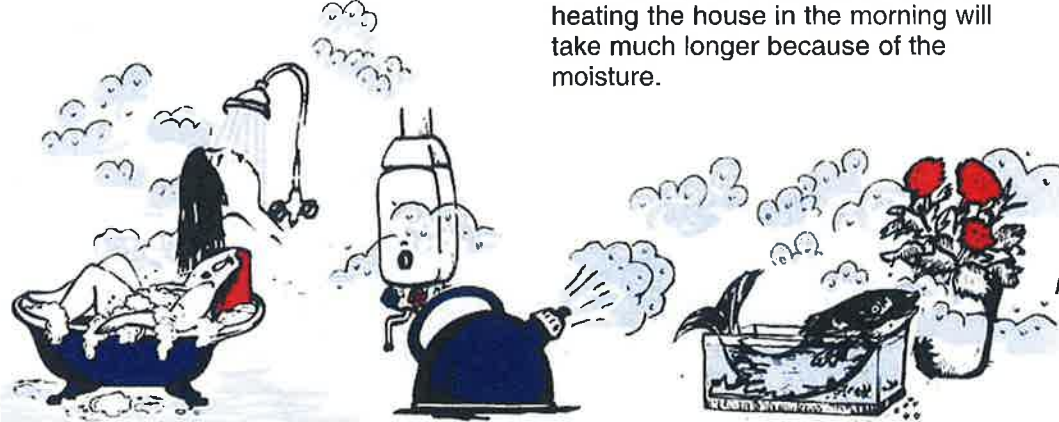
# Ventilation and saving energy

Many people have had their houses insulated and cracks and holes filled up. This saves energy. Which is a good thing, of course. But it is wrong to think that not ventilating the house results in saving even more heating costs.

By not ventilating or not ventilating well your house will become damp, especially because the „living damp” cannot leave the house. Besides ... heating a little fresh air every day really is cheaper than trying to heat a damp house until it is nice and warm inside.

A damp house feels cold and chilly. The air becomes stuffy because the „living damp”, all sorts of smells and harmful substances - such as tobacco smoke - remain in the house. During the day you heat the house until it is dry, but everything is taken up in the warm air and settles on the walls and your furniture in the form of moisture at night.

And if you do not ventilate well, heating the house in the morning will take much longer because of the moisture.



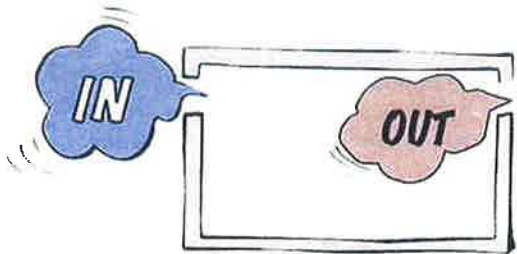
# If you ventilate well and the house remains damp ...

- ▶ The temperature in your house is too low, 13-15°C (55-60°F) for example, so that the damp cannot evaporate completely and you cannot get it out of the house by ventilating it.
- ▶ The vent holes in your house are stopped up (some birds think these are ideal spots to build their nests).
- ▶ Too much steam is produced in the house, so that even if you ventilate it well you do not get rid of it. You will have to try to limit the production of steam in the house; for example, by hanging out your laundry outside or spin-drying it longer, removing watering-pots from the heater and by ventilating while taking a shower and preparing meals.



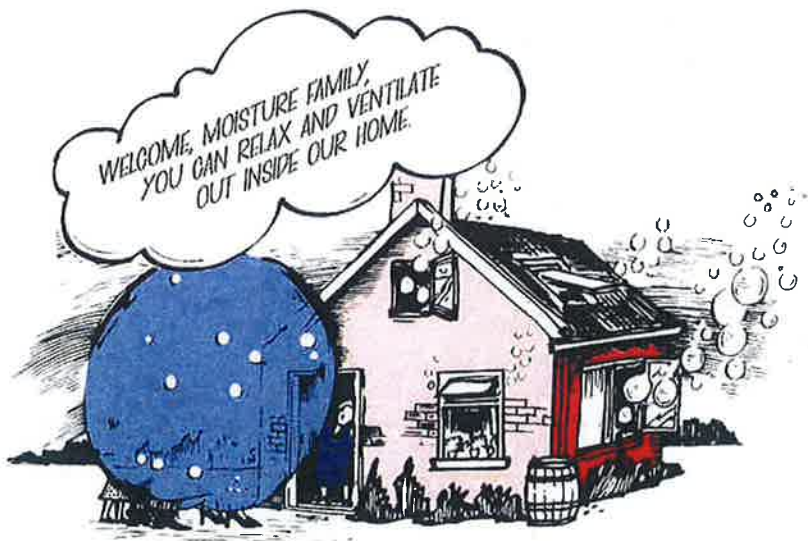
# Ventilation is: moist air out and fresh air in

Excessive moisture can be prevented by ventilating the house well every day. Use small windows and ventilation slides consciously. Vent holes in the attic, the bathroom and in the kitchen must certainly remain open. Sufficient fresh air should enter the house and moist air (with living damp) and smells should be able to leave the house.



VENTILATION

You, your pets, your plants, and your gas appliances all need the oxygen in this fresh air ... every day!



# A few practical tips

1. Even if the house is not used during the day (because no one is there), make sure it will not become too cold inside. Heating the house too sparingly may lead to excessive moisture. Leave the temperature in the house to about 15-16°C (60°F) at night as well.
2. While cooking - and at least for 15 minutes after that - ventilate the house to get rid of the steam produced. If you have a cooker hood, turn it on at maximal power during the cooking process and leave it on for at least 15 minutes after cooking at the lowest power level. Mechanical ventilation functions best when switched on 15 minutes at maximal power before cooking.
3. Though taking a shower uses less energy, it produces a lot more steam. Ventilate while taking a shower and for 30 minutes after that. Even if it is very cold, open the window a finger thick. And if you remove the water on the walls and on the floor with a wiper, the result will be 1 to 2 litres less moisture in the house.
4. It is advisable to position the furniture free from the exterior walls. A few centimetres will do to keep enough air circulation to prevent steam from settling. Sometimes placing a small fan can circulate the air in these spots (using „green current“ for example).
5. It goes without saying that when there are more people in a room, a window needs to be open. The

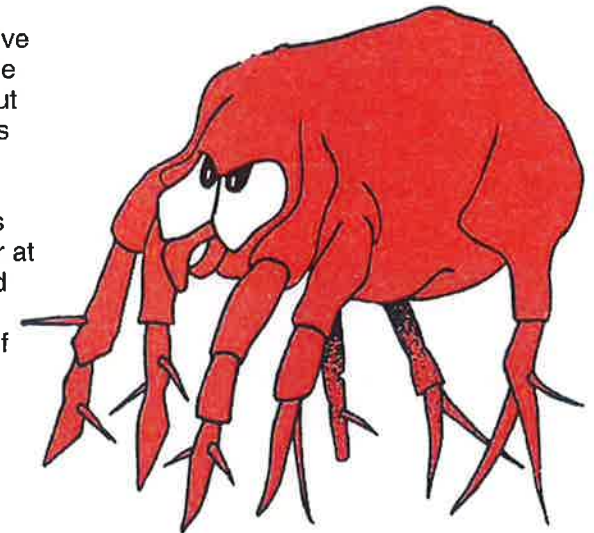
more people, the more fresh air is needed.

6. A crawl space underneath a house on the ground can be very damp. Sometimes they even need drainage. Be sure that the floor in your house is intact everywhere - in the meter cupboard, around a hatch, around pipes going through the floor .... Don't allow moisture to „work itself up“.
7. It is proven that people living in a damp house suffer from bronchitis and allergies more often than others. One of the reasons could be the increasing chance of having the glycyphagus (a tiny bug invisible to the eye) and fungi in the house. The excrements of the glycyphagus and fungi sporules can cause all kinds of allergic reactions: earache, nausea, asthma, eczema, coughing .... Glycyphagus and fungi have much less chance to develop in dry houses.



8. The best way to stop the spreading of the glycyphagus in your house is and will always be: - MOISTURE CONTROL -. These little vermin seem to like damp environments best. As they prefer rough and irregular floors, such as carpets, smooth floor coverings is best for bedrooms. Circulating the microscopic dust particles, with flakes of skin and the glycyphagus for example, can be limited further by vacuuming regularly, using a vacuum cleaner with an extra filter. These measures are very helpful to people with asthma or bronchitis (an estimated 10% of the population). So, ventilating the house well to prevent excessive moisture is certainly worth the effort.
9. A great deal of moisture is produced by hanging out the laundry to dry indoors. If you suffer from excessive moisture, consider buying a tumble drier, which drains off the water out of the house directly or condenses it.
10. Make sure that each room with gas appliances gets sufficient fresh air at all times. Much oxygen is required for the combustion. Incomplete combustion can lead to all sorts of dangerous situations.

● A glycyphagus, magnified 250 times.

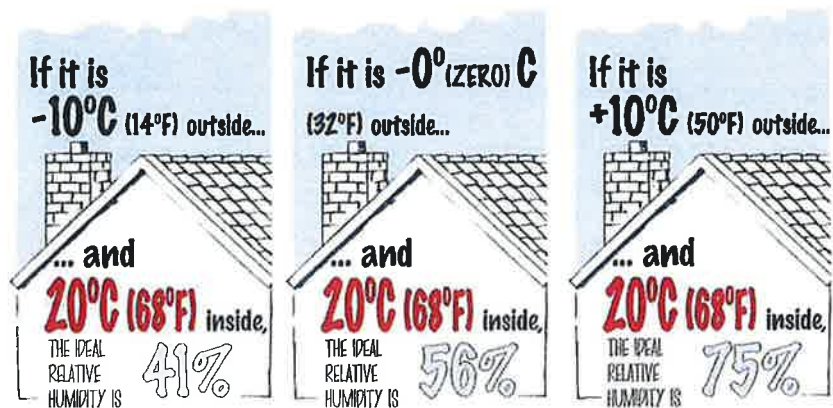


*We have tried to give you some helpful tips for the benefit of yourself, your housemates and inmates, your belongings, your plants, your pets, and your gas appliances. A house which is not damp is more comfortable, and heating a dry house costs less energy than heating a damp house. Ventilating your house well contributes a great deal in this respect.*

*If in spite of all this you still have a damp house, please call in an expert - an architect, a building consultant, your housing corporation, your gas company - for something may be wrong with your house.*

Since we produce moisture in the house every day, we must try to get rid of it again. Ventilating the house well is a good way to do this. As warm air can hold more steam than cold air, it is advisable to let the temperature in the house not drop too much. If it gets too cold „the steam will settle“. As you see below, the „ideal“ relative humidity in the summer and in the winter may be different. In the winter the maximum is 41%, in the summer the maximum is 75%.

„Ventilation ... Why?“ is a new, revised edition of an information booklet in which special attention is given to preventing excessive moisture and to providing a liveable environment inside the house.



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