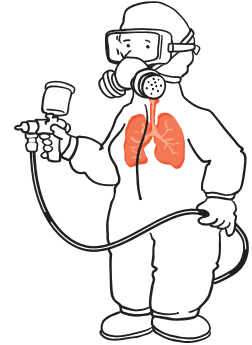


# OCCUPATIONAL ASTHMA

## Automotive Parts Manufacturing and Foam and Expanded Plastic Industries

Asthma is a common lung disease that makes breathing difficult. When it is caused by breathing in hazardous substances in the workplace, it is called “occupational asthma.” If you work in automotive parts manufacturing or in the foam or expanded plastic industry, you are at risk for getting it.

Asthma can affect your ability to work and your overall quality of life. It can even threaten your life.



### What Are the Symptoms of Occupational Asthma?

People suffering from occupational asthma often do not realize that their symptoms are work-related. The symptoms of occupational asthma are the same as for regular asthma. They include any or all of the following:

- cough
- shortness of breath
- wheezing, and
- chest tightness.

In occupational asthma, the symptoms usually become worse during the working day and throughout the workweek. They decrease over the weekend or on days off and during vacations.

If you have these symptoms, go to your doctor. Also, tell your union steward, joint health and safety committee or your supervisor about your symptoms.

### What Causes Occupational Asthma in these Sectors?

Many factors or agents that are commonly used in these industries can cause occupational asthma. Table 1 lists some examples.

**TABLE 1:** Agents known to cause occupational asthma in automotive parts manufacturing and the foam and expanded plastic sector

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

### Isocyanates

Isocyanates are the main chemicals that cause occupational asthma in both the automotive parts manufacturing and the foam and expanded plastic industries. These highly reactive chemicals are used to produce foam, automotive body parts and finish coatings (paint). The more commonly used isocyanates include:

- TDI – toluene diisocyanate
- MDI – methylene diphenyl diisocyanate, and
- HDI – hexamethylene diisocyanate.

## How Can Occupational Asthma be Prevented?

Occupational asthma can be largely prevented by eliminating or reducing the level of any asthma-causing agents in the workplace air. See Table 1 for examples of these asthma-causing agents. Both employers and employees have a role in prevention.

### The employer's role is:

- first, try to **eliminate** the agent or agents causing the asthma from the workplace
- if elimination is not possible, **substitute** a less hazardous agent
- when substitution is not possible, **control** the exposures by closing off the work processes that release the agent into the air and installing ventilation systems to capture and contain emissions (e.g., gases or vapours) at the source
- provide **personal protective equipment** (PPE) to employees and provide training on how to use it properly. PPE is the last line of defence, to be used when exposures are not already prevented or significantly reduced by elimination, substitution and control. When respirators are used, the employer must provide a detailed respiratory protection program that includes:
  - proper respirator selection
  - maintenance of the respirator
  - training for use, and
  - fit-testing (to make sure that the respirator fits properly)
- train employees on safe working and housekeeping methods, and
- monitor the level of exposure to isocyanates and other hazardous agents.

Workplaces in Ontario that use isocyanates must provide medical surveillance. This is a legal requirement. A medical surveillance program includes a pre-employment or pre-exposure medical questionnaire and spirometry (a test that assesses lung function). These tests are repeated over the course of employment.

Informing employees about potential workplace hazards and providing proper training is important. Seek advice from occupational health professionals 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.

## What Should I Do if I Have Trouble Breathing?

If you have symptoms of occupational asthma, act right away:

- make an appointment right away with your family doctor
- tell your doctor your symptoms, where you work, what your job is and what chemicals and materials you work with every day
- take this fact sheet to your doctor
- ask for help from an occupational health professional (e.g., an occupational health doctor or nurse), and
- talk to your supervisor, as well as your joint health and safety committee, union health and safety representative or an injured worker group.

If your doctor tells you that you have occupational asthma, you should be removed from the work area or job to prevent it from getting worse.

Occupational asthma is a serious illness. If you do not get treatment, it can cause permanent disability. Early recognition and treatment are very important to keep this illness from getting worse.

### Employees can:

- learn about the hazards in the workplace by speaking to the health and safety representative, an occupational health professional (e.g., an occupational hygienist, nurse or doctor) or the employer
- follow safe work practices
- use the PPE provided
- report any problems with equipment or ventilation systems
- participate in all health and safety programs in the workplace
- attend any training courses, and
- be aware of the early signs of occupational asthma.

### For more information, contact:

- Occupational Health Clinics for Ontario Workers (OHCOW): [www.ohcow.on.ca](http://www.ohcow.on.ca) or 1-877-817-0336
- Industrial Accident Prevention Association (IAPA): [www.iapa.ca](http://www.iapa.ca) or 1-800-406-4272
- The Lung Association's Asthma Action Helpline: 1-800-668-7682
- The Lung Association: [www.on.lung.ca](http://www.on.lung.ca) or 1-888-566-5864
- The Asthma Society of Canada: [www.asthma.ca](http://www.asthma.ca) or 1-866-787-4050
- Workplace Safety & Insurance Board: [www.wsib.ca](http://www.wsib.ca) or 1-800-465-5606
- Ministry of Labour health and safety information: [www.labour.gov.on.ca/english/hs/index.html](http://www.labour.gov.on.ca/english/hs/index.html) or 1-800-268-8013.

Contact the OHCOW or IAPA for the companion brochure, *Work-related Asthma and You: Preventing Work-related Asthma in the Auto Parts Manufacturing and Foam and Expanded Plastic Industries*, which accompanies this fact sheet.

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