



It's About Making A Difference.

Occupational Asthma

Automotive Parts Manufacturing and Foam/Expanded Plastic Sectors



Occupational Health Clinics for Ontario Workers Inc.



It's About Making A Difference.



Occupational Health Clinics for Ontario Workers Inc.

How Can Occupational Asthma be Prevented?

The risk of developing occupational asthma can be decreased by reducing the level of chemical agents known to cause OA that are released into the workplace air (Table 1). Both employers and employees have a hand in preventing OA. The control of exposure to any hazardous agent is a step-by-step process.

An employer should:

- First try to eliminate the agent causing the OA from the workplace.
- When elimination is not possible, substitute with a less hazardous agent.
- Control exposures by closing off the work processes that release the agent into the air and install ventilation systems to capture and contain emissions (such as gases or vapours) at the source.
- Provide training to employees on safe working and housekeeping methods.
- Perform regular maintenance on all equipment to prevent accidental spills or leaks.
- Provide personal protective equipment (PPE) to employees and train them how to use PPE properly. When using respirators, a detailed respiratory protection program should be prepared, including proper respirator selection, maintenance, training for use and fit-testing, to make sure that the respirator fits properly.
- Monitor the level of exposure to isocyanates and other hazardous agents regularly.

Employees should:

- Learn about the hazards in the workplace by speaking to their health and safety representative or an industrial hygienist.
- Follow safe work practices.
- Use the personal protective equipment provided.
- Report any problems with equipment or ventilation systems.
- Participate in all health and safety programs in the workplace.
- Be aware of the early signs of occupational asthma.

What should you do if you are having problems breathing?

Early recognition is very important to help prevent worsening of the illness. If you have the symptoms of occupational asthma:

- Make an appointment immediately with your family doctor.
- Tell your doctor your symptoms, where you work, what your job is and what substances you use on a daily basis. Bring this sheet to your doctor.
- Seek assistance from an occupational health professional, such as an occupational health doctor or nurse. Your joint health and safety committee, union health and safety representatives and injured worker groups are also good resources.

Occupational asthma can be serious and debilitating, if left untreated. Early recognition and effective control measures can greatly reduce the risk of permanent disability and the high human and financial costs of OA.

For more information, please contact:

Occupational Health Clinics for Ontario Workers: www.ohcow.on.ca or 1-877-817-0336

Industrial Accident Prevention Association: www.iapa.ca or 1-800-669-4939

The Asthma Society of Canada: www.asthma.ca or 1-866-787-4050

Ontario Lung Association Asthma Action Help-line: 1-800-668-7682

Ontario Lung Association: www.on.lung.ca or 1-888-566-5864

Workplace Safety and Insurance Board: www.wsib.ca or 1-800-465-5606

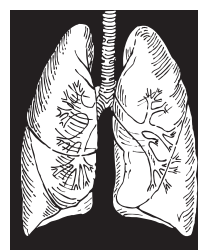
Funding for this resource was provided by the Government of Ontario. IAPA/OHCOW would like to thank the Ministry of Labour the Ministry of Health and Long Term Care. This brochure is provided for general information purposes only. For further information, individuals are advised to seek the advice of a physician or other health care professional. The information provided in this brochure has been developed by IAPA/OHCOW and does not necessarily reflect the policies or positions of the Government of Ontario.

Asthma is a common lung disease that makes breathing difficult. It can be a severe and life-threatening disease, affecting a person's ability to work and their overall quality of life.

What is Occupational Asthma?

Asthma that is caused by breathing in hazardous substances in the workplace, is called occupational asthma (OA).

Two industries that are considered high risk and report high numbers of occupational asthma cases are the automotive parts manufacturing and foam/expanded plastic sectors.



What causes OA in the automotive parts manufacturing and foam/expanded plastic sectors?

There are hundreds of factors or agents that have been known to cause OA. This number will continue to grow as new processes and agents are introduced into the workplace. Table 1 lists some examples in these two sectors.

TABLE 1. Agents known to cause occupational asthma in the automotive parts manufacturing and foam/expanded plastic sectors

Agent	Workers at risk
Isocyanates	Spray painters Manufacturers of plastic, rubber and foam
Anhydrides	Plastics and epoxy resins workers
Metalworking fluids and lubricants	Metal parts manufacturing and fabricating (e.g. cutting, grinding, drilling drawing, stamping)
Metals	Metal parts manufacturing and fabricating Welders

Isocyanates

Isocyanates are the main group of chemicals that cause OA in the automotive parts manufacturing and foam/expanded plastic sectors. Isocyanates are a group of highly reactive chemicals that are used in the automobile industry for production of foam, automotive body parts and finish coatings (paint). Isocyanates can easily form plastics, adhesives, elastomers, and become either flexible or rigid. The more commonly used isocyanates include:

TDI – toluene diisocyanate

MDI – methylene diphenyl diisocyanate

What are the symptoms of Occupational Asthma?

People suffering from OA often do not realize that their symptoms are work-related. The symptoms of OA are the same symptoms occurring with regular asthma and include some or all of the following:

- cough
- shortness of breath
- wheezing
- chest tightness

The symptoms usually become worse over the course of the working day and throughout the workweek, and improve over the weekend and during vacations. The person with OA should be removed from the area or workplace to prevent further exposure.

Informing employees about potential workplace hazards and providing proper training is important. Seek advice from occupational health professionals, such as occupational hygienists, on how to recognize, evaluate and control workplace hazards and their health effects. Provide education and information to employees on occupational asthma and its control measures.

Workplaces in Ontario using isocyanates are required by law to provide medical surveillance. Medical surveillance (on-going medical follow-up) and appropriate exposure controls in the workplace are the main methods in reducing the occurrence of OA. A medical surveillance program includes a pre-employment or pre-exposure medical questionnaire and spirometry (a test that assesses lung function) that are both repeated over the course of employment.

