

Indoor air quality

Because Canadians spend about 90% of their time indoors, the quality of indoor air is very important¹. Health Canada's Residential Indoor Air Quality Guidelines and the Canadian Mortgage and Housing Corporation publications provides helpful information on ways to improve air quality².

Indoor air pollutants include:

- Biological contaminants – living organisms such as mould and bacteria
- Chemical contaminants – gases and particles released from items such as new furniture, soil, appliances, etc.

Some major indoor air pollutants and their sources include³ :

- Furnaces and other combustion appliances (sources of carbon monoxide)
- Wood-burning stoves, gas-fired stoves, and fire places
- Tobacco smoke (releases carbon monoxide, oxides of nitrogen and harmful organic contaminants)
- Human metabolic activity (respiration, perspiration and food preparation) add water vapour as well as odour-producing substances
- Air fresheners
- Furniture waxes
- Cleaners
- Paints
- Pesticides

Common symptoms associated with exposure to poor indoor air include⁴:

- Headaches
- Fatigue
- Shortness of breath
- Worsening of pre-existing allergies and asthma
- Sinus congestion, cough and sneezing
- Eye, nose, throat and skin irritation
- Dizziness and nausea

¹ <http://www.hc-sc.gc.ca/ewh-semt/air/in/poll/index-eng.php>

² http://www.cmhc-schl.gc.ca/en/co/co_001.cfm

³ http://www.hc-sc.gc.ca/ewh-semt/alt_formats/hecs-sesc/pdf/pubs/air/exposure-exposition/exposure-exposition-eng.pdf

⁴ http://www.lung.ca/protect-protegez/pollution-pollution/indoor-interieur/index_e.php

Information pertaining to the amount of exposure and the length of time of exposure remain uncertain at this time. It is important to recognize that people react differently and therefore precautions must be taken to minimize the potential risks. In order to minimize potential health effects associated with poor indoor air quality caused by chemical contaminants, it is important to recognize what products are being used within your facility and identify control measures such as airing out rooms when using cleaning and disinfecting products before re-occupancy.

Mould:

Mould requires the presence of nutrients, adequate temperature and moisture to grow. It can affect indoor air quality as it can release spores that can be inhaled and cause possible health effects.

Major causes of mould growth are:

- Excessive humidity
- Lack of ventilation and inadequate ventilation
- Water infiltration e.g., water from an external source
- Water leaks and floods

In order to minimize mould growth, it is important to:

- Assess the building structure for damage,
- Reduce condensation indoors where possible,
- Increase air circulation,
- Clean wet surfaces immediately. Surfaces that have been damp for more than 48 hours should be inspected for mould growth and removed where they cannot be dried completely. Contacting a mould remediation expert or an environmental consultant is recommended.

Health effects of mould

Health Canada considers that mould growth in buildings may pose a health hazard. The amount of susceptibility depends on the specific individual and the amount of exposure. It is also important to recognize that there is limited information on the amount of mould required to cause a health effect. To reduce exposure to mould, Health Canada's Residential Indoor Air Quality Guidelines recommends removing mould growth regardless of the mould species found to be growing in buildings⁵. It is important that mould be removed

Most common symptoms

There is sufficient evidence that exposure to mould in indoor environments is associated with⁶:

- Asthma and asthma-like symptoms (in asthmatic individuals)

⁵ <http://www.hc-sc.gc.ca/ewh-semt/pubs/air/mould-moisissure-eng.php>

⁶ http://www.nceh.ca/sites/default/files/Mould_and_Health_Effects_Nov_2009.pdf

- Upper respiratory tract symptoms
- Cough and wheezing

Children should see a medical doctor immediately if they experience any of the above symptoms. Where mould is identified in a specific room, it is best practice to relocate children to another room and continue to do so until the mould has been removed and the room has been properly cleaned. For information specific to mould removal/clean-up refer to the Canadian Mortgage Housing Corporation (CMHC) website:
<http://www.cmhc-schl.gc.ca>

The York Region Community and Health Services Department - Health Protection Division has an indoor air quality program. For more information please visit our website: <http://www.york.ca/Services/Public+Health+and+Safety/Environmental+Health>

Questions pertaining to mould and or indoor air quality concerns at your school or child care centre can be directed to the public health inspector at the *Health Connection* line at 1-800-361-5653.