

What is indoor air quality?

Indoor air quality is a term that describes the physical, chemical and biological state of indoor air. It usually refers to the air in non-industrial workplaces such as office buildings, casinos and federal government buildings. Poor indoor air quality (IAQ) is a hazard that affects PSAC members' health.

What are the problems?

Energy conservation measures have led to reduced outdoor air intake due to the airtight construction of buildings. Less outdoor air intake contributes to the accumulation of contaminants. The combination of less outdoor air and inadequate maintenance of heating, ventilating and air conditioning (HVAC) systems, creates polluted indoor air. Poor indoor air quality often leads to PSAC members experiencing fatigue, headaches and irritation of the eyes, nose and throat. Cutbacks and employer inaction and ignorance about indoor air quality create more obstacles to having clean indoor air.

Sometimes indoor air quality can cause sick building syndrome (SBS) or multiple chemical sensitivity (MCS).

SBS is caused by tightly sealed and energy-efficient buildings that lack proper ventilation. These buildings trap contaminants inside and stop the intake of fresh outdoor air. SBS symptoms include headaches, fatigue, nausea, a susceptibility to colds and flu, and dry skin, eyes, nose and throat. The symptoms of SBS become less severe upon leaving the workplace.

MCS can be caused by exposure to one or a combination of chemicals. The best way to understand MCS is to think of it as a chemical immune-deficiency disease. Those who have MCS become hypersensitive to certain chemicals. MCS symptoms include skin rashes, irregular breathing, convulsions, central nervous system problems, and eye, nose and throat irritation.

Some or all of the following effects to health characterize poor indoor air quality:

- Sick building syndrome (SBS) and multiple chemical sensitivity (MCS)
- Headaches, blurred vision and common irritations of the eyes, nose and throat
- Difficulty concentrating, fatigue and nausea
- Shortness of breath, wheezing, sinus congestion and occupational allergies

What are the hazards?

Poor indoor air quality can lead to poor physical and psychological health for workers. Poor physical health contributes to workplace stress. This stress can

be compounded when workers' complaints about poor indoor air quality are dismissed or minimized by employers. When workers complain, employers tell them they are "imagining things" or "being hysterical". But poor indoor air quality is serious and needs the employers' immediate attention.

Indoor air quality hazards fall into three basic categories: physical, chemical and biological.

Physical indoor air quality hazards include:

- Improper temperature and humidity levels
- No HVAC maintenance workers or program in place due to cutbacks
- Lack of worker-controlled HVAC systems
- Overcrowding due to cutbacks that lead to reduced workspace
- Placement of workspace partitions, furniture and equipment that prevents proper ventilation
- Renovations that alter workplace layout without adjustments to HVAC system capacity
- HVAC systems that begin to operate only after workers have arrived or are shut down before the end of the workday
- Outdoor air intakes close to loading bays and busy streets
- Windows that don't open
- Excessive noise and poor lighting

Chemical indoor air quality hazards include:

- Asbestos in places like ceiling tiles, pipe and duct insulation, and old wallboards and plaster
- Volatile organic compounds (VOCs) like formaldehyde, organochlorines, phenols emitted from furniture, building materials, carpets and plastics
- Carbon dioxide exhaled from building occupants
- Carbon monoxide from gas burners and furnaces inside workplaces, and vehicle exhaust and tobacco smoke outside workplaces
- Pesticides in plant sprays and insect and rodent control products
- Solvents such as benzene and toluene in cleaning products, copier toners and paints
- Hazardous dusts, fibres and odours from building materials and occupants
- Ozone from photocopiers, electric motors and electrostatic air cleaners
- Radon from naturally occurring radioactivity in minerals and soil around workplace foundations

Biological indoor air quality hazards include:

- Toxic moulds that grow on wood, drywall, upholstery, ceiling tiles, carpet and other building materials where moisture has accumulated
- Bacterial diseases like legionnaires disease, Pontiac fever and humidifier fever that originate from poorly maintained HVAC systems
- Dust mites that can cause allergic reactions
- Pollen and biological aerosols that don't get filtered out of indoor air due to poor HVAC maintenance

Identify the problem

The first step is to recognize that poor indoor air quality is a health and safety hazard in your workplace. Surveys and mapping techniques are excellent tools to identify indoor air quality hazards. An indoor air quality survey can be done in co-operation with the employer, but the union should approve the survey and be involved in collecting and assessing the results.

The union should conduct its own indoor air quality survey if the employer resists the idea or denies that poor indoor air quality is a problem. Surveys are an important tool in uncovering indoor air quality hazards.

When and where workers get sick are key factors in identifying and resolving poor indoor air quality. In addition, body mapping, hazard mapping and "your world" mapping techniques can be used to identify indoor air quality hazards. Workplace inspections by workers are an important tool in uncovering and identifying indoor air quality hazards and should be carried out regularly.

Actions

Indoor air quality hazards largely centre on issues of control, cutbacks and employer neglect. Taking action on poor indoor air quality involves members exercising control at work.

The following actions can help combat poor indoor air quality:

- Refuse unsafe working conditions caused by poor indoor air quality
- Report indoor air quality hazards
- Conduct regular workplace inspections to uncover indoor air quality hazards
- Put indoor air quality issues on the health and safety committee agenda
- Demand employers take action on testing for and fixing indoor air quality hazards
- Insist employers increase the ventilation intake rate of outdoor air

Strategies for change

Complementing the actions listed above, the following strategies can eliminate poor indoor air quality:

- Keep indoor air quality issues on the health and safety committee agenda until they are resolved
- Monitor and test indoor air for contaminants
- Demand regularly scheduled maintenance and cleaning procedures on HVAC systems
- Give workers control by allowing them to adjust humidity, temperature and ventilation rates
- Demand employers obey health and safety laws and regulations pertaining to indoor air quality hazards
- Where legislation does not provide for specific indoor air quality controls, monitoring, or access to information, the union can negotiate contract language that protect workers from indoor air quality hazards
- Put the issue of poor indoor air quality on the bargaining table
- Sponsor PSAC education around the issue of poor indoor air quality and its effects
- Create an indoor air quality policy for PSAC workplaces starting with a statement acknowledging that poor indoor air quality is a health and safety hazard and that all steps should be taken to prevent the hazard
- Organize collective job action around the issue of poor indoor air quality

Employer responsibility

Employers have the responsibility to provide a healthy and safe workplace. This responsibility is known as the general duty clause. Clean indoor air is an important part of a healthy workplace. Ending poor indoor air quality requires the participation of our union membership. Through education and activism, poor indoor air quality can be eliminated from PSAC workplaces.