



VENTILATION AND THE INDOOR ENVIRONMENT

Ventilation describes the movement of air into or out of homes and proper ventilation is a key component of good indoor air quality.

The best way to improve indoor air quality is to keep pollutants out of the home, to not smoke, to make sure furnaces / fire places / stoves are in good working order and to properly vent to the outside, and to use low emission products.

Ventilation can also help improve indoor air quality by removing pollutants from the home and by bringing in fresh air from outside. This is especially important when renovating or when using chemical products in the home.

Types of ventilation

There are two types of ventilation:

Natural ventilation is when air moves between inside and outside through open windows, doors, chimneys, vents or cracks in the walls. An older, draftier home may have higher natural ventilation rates than new homes that are tightly built to comply with current codes and standards.

Mechanical ventilation refers to air flows created through the use of fans, ducting, and designed openings in the house. This includes kitchen and bathroom fans, as well as more complicated systems such as heat recovery ventilators (HRVs) or energy recovery ventilators (ERVs).

Recent building codes require mechanical ventilation systems, as natural ventilation is low in most new homes built in Canada.

What are the signs of a home ventilation rate that is too low?

Ventilation may need to be increased if you have:

1. High humidity, for example if you see condensation on windows in winter
2. Mould growing in your home
3. Odours that linger, for example from cooking
4. General feeling of stuffiness

What are the signs that a home ventilation rate is too high?

1. Higher than average heating (or cooling) bills
2. Very dry air in winter
3. Drafts and discomfort

Reducing ventilation generally requires better sealing of cracks, especially around doors and windows, or better insulation. If you are having problems with too much ventilation, you may want to consult an energy retrofit expert.

Using ventilation to improve indoor air quality

Ventilation may be increased to improve your indoor air quality by:

1. Opening windows, when possible
2. Letting bathroom fans run after showering or bathing
3. Setting your mechanical ventilation system to a higher setting, letting it run longer, or, if necessary, having your ventilation system checked by a qualified ventilation contractor
4. Installing a fresh air duct into your forced-air furnace, which may help bring in fresh air whenever the furnace runs
5. Using an HRV or an ERV if your home is equipped with one, or retrofitting one into your home
6. Running your kitchen fan when cooking
7. Using your furnace fan or, if necessary, a separate fan or air supply to make sure air is distributed throughout the home

For more information

To learn more about the ventilation options, please see the document *Ventilation and the Indoor Environment* available by emailing AIR@hc-sc.gc.ca

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