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## How To Stop Condensation In Your Home

### How to stop condensation forming on windows

When moisture accumulates on windows and furniture due to condensation, it can lead to damage and even mold growth, which can be harmful to one's health. To prevent this, it's crucial to identify the underlying cause of the excess moisture in your home.

To help you address this issue, we will provide you with the following information:

1. The factors that contribute to condensation formation
2. The potential health risks associated with condensation
3. Effective ways to prevent condensation from occurring

We will also provide answers to some frequently asked questions on this topic.

### What is the cause of condensation on windows?

When the air contains excessive moisture, it can condense on colder surfaces such as windows, creating what we know as condensation. This occurs more frequently when it's colder outside than inside, and is caused by tiny water droplets in the air colliding and becoming concentrated due to higher humidity levels.

For instance, consider a cold drink in a glass on a hot day. The moisture in the surrounding warm air collides with the cold glass, causing the glass to form beads of water like dew.

This dew point is reached when the water molecules in the air come together due to lower temperatures, causing them to merge into visible liquid on surfaces. This is the point where condensation occurs, as seen on:

1. The mirror in a warm bathroom
2. Kitchen windows when cooking, or
3. Windows when drying clothes indoors.

Condensation can form on any cold surface, particularly in areas where moisture can become trapped, such as windows with curtains or blinds, behind large furniture against a cold wall, even inside a fitted wardrobe on an external wall for example.

## **How can condensation damage windows?**

Water that remains stagnant on any surface, including waterproof ones, can lead to damage over time. Limescale buildup and mould growth are two common problems that can arise from standing water.

Although uPVC windows are generally resistant to water damage, prolonged exposure of seals to water and direct sunlight can cause them to expand and contract, leading to cracks and cause them to perish. Wooden frames are particularly vulnerable to water damage, which can cause paint and varnish to peel and the wood trim to dry and crack.

The most significant issue associated with standing water and moisture is the growth of mould. If mould is not addressed, it can lead to discolouration and damage to both uPVC and wood.

Even more concerning, mould can have severe health consequences on us and our pets.

### **Condensation and black mould.**

Condensation can be a serious problem because it can lead to the growth of black mould, which can have serious health consequences.

Black mould patches around windows, doors, and on walls not only looks unsightly, but can also cause significant health issues, the symptoms can include:

1. Wheezing
2. Stuffy or runny nose
3. Red or itchy eyes
4. Skin rashes and itching

The World Health Organization also reports that mould can contribute to:

1. Asthma
2. Allergic rhinitis
3. Chronic rhinosinusitis
4. Hypersensitivity pneumonitis
5. Allergic fungal sinusitis
6. Allergic alveolitis

Moreover, there is some inconclusive evidence suggesting that acute idiopathic pulmonary hemorrhage can lead to memory loss and potentially contribute to lethargy in infants.

It's essential to take mould growth seriously and address it promptly. Any visible mould should be carefully cleaned and removed, followed by preventive measures to tackle the root cause of the condensation problem.

## **How can you stop condensation forming on windows?**

The primary cause of condensation is inadequate ventilation, which can be remedied by improving airflow to balance indoor and outdoor humidity levels.

In the past, homes were constructed with poorly fitted windows, doors, chimneys, and air vents, allowing air to circulate naturally. However, with the emphasis on energy efficiency in recent years, many homes have become tightly sealed, trapping moisture inside.

While we've become more efficient at retaining heat, we've also lost the natural ventilation that used to occur in our homes. To eliminate condensation on windows once and for all, it's important to take the following steps:

1. Enhance ventilation
2. Decrease moisture
3. Install double or triple-glazed windows

## **How to increase ventilation in order to reduce condensation.**

There are several choices available to enhance the ventilation in your home. Consider the following:

### Airflow systems

Modern apartments are increasingly constructed with internal airflow systems that use a series of ceiling ducts to extract and circulate air from the outside. This maintains a proper balance of humidity and air circulation inside the well-sealed property.

Retrofitting a ventilation system in an older home can be costly and invasive, if at all possible.

### PIV unit

Positive Input Ventilation (PIV) units offer a potentially easier to install solution and can be fitted in areas that produce excessive moisture such as kitchens and damp basements.

They extract the humid air from inside the house and draw in dry air from the outside. This exchange of air helps to maintain the humidity balance. Some models come with heating elements to warm the air coming in during colder months.

### Extractor fans

It's important to have effective ventilation in bathrooms to minimize the buildup of excess moisture caused by showers. Certain types of bathroom fans come equipped with humidity control features, which allow them to turn on automatically when the humidity level rises above a specified threshold.

Likewise, kitchens require reliable extraction systems to eliminate smoke, odors, and

steam generated during cooking.

### Air vents and bricks

Air bricks are commonly obstructed to prevent unwanted draughts, but they do serve a purpose in providing ventilation to an area. Although a basic vent can help regulate humidity levels in a room, it can also compromise energy efficiency by allowing heat to escape. As a result, air bricks have become less popular these days.

On the other hand, air vents installed in windows can effectively promote ventilation and minimize condensation buildup on the glass. Also known as trickle vents, they can be retro fitted to most types of windows and are a convenient solution for improving air flow

### Opening the windows

In the past, it was common for people, like your grandmother, to open doors and windows each morning to "air out" their homes. Fresh air circulation is one of the most effective ways to ventilate a space, eliminate stagnant air and odours, and reduce indoor moisture levels.

When homes were heated primarily with fossil fuels, traditional windows played a critical role in promoting adequate ventilation. Sash windows, in particular, were designed to open at both the top and bottom to facilitate air movement and circulation.

Bay windows were also engineered to enhance ventilation by featuring two casement windows on each side to draw air in and out of the room.

Transom windows located above doors were another design element used to improve airflow and facilitate heat transfer throughout a home.

Today, modern windows are typically equipped with multi-point lock settings that allow for secure ventilation without compromising home security. This simple and convenient approach is an excellent way to keep your home ventilated and prevent condensation.

### Dehumidifiers

See dehumidifier section below.

### **Reduce condensation by reducing moisture**

To effectively reduce condensation it's important to both increase ventilation and reduce moisture in the property. The average household creates a surprising amount of moisture from daily activities.

Cooking	up to 3 litres daily
Clothes washing	approx. half a litre per day
Un-vented clothes drying	potentially 5 litres per load
Breathing	0.2 litres per adult per hour

Breathing while sleeping	0.2 litres per adult per hour
Washing dishes	up to 1 litre per day
Showers and baths	approx. 1.5 litres per person

### **What are the biggest causes of excess moisture?**

Below are some key areas that should be addressed or minimised due to their contribution to humidity in the house:

1. Cooking, boiling pans and kettles
2. Showers and hot taps
3. Washing machines and tumble dryers
4. Large houseplants
5. Wet logs stored for wood burners
6. Unfound water leaks in cavities or under floors
7. Rising damp in basements and ground-level buildings

### **How does double glazing reduce condensation?**

Single glazed glass tends to accumulate a lot of condensation because it is prone to getting cold easily, which prompts the dew point of water vapor in the air. On the other hand, double glazing mitigates the problem of condensation by having an air gap between two layers of glass, acting like an insulator, which maintains the interior glass at closer to room temperature. This temperature difference is enough to prevent water vapor from reaching the dew point and creating condensation on the glass.

While double glazing reduces condensation, it cannot eliminate it entirely. Therefore, to eliminate condensation completely, it is necessary to adopt a combined approach that includes using appropriate ventilation, and reducing moisture levels.

### **Dehumidifiers and condensation.**

Sometimes internal rooms or spaces don't have windows or there is an excess of moisture to extract, in these cases dehumidifiers can be a good option.

Dehumidifiers work by drawing in the air in a room and extracting the moisture directly using varying methods. This can be useful in colder months when you're drying clothes indoors in a dedicated room.

The water collects in a sump and can be emptied as necessary.

Times to use a dehumidifier include:

1. Drying clothes inside
2. Extracting moisture from a bad leak or flood
3. Drying out attics or basements/cellars with damp issues

NOTE: Do not run a dehumidifier in a room where a window is open as they will draw in moisture from outside and become inefficient.

### **What causes condensation on the inside of windows?**

When double or triple glazed windows have condensation between their panes, it is an indication that the seals on the glazing unit have failed. Typically, double glazed units contain crystalline desiccant in the spacer bar, which draws out moisture from the air gap, thereby keeping the internal space dry and preventing the formation of moisture on the glass inside.

However, when the seals on the unit begin to deteriorate, more moisture is drawn into the unit, causing the desiccant to become saturated and unable to absorb any more moisture. This results in excess moisture and allows the formation of condensation inside the unit.

At this point it's time for a new replacement glass unit.

### **Can you get condensation on new windows?**

This can only happen if there is an issue with the glass unit seals during the manufacturing process.

If this is the case your windows should be covered by the warranty - some manufacturers give at least 2 years, we at WSR give 10 years guarantee.

### **Morning condensation on the outside window pane.**

During the warmer months as the air is warmed by the rising sun it can settle on the colder external glass panes of windows and condense. This is normal and will soon evaporate as the sun warms the glass too.

### **Why do bedroom windows attract so much condensation?**

Referring back to the above section about the sources of moisture in the home - and you'll notice that during an 8 hour period each person in a room can exhale up to half a litre of moisture.

To control this you can leave the window ajar on the ventilation lock, keep your trickle vents at the top of the frame open and if possible, leave the bedroom door open to allow the moisture to dissipate in a larger volume of air.

READ ON TO FIND OUT MORE...

If you are experiencing any of the issues outlined in this special report and need more help with units you suspect have failed or windows that require trickle vents retro-fitting etc. please contact us for advice.

We are happy to visit and evaluate any issues and offer advice at no cost along with a free, no obligation quote for any work that may need to take place to rectify the issue.

If you happen to be a tenant and receive this report then contact your letting agent or landlord to seek permission for us to visit if necessary. We will liaise with you for access at a time of your convenience, and liaise with them direct regarding the cost of any works to be carried out.

**Simply call: 01923 628588**

**or**

**Email: [info@windowseviceandrepair.co.uk](mailto:info@windowseviceandrepair.co.uk)**



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