

Workplace Health and Safety Bulletin



Using Pesticides Safely

Workers in many different jobs can be exposed to pesticides (insecticides, herbicides, fungicides, rodenticides, etc.). They include horticulturists, exterminators, greenhouse workers, forestry workers, roadside powerline workers, petroleum sector workers (pipeline right-of-way, wellsites), agricultural workers and aerial pesticide applicators among others. This bulletin explains how pesticides can enter your body, what the health effects are, and what you can do to protect your health.

How do you get exposed to pesticides?

Pesticides can enter your body during mixing, applying, or clean-up operations. You can be exposed to pesticides by breathing in mists or vapours and pesticides can be absorbed directly through the skin or eyes if the liquid containing the pesticides gets on your skin or in your eyes. It is also possible for workers to accidentally swallow a pesticide.

Health effects

The most common health effect from exposure to many pesticides is on the nerve-muscle system. With too much pesticide exposure, a worker can have symptoms such as muscle weakness and twitching, abdominal cramps, difficulty breathing, and even paralysis. Quite often symptoms also include nausea, vomiting, increased perspiration, and lightheadedness. Sometimes, with severe exposures, convulsions can occur. Certain pesticides affect the central nervous system and can cause headaches, depression, irritability, poor balance, and

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memory problems. Reproductive effects have been reported from exposure to a few pesticides, so if there is a concern it is a good idea for pregnant or nursing mothers to check with their doctors about further exposure.

Many health effects reverse themselves after time, but exposure to pesticides can also cause problems that don't go away. For example, some pesticides can also cause muscle weakness, difficulty moving, and some loss of sensation. Health effects from pesticides exposure can be immediate, but sometimes health effects aren't noticed for years. No matter what type of pesticide you handle, it is important for you to find out about the particular chemicals you work with, and how to protect yourself.

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Read the product label and material safety data sheet (MSDS) provided with the pesticide. The Pest Management Regulatory Authority (PMRA) of Health Canada has a pesticide product information database which can be accessed online at:

 www.hc-sc.gc.ca/cps-spc/pest/protect-proteger/publi-regist/index-eng.php#ppid

Protecting your health

Individuals in Alberta who:

- use pesticides in or on the grounds of condominiums, hospitals, day care centres, schools and nursing homes;
- offer pesticide application services;
- apply pesticides on public land (eg. provincial or municipal);
- conduct forest management activities;

must hold a valid Pesticide Applicator Certificate (or be supervised by a certified applicator). In addition, individuals who apply pesticides as a service, in forests or on public land, must also have a Pesticide Service Registration from Alberta Environment. This protects workers by making sure they have proper training, experience, and regular medical check-ups. For more information visit the Alberta Environment website at:

 www.environment.alberta.ca/0961.html

Anyone who works with or may be exposed to pesticides, including maintenance people who maintain or clean equipment, must know and use safe personal and work habits, correct spill clean-up and disposal procedures, and proper first aid procedures.

Develop safe personal habits at work

- don't eat, smoke, or drink in a chemical handling area
- always wash your hands and face before eating, drinking or smoking or using a kitchen or bathroom
- have water, soap and towels available
- when handling a highly toxic pesticide, do not work alone

Develop safe work habits

- work in a well ventilated area
- be careful to avoid splashes and/or spills
- use the proper tools and equipment to open containers and mix chemicals
- never use your mouth to siphon or clear clogged spray nozzles
- never spray on a very windy day — you can spray when there is a slight breeze (6-16 kph), but make sure the spray blows away from you or anyone else and remains on the target property
- follow safe storage practices to avoid accidental contamination and/or poisoning.

Use personal protective equipment

- wear respiratory protection and make sure it is NIOSH approved for the chemical(s) you are working with — read the Code of Practice your company has written for use of respirators
- make sure your respirator fits properly
- if you use a cartridge mask, make sure to change the cartridge when necessary
- wear coveralls and chemical resistant gloves
- wear goggles or a face shield, rubber boots, and an apron when there is a danger of a splash or spill
- change and launder clothes daily and more often if contamination occurs. If clothing has been contaminated with a chemical, cleaning won't always remove the chemicals. You may have to throw contaminated clothing out.
- discard leaky gloves or contaminated leather boots or shoes

Have proper spill clean-up and disposal procedures

- isolate the spill area and ventilate if indoors
- wear the appropriate personal protective equipment (see the MSDS or product label) — unauthorized people and those without protection should be kept out of the spill area
- use an absorbent material for liquid spills such as activated charcoal or vermiculite
- after a spill has been absorbed, the contaminated area should be scrubbed with a decontaminant product as identified on the MSDS
- for specific clean-up and disposal information contact the pesticide manufacturer or refer to the MSDS
- accidental releases of pesticides into the environment must be reported to Alberta Environment (1-800-222-6514)

Know the proper first aid procedures


- have available the necessary first aid equipment — eye wash equipment, first aid kit, soap and water.
- watch for health effects in yourself and co-workers — if you suspect a poisoning get medical aid and stay with the victim.
- protect yourself if you need to administer first aid — first put on personal protective equipment such as chemical resistant gloves and coveralls.
- if a worker gets splashed in the eyes, immediately flush eyes with water for at least 15 minutes and get medical aid.(use a face mask or shield to prevent your face from becoming contaminated by the victim).
- if a worker gets splashed on the skin, remove the contaminated clothing and wash the skin with soap and water. Do not re-use the contaminated clothing until it has been laundered. Do not let the victim become chilled.
- remove victims from a contaminated site. If a victim is not breathing, start artificial respiration .
- perform any other first aid measures necessary until you have medical aid (if necessary, call the provincial poison control center at 1-800-332-1414 for information on how to treat accidental poisoning).
- make sure to take the label of the pesticide container to the medical aid personnel who will treat the victim.
- for more specific information and practice in first aid, take a first aid course.

If you are unsure about something, ask your supervisor. Both you and your employer have a legal responsibility to ensure your health and safety at work.

Medical check-ups


Certified pesticide applicators are encouraged to have regular medical check-ups.


For more information

 http://employment.alberta.ca/documents/WHS/WHS-PUB_ch056.pdf
Guidelines for Workers Applying Insecticides – CH056

Contact us:

Province-Wide Contact Centre

 Edmonton & surrounding area:
780-415-8690

 Throughout Alberta:
1-866-415-8690



Deaf or hearing impaired
▪ In Edmonton: **780-427-9999**
or
▪ **1-800-232-7215**
throughout Alberta

Web Site



www.worksafely.org

Getting copies of OHS Act, Regulation & Code:

Queen's Printer



www.qp.gov.ab.ca

Workplace Health and Safety



<http://employment.alberta.ca/whs-ohs>



Edmonton 780-427-4952

Call any Government of Alberta office toll-free
Dial 310-0000, then the area code and telephone number you want to reach

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