

Office Indoor Air Quality

There are many sources of office indoor air problems from heating, to products we buy, to how we choose to live our lives. Indoor air quality can often be worse than outside. This is due in part to the “off-gassing” of chemicals from everyday items like paint, adhesives and even upholstery. Awareness of potential hazards is the first step in ensuring a healthy environment. Improving poor indoor air quality leads to increased comfort, productivity and fewer illnesses.

What are the causes of poor Indoor Air Quality

There are several causes of poor indoor air quality. Potential for harm depends on many factors including time spent indoors, concentrations of hazardous substances in the air, the effectiveness of indoor ventilation systems and how each individual responds. If you think your symptoms may be caused by poor air quality you should go outside for some fresh air! If the problem persists after returning indoors go see your doctor and alert your employer. Acute symptoms help identify the need for an immediate intervention. However, it is important to note that many sources of pollution cause no obvious ill-effects but can lead to chronic health problems down the road. You can read more about the most common causes of poor indoor air quality below:

Tobacco Smoke from cigarettes, cigars, and pipes is the most common air pollutant. Breathing second hand smoke doubles the non-smoker’s risk of lung cancer.

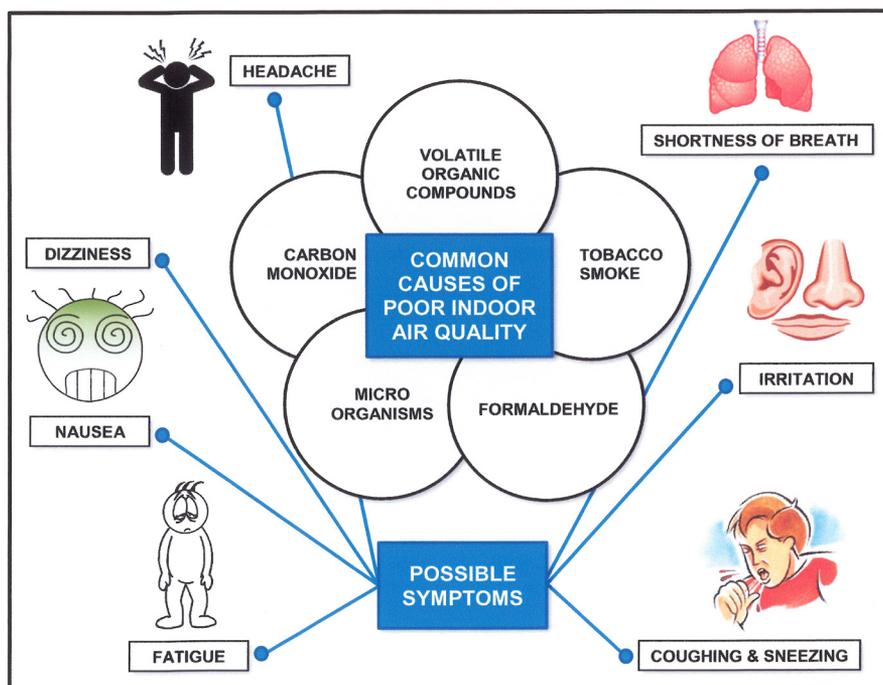
Carbon Monoxide, an odorless gas, is a much greater hazard indoors. It is often found in garages and loading docks which, if not properly vented, can leak into ducts and then into your work space. Symptoms include headaches, nausea, dizziness and lack of coordination.

Microorganisms include bacteria, viruses, and moulds that are present in the air. They grow more abundantly in warm and

humid offices, poorly maintained air systems, and dirty washrooms. These microorganisms can cause allergic reactions and asthma attacks.

Formaldehyde is a gas found in many building products such as particle board, plywood, carpeting and glue. If you are exposed to this gas, your eyes and lungs may become irritated.

Volatile Organic Compounds from felt markers and pens, paint, solvents, and copy machines can become vapours or gases at room temperature and cause eye and lung irritation.



Many of the most common symptoms of poor indoor air quality are caused by a wide variety of airborne toxins. Carbon monoxide and tobacco smoke are two of the most common sources of poor indoor air quality. They are also two of the easiest sources to control.

Who is most likely to get sick from poor indoor air quality?

- contact lens users
- people with allergies or asthma
- people with weakened immune systems especially those with cancer, AIDS or receiving chemotherapy
- those with respiratory diseases

Standards and Guidelines for Indoor Air Quality

There is no legislation regulating indoor air quality. The standard most widely used was produced by the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE). This standard (last updated in 2010) defines acceptable indoor air quality as “air in which. . . a substantial majority (80% or more) of the people exposed do not express dissatisfaction”. Recommendations include

- temperature of 20-23.5 °C in winter and 23-26 °C in summer
- relative humidity (measure of moisture in the air) between 30% - 60%
- carbon dioxide levels can be measured to see if the heating, ventilation, and air conditioning (HVAC) system is working properly.

What Can Your Employer Do?

- ✓ Work closely with the Workplace Health and Safety Committee to identify problems and solutions. Be open to using outside resources.
- ✓ Follow ASHRAE recommendations
- ✓ Develop a firm no smoking policy
- ✓ Provide proper ventilation with enough fresh air (not all recycled air).
- ✓ Ensure fresh air reaches the worker. Be aware that adding partitions or extra offices can interfere with the air distribution as it was originally designed.
- ✓ Promote natural solutions to improve indoor air quality. This might include adding indoor plants to common areas. Even the most typical indoor plants have been shown to remove airborne toxins and produce fresh oxygen.
- ✓ Plan renovations keeping indoor air quality in mind, schedule work during unoccupied periods, and increase outside ventilation following all renovation work.

- ✓ Practice regular maintenance and inspections. Clean and disinfect ventilating, heating, and cooling systems such as humidifiers, air filters, pumps, and blowers.
- ✓ Use non-toxic cleaning agents whenever possible.
- ✓ Provide masks and/or ventilators when toxic chemicals must be used and ventilate areas before and after use.
- ✓ Locate air supply inlets far from loading docks, dump truck areas and parking garages.
- ✓ Remove or alter office furnishings/supplies that workers believe are contributing to their symptoms.

What Can You Do?

- ✓ Work with your Workplace Health and Safety Committee to identify resources, document concerns and coordinate investigations.
- ✓ If warranted participate with your committee in assessing whether a “scent-free” policy is appropriate for your workplace. Some workers are sensitive and cannot tolerate common perfumes and colognes.
- ✓ Coordinate with management to promote and maintain the indoor “greenscape” - keep indoor plants at your workstation and ensure all plants in your vicinity are well taken care of.
- ✓ Do not smoke indoors or near fresh air sources.
- ✓ Be aware of the causes of air quality problems.
- ✓ Read container labels and wear masks when using cleaning agents or any toxic substance
- ✓ Report any concerns or symptoms to your Health and Safety Committee and/or your supervisor.

For more information contact the

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