

WORK-RELATED ASTHMA

Over 2.7 million Canadians have asthma and about 10-15% of adult cases are potentially caused by exposures in the workplace. Many agricultural workers are at a higher risk of asthma than the average Canadian.

Work-related asthma (WRA) is the most common chronic work-related respiratory disease in Canada. There are two types of WRA:

Work-Aggravated Asthma – This happens when someone already has asthma but they get symptoms or symptoms are worsened due to an exposure in the workplace.

Occupational Asthma (OA) – This happens when someone never had asthma until they were exposed to something in the workplace.

HOW CAN IT AFFECT YOU

Untreated WRA can lead to:

- Loss of productivity and income (*being unable to work for even a couple days during harvest can be very costly*)
- Needless suffering and sometimes even death (*farmers have a higher risk since they are usually farther from emergency medical care*)
- Increased medical and insurance costs

Farm workers are less able to switch occupations or avoid exposures in the workplace. The longer the exposure to the trigger after developing OA, the more likely the asthma will be permanent and worse the symptoms will get. Most OA is due to a response similar to allergy, but after a high exposure to an irritant, some people can develop OA that may be permanent (irritant-induced OA).

DO I HAVE WORK-RELATED ASTHMA?

Asthma symptoms can include cough, chest tightness, wheezing and difficulty breathing. These symptoms occur because of inflammation and airway tightening in the lungs.

If you answer YES to one or more of the following questions you may have asthma and should see a doctor:

Do you ever cough, wheeze or feel chest tightness?

Does coughing, wheezing, or chest tightness ever wake you at night?

Do you ever have to slow down, stop working, or miss work-days due to shortness of breath?

To diagnose asthma, your doctor will:

- Ask you what kind of symptoms you feel and how often they occur
- Ask if you or your family has any allergies, which can increase the chances that you could have asthma
- Listen to your lungs for difficulty breathing or wheezing
- Send you for a lung function test called “spirometry”, to confirm the diagnosis

If your symptoms get worse during workdays compared to days off or when on vacation, your asthma could be related to something at work.

COMMON TRIGGERS

A trigger is any substance found in the workplace that results in asthma symptoms.

Common asthma triggers in agriculture:

- Animals
- Grain, hay, straw, forage
- Mites
- Moulds
- Plants

Common animal triggers:

- Ammonia (in hog & poultry urine)
- Bacteria (in feces)
- Skin debris (from hogs & cattle)

Other common triggers:

- Feed enhancers
- Antibiotics in animal feed
- Fertilizers
- Pesticides
- Cleaners/disinfectants

Standard allergy tests do **NOT** test for the triggers that cause over 50% of agricultural asthma. Notify your doctor that you are an agricultural worker. Doctors and patients should work together to identify the triggers that are causing your symptoms then find a solution.

HOW TO MANAGE WORK-RELATED ASTHMA

Once you get OA, treatment and preventive measures can only help control symptoms but will not eliminate them. There is no cure with medications, but early removal from the cause can result in resolution of OA in some workers.

There are three main ways to manage WRA:

- Remove or reduce the trigger
- Remove the person from the trigger
- Control the symptoms

Changing careers isn't always an option, so it is important to avoid or reduce the exposure. Work with your health care professional on an asthma treatment plan.

If symptoms continue to the point that talking is difficult or medication doesn't relieve symptoms for more than three hours, you should **call 911** and go to the nearest emergency room.

Use Personal Protective Equipment (PPE)

- When necessary, wear appropriate PPE when spraying, harvesting, weeding, tilling, or when working in livestock barns or storage facilities
- It is much healthier to wear a respirator and prevent asthma than to have to wear a respirator once you develop asthma

Respirators offer the single best protection from asthma (if exposure cannot be avoided or controlled by other means), especially in confined spaces, but do not provide complete protection.

N95 Respirator:

At the very minimum, wear a properly fitted N95 respirator to reduce your risk of asthma.

They come in different sizes so get the right sized respirator for your face and have them fit-tested prior to use.

- N95 respirators trap some of the particles you breathe in, but do not trap gases such as ammonia
- N95 respirators do not fit well on children and those with facial hair

A hard hat Powered Air Purifying Respirator (PAPR) offers protection, cooling comfort, and excellent fit, even with a beard.

Supplied-Air Respirators, such as the Self-Contained Breathing Apparatus (SCBA) respirator, supply clean air from a tank or air line and can protect the lungs from higher gas levels such as ammonia.

NEVER enter a grain bin without proper PPE.

ALL workers, veterinarians, custom operators and visitors should use appropriate PPE (fit-tested N95 respirator or better, depending on the exposure).

Reduce Trigger Levels

- Don't sweep up feed or spills - wet and use an industrial vacuum with a High Efficiency Particulate Air (HEPA) filter
- Vacuum often to improve conditions and health of both people and animals
- Mites can end up indoors where they colonize areas where clothing is kept, then spread to the rest of the home
- Don't bring work clothes into your home; wash them and horse blankets once a week in hot water (over 60°C/140°F) in a separate washing machine
- Bacteria and insects (especially botfly and grain weevils) in feed or bedding can increase your risk of asthma
- Adding dust suppressants (molasses, etc.) to animal feed and using automated feeders can reduce airborne dust and protect you against asthma
- Allow all crops to dry completely before storage and use commercial anti-mould products to help reduce mould levels

Improve Ventilation

- Ventilation can reduce the concentration of triggers to lower levels
- Many buildings lack good ventilation - eliminate dead zones and consider automatic ventilation systems that control temperature and humidity
- Fit all openings to manure pits with metal grill covers to allow for ventilation and to prevent falls into the pit
- Since grain bins are especially hazardous due to high levels of dust, bacteria, mould and fungi, it is very important to install a ventilation system
- Ensure good ventilation and wear appropriate respirator when brushing horses and other large animals
- Mites, fungi and mould thrive in warm, humid areas and can be reduced with a proper ventilation system
- Diesel exhaust must be properly vented outdoors as even low levels of exhaust can increase your risk of asthma

**It is very important to install ammonia level sensors in areas where ammonia can build up to hazardous levels.*

WHERE TO GET MORE HELP

This brochure contains general information on asthma related to working in the agricultural industry and does not include all relevant information. For information specific to your situation, see your doctor and contact appropriate resources such as the organizations listed below.

Occupational Health Clinics for Ontario Workers:

1-877-817-0336

www.ohcow.on.ca

Workplace Safety & Prevention Services:

1-877-494-WSPS (9777)

www.wsps.ca

Ontario Lung Association:

Asthma Action™ Helpline: 1-888-344-LUNG (5864)

www.on.lung.ca

Canadian Centre for Occupational Health & Safety:

1-800-668-4284

www.ccohs.ca

Telehealth Ontario:

1-866-797-0000

3M Canada Occupational Health & Environmental Safety Division:

For information on **respirator fit-testing** call

1-800-265-1840 ext. 3769

For general respiratory questions call the Technical Support Centre at 1-800-267-4414 or visit

www.3m.ca/safety

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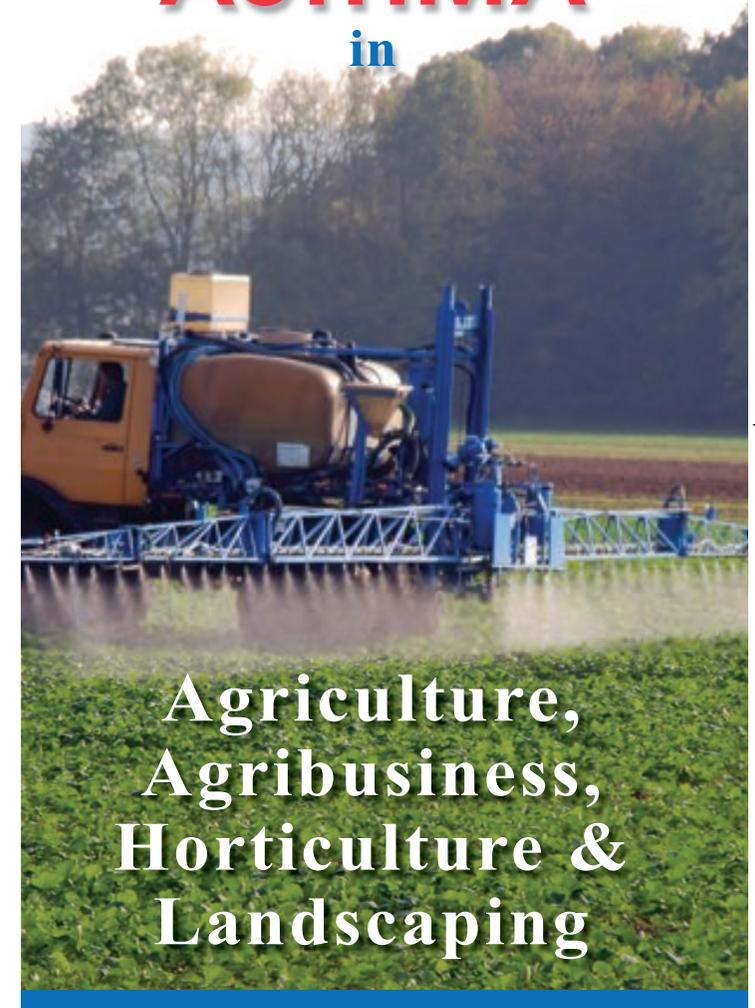
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WORK-RELATED ASTHMA in



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