

OCCUPATIONAL ASTHMA

Greenhouse and Mushroom workers are at elevated risk of developing *Occupational Asthma (OA)* compared with other Canadians.

There are two types of Workplace related Asthmas:

OCCUPATIONAL ASTHMA —These are cases without an existing asthma condition where *OA* symptoms develop after exposure to a trigger found at work.

WORK-AGGRAVATED ASTHMA — These are cases with an existing asthma condition where the severity or frequency of asthma symptoms increase after exposure to a nonspecific trigger found in the workplace.

EFFECTS

Occupational Asthma is a leading non-musculoskeletal cause of disability causing lost work and production. Every year *OA* costs businesses millions of dollars. Consider how financially devastating being physically unable to work for 48 hours during harvest could be.

Farm owners and self-employed people are less able to switch occupations or avoid exposure. Yet those who remain at their workplace experience a worsening of their asthma symptoms over time.

The longer people are exposed to the trigger that causes their *OA* the more likely the symptoms and effects will continue, even after leaving the source of the exposure. The severity and frequency of symptoms are often directly related to the number of hours of exposure to the trigger.

If you are perfectly healthy you could still develop permanent *OA* after only a single exposure.

Occupational Asthma affects 30 to 50 times more people than *Farmers Lung* and can lead to permanent disability and even death.

RECOGNIZING SYMPTOMS

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

- Do you cough, wheeze or have a tight chest more than 3 times per week?
- Does coughing, wheezing, or chest tightness wake you at night more than once a week?
- Do you have to stop working due to shortness of breath?
- Do you ever miss work because you can't breathe?

Symptoms are caused by inflammation and airway tightening and can include cough, wheezing and difficulty breathing. If symptoms continue to the point that talking is difficult or medication doesn't last more than 2 hours, you should call 911 and go to the nearest emergency room.

TRIGGERS

Causes of *OA* in Greenhouse, Landscaping and Mushroom workers are often attributed to:

- Mites and other Insects (predatory, pests and pollinators)
- Fungal Spores
- Pollen and Plant Oils, and
- Chemicals (fertilizers, pesticides, herbicides, insecticides).

Predatory mites commonly used in greenhouses as a natural pest control and fungal spores in mushroom plants are the two largest asthma threats to exposed workers.

Inform your doctor that you work in a Greenhouse, with Mushrooms or as a Landscaper and therefore may be exposed to possible *Occupational Asthma* triggers as *OA* is often misdiagnosed as:

- Repeated diagnoses of *Bronchitis*, or;
- *Emphysema* wheeze in older people.

TREATMENT & AVOIDANCE

Your best bet is to avoid exposure to triggers in the first place, as treatment and preventive measures after the fact can only lessen and help control symptoms NEVER eliminate them; there is no cure.

There are three methods for dealing with *OA*:

- Remove the Trigger
- Remove the Worker from the Workplace, and/or
- Lessen the Symptoms.

OA often results in employees having to change careers. However, if changing your career isn't an option, your only alternative is to avoid and reduce exposure and to work with your health care professional on an asthma treatment plan.

Respirators offer the single greatest protection against *OA*, especially in confinement situations. Your respiratory health, if you wear a respirator for preventative reasons, will be far better than if you develop *OA* and have to wear a respirator because of symptoms. You should use a full-face or half-mask respirator capable of removing any chemicals you are using and 95% or more of the particulate matter. The respirator should ALWAYS be worn any time you are in contact with mushrooms or flowering plants, applying chemicals, or in a greenhouse.

A Powered Air Purifying Respirator (PAPR) is a good investment; offering protection, cooling comfort, and can be used even with a beard but may not offer 100% protection in that circumstance. Installing a central airline for multiple helmets can reduce costs.

A dust mask is NOT able to protect you from harmful airborne pollutants and should never be worn in situations whenever spores or chemical exposure is

likely (such as mushroom houses or greenhouses after spraying).

Don't sweep up spills; wet and use an industrial vacuum with a High Efficiency Particulate Air (HEPA) filter. Regular vacuuming will improve conditions for everyone.

Predatory mites used for pest control may be transported indoors where they colonize storage areas where outdoor clothing is kept. Don't take work clothes home; wash everything at least once a week in hot water (over 60°C/140°F), ideally in a separate machine designated just for work wear.

Mites thrive in warm, high humidity areas. Many buildings lack proper ventilation; eliminate dead zones and consider automating ventilation systems based on temperature and humidity.

High concentrations of mold and fungi in mechanically vented greenhouses and mushroom houses increased the risk of OA. Commercial anti-mold sprays or preparations will help to reduce mold levels.

You should wear an appropriate respirator when applying cleaners, fertilizer, or any other type of powder.

When handling pesticides and fertilizers. ALWAYS follow safety instructions completely and WEAR a respirator even if it is not recommended.

Gas heaters and diesel generators must be properly ventilated to the outdoors as even low levels of combustion byproducts can result in OA.

Respirators or dust masks as a minimum should be available for contract workers and visitors to reduce their exposure. NEVER allow unauthorized persons admittance.

ASTHMA RESOURCES

If you or your doctor have questions or want help with symptoms call:

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

If you want more information about agricultural related asthma contact the organizations below:

Asthma Action Help Line: 1-800-668-7682

Canadian Centre for Occupational Health & Safety:
www.ccohs.ca or 1-800-668-4284

Canadian Lung Association: www.lung.ca

Farm Safety Association, Inc: www.farmsafety.ca

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

Telehealth Ontario: 1-866-797-0000

The Asthma Society of Canada: www.asthma.ca

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