

OCCUPATIONAL ASTHMA

Clinical Asthma affects 2.2 million Canadians of which 330,000 cases are *Occupational Asthma (OA)*. Many of these cases are directly related to workers in Swine and Poultry confinement buildings.

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

Initial respiratory problems often start only after a few months of employment and can become permanent after a single exposure, even if you are perfectly healthy. Permanent disability or even death can occur.

Length of exposure to a trigger increases the chance that your symptoms and effects will continue even after you leave the source of the exposure. The severity and frequency of symptoms are often directly related to the number of hours of exposure.

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 lack 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

If you work in an animal Confinement Building (Swine or Poultry) you are at an increased risk of developing *OA* from exposure to:

- Ammonia from pig and poultry urine
- Endotoxins from fecal material
- Feathers and feather tips
- Mites and Bacteria
- Organic dust from litter and feed and
- Inorganic dust and metal from stainless steel cages and gratings.

Ammonia exposure and mites are the most serious triggers for animal confinement.. Mites and bacteria in confinement buildings are responsible for poor respiratory health in pigs, birds and humans.

Spending 4 or more hours per day in a swine confinement building can greatly increase your risk of developing *Occupational Asthma*.

Veterinarians and visitors to swine and poultry containment facilities report very high levels of *OA* and asthma attacks. Facilities should have extra respirators or Powered Air Purifying Respirators (*PARPs*) to protect contract workers.

Inform your doctor that you work with animals in confinement because *OA* is often misdiagnosed as:

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

TREATMENT & AVOIDANCE

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.

If changing careers isn't an option; your only real option is avoiding and reducing the exposure.

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 respirator capable of removing AMMONIA and 95% or more of the particulate matter. The respirator should ALWAYS be worn any time you are in animal confinement buildings. A dust mask is NOT able to protect you from harmful airborne pollutants and should not be worn where ammonia exposure is expected.

A hard hat 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.

Exposure to mites occurs when handling straw, hay, grain, feed or bedding. Mites may be transported indoors where they colonize areas where outdoor clothing is kept. Don't bring work clothes home or wash them in a household washer. Wash 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 confinement buildings lack proper ventilation - this harms both workers and animal health. Eliminate dead zones and consider automating ventilation systems based on temperature and humidity. Commercial anti-mold sprays will help to reduce mold levels.

Spraying swine with canola oil and using misting systems in swine confinement facilities are effective in reducing the occurrences of *Occupational Asthma* by limiting airborne dust and moisturizing the skin to reduce dander production. Total Organic Dust (TOD) concentrations can be reduced by up to 80%.

Handling feed, especially those that contain fish powder increases your chance of developing *OA*. Adding molasses or another thickening agent to feed will reduce airborne contaminant levels. Spraying water or canola oil on feed or bedding prior to distribution, in enclosed spaces and automatic feeding system will reduce airborne containments. Don't sweep feed or spills; wet and use an industrial vacuum with a High Efficiency Particle Air (HEPA) filter.

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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WORK-RELATED ASTHMA IN ANIMAL CONFINEMENT



POULTRY, SWINE AND OTHER ANIMAL CONFINEMENT WORKERS



A pamphlet prepared by:



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