

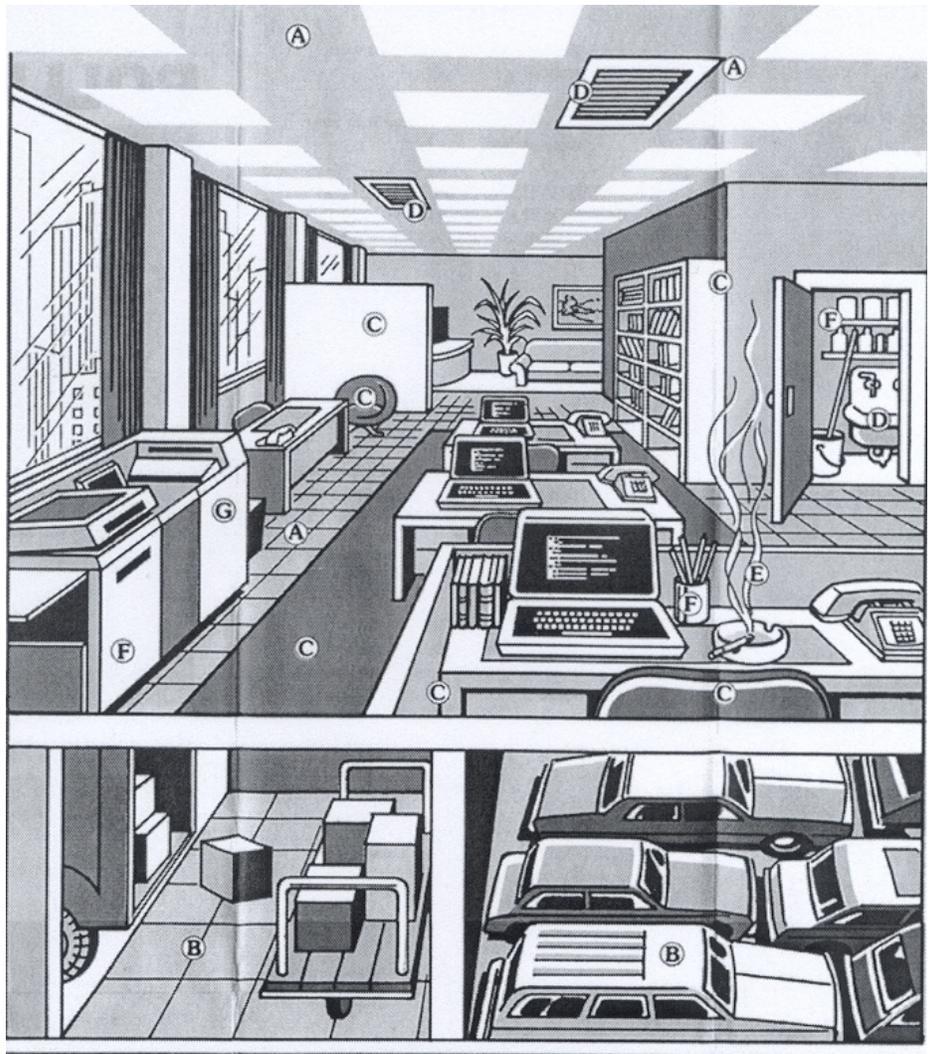
# Office Indoor Air Quality

There are many sources of office indoor air problems from heating, to products we buy, to how we choose to live our lives. A healthy environment not only increases our comfort and productivity but reduces illnesses caused by poor indoor air quality (IAQ).

## Can you identify the causes of poor IAQ?

Look at the letters in the picture below. What do you think could be a potential problem in that space? Compare your answers with the information written beside each letter.

- A. **Asbestos** in floor and ceiling tiles, heating system insulation or acoustic insulation, can be breathed into your lungs and may cause scarring. This problem is most often found in miners and insulators.
- B. **Carbon Monoxide**, an odorless gas, is regulated outdoors but is a greater hazard indoors. It is found in garages and loading docks which, if not properly vented, can leak into the ducts and then into your work space. If you were exposed to carbon monoxide you may suffer from headaches, nausea, tiredness, confusion, dizziness, and lack of coordination.
- C. **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.
- D. **Microorganisms** are 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.
- E. **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.
- F/G. **Volatile Organic Compounds** from felt markers and pens, paint, solvents, and copy machines can become vapours or gases at room temperature and cause similar symptoms as formaldehyde.



## Some symptoms of poor IAQ

- dizziness and nausea
- headaches
- tiredness
- shortness of breath
- frequent coughing and sneezing
- eye, nose, throat and skin irritation

## Who is most likely to get sick from poor IAQ?

- 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 IAQ

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 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 degrees Celsius in winter and 23 - 26 degrees Celsius 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
- ✓ plan renovations keeping IAQ in mind, schedule work during unoccupied periods, and increase outside ventilation following all renovation work
- ✓ practise regular maintenance and inspections. Clean and disinfect ventilating, heating, and cooling
- ✓ systems such as humidifiers, air filters, pumps, and blowers
- ✓ use nontoxic 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
- ✓ 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

MFL Occupational Health Centre  
102-275 Broadway  
Winnipeg, Manitoba R3C 4M6  
Phone: 204-949-0811  
Toll free: 204-888-843-1229 (Manitoba only)  
Fax: 204-956-0848  
Email: [mflohc@mflohc.mb.ca](mailto:mflohc@mflohc.mb.ca)  
Website: [www.mflohc.mb.ca](http://www.mflohc.mb.ca)

Revised September 2004