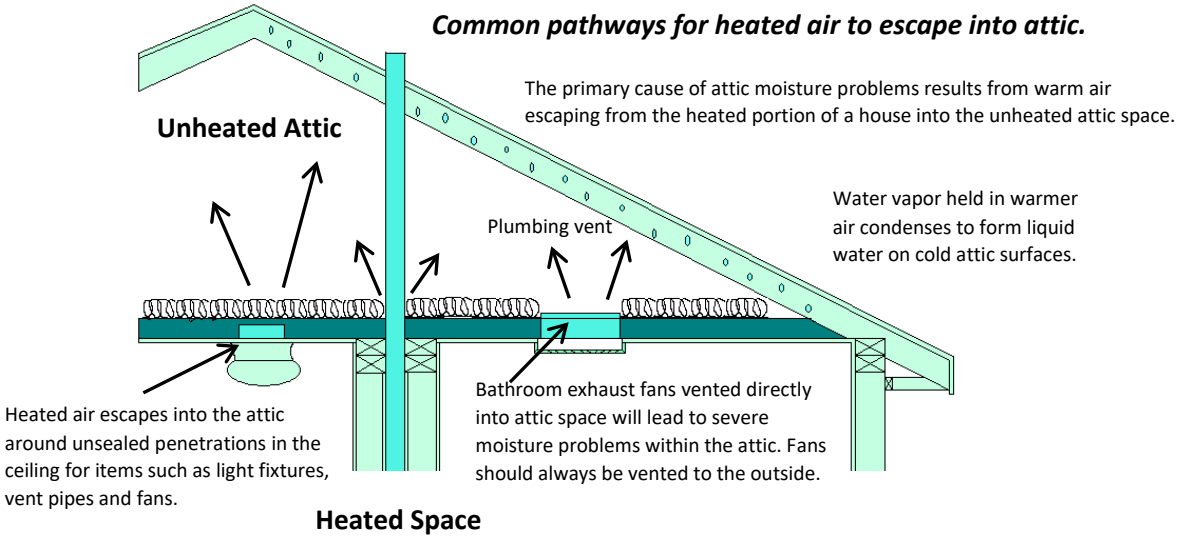
CONDENSATION

Calgary and the surrounding areas are seeing some extreme temperatures this winter. These fluctuations are a concern for homeowners because it can lead to problems with **condensation,** or the buildup of moisture in the home. Condensation can be caused by a variety of reasons, the majority of which are not an actual roofing concern.

What is condensation?

- Warm air can hold more water vapor than cold air. If the warm, moist air in a home can't escape through an open window or air vent, it moves around until it finds a cold surface (which could be in the roof space). It then cools and forms dampness or water droplets (or in winter can possibly freeze first).
- After extreme weather conditions, simply put, condensation is warm air melting frozen frost. If frost has accumulated in the attic, it eventually warms up, melts and presents itself as a possible "leak".



Common Signs of Condensation

To start with, ask yourself the question "Does it leak when it rains?", or in the case of winter and spring, "Does it leak when the snow is melting?". If the answer is no, you can look for the following signs of condensation:

- Moisture or water that begins to slowly drip out of a bathroom fan. A homeowner will often attribute this to a roof leak, when in fact it is more often a condensation problem.
- An abundance of icicles hanging from the edge of your roof can be an indication of condensation or possible ice damming
- While examining the attic during *cold* weather, look for moisture droplets or frost.
- When checking the attic during warmer months, look for visible signs of moisture. A water stain from a roof leak will be confined to relatively small area, while water stains caused by condensation will cover a much larger area.
- Mold growth covering a large area on the underside of the roof sheathing is also an indication of attic condensation.

Causes of Condensation

- Poor roof ventilation especially in isolated spaces. Examples include; rear bay windows, kitchen nooks, closed-off dormer spaces, or any area of the house that is separate from the main ventilated roof line.
- Too much humidity in the home. Consider using a de-humidifier or reducing usage of your humidifier. In winter months, relative humidity should be as low as 40% to avoid condensation on windows.
- Poor insulation in the roof attic. This can be due to insufficient insulation, poor placement of the insulation in the first place, or attic hatches not being properly insulated.

Resolving a Condensation Problem

- You are unlikely to prevent condensation in the roof space completely. You should aim to reduce it to a level that doesn't cause problems, such as the recommended 40% relative humidity.
- In order to prevent warm air from infiltrating the attic, a sufficient air barrier between the house and the attic is needed. Consult an insulation expert to assist with this.
- If the condensation is related to poor roofing ventilation, this is something your roofing company can assist with by evaluating the need for additional roof vents.