Gladstone's Window & Door Store
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Understanding Condensation

Condensation is a natural occurrence. You'll find it in the form of dew on the grass and water droplets on the windshield of your automobile. Simply stated, it will occur when the air cannot contain any more moisture. It is dispersed on the nearest cool or cold surface. Warmer air will hold more moisture than cooler air as illustrated on hot humid days during the summer.

Condensation is not created by windows or doors. The surface of the window or door is an avenue for the dispersal of the excess moisture in the air based on interior and exterior temperatures and relative humidity factors which affect the glass surface.

With the emphasis on energy efficiency, modern houses today are constructed more air tight than ever before. While this makes the dwelling much more comfortable and energy efficient it also causes normal moisture and other air quality problems to accumulate and not escape.

The good news is that condensation is controllable. The first item that should be checked is the amount of humidity in the dwelling. One should realize what is acceptable and comfortable to you may not be acceptable for your health or you're dwelling.

While improper ventilation and elevated humidity in a dwelling contribute to condensation, long term studies are beginning to show it can have far reaching adverse health effects as well. By following the suggested guidelines such as proper ventilation and the control of indoor air quality covered in the publication topics, not only will you feel healthier but your windows and doors will perform at their optimum.

Should condensation problems persist, you should first contact your local heating, ventilation and air condition contractor to analyze your air quality and suggest the best solution for your situation.

In the rare instance a window or door is not performing you may want to contact a local window and door installation contractor to evaluate the installation of these products.

Indoor Humidity: How much is too much?

Determining what level of humidity is desirable, and when to add or reduce moisture, can be difficult in Minnesota. Research indicates that we are physically most comfortable at a relative humidity of 40 to 60 percent. However, most of our homes will not tolerate this high level of humidity over the course of the winter without suffering damage. The following chart illustrates the relationship between air temperature and indoor relative humidity. Condensation will usually result when indoor humidity exceeds these levels.

Inside Relative Humidity of 70° F. with double glazed window

Outside air Temperature	*Indoor Relative Humidity*
-20° F or Below	not over 15%
-20° F to -10° F	not over 20%
-10° F to 0° F	not over 25%
0° F to 10° F	not over 30%
10° F to 20° F	not over 35%
20° F to 40° F	not over 40%

Keep in mind that condensation on windows is a sign of too much moisture, although at extremely cold temperatures some condensation is difficult to avoid. You will need a hygrometer to read indoor humidity levels.