



Pesticides – What You Need to Know

Before you decide to apply pesticides to get rid of pests and/or unwanted weeds, you need to know that the miss-use of pesticides could have consequences for you, your family, your pets, wildlife and the environment. Read and follow label directions and make informed choices regarding pesticides and the level of use appropriate for you. Consult licensed professional applicators in area about treatments. These personnel are educated in utilizing proper approaches, safety equipment, application times and proper quantities where required.

What are pesticides?

A pesticide is a chemical or biological substance designed to kill, control or repel a variety of living organisms. Some different classes of pesticides are as follows:

- Insecticides (for insects)
- Herbicides (for vegetation)
- Fungicides (for moulds or fungi)
- Rodenticides (for rodents)

Fertilizers containing an herbicide (e.g., “Weed and Feed”) are also considered pesticides.

How can I be exposed to pesticides?

Pesticide exposure can occur from either direct contact with the pesticide (e.g. during application) or through indirect exposure (e.g. by touching surfaces contaminated with pesticide residue such as your lawn or carpet, applicator tools, containers and the product itself).

Pesticides can enter the body through a variety of routes. They can be absorbed by the skin, ingested or inhaled. Health effects associated with the various routes of entry vary.

Improper storage and improper applications (i.e. mixed too strong or using the wrong equipment for safety/applying/mixing) will increase an individuals exposure to the potentially harmful substances.

Who's at risk from pesticide exposure?

Pesticides can affect anyone, but infants and children may be especially sensitive to health risks posed by pesticides for the following reasons.

- Their internal organs are still developing and maturing.
- In relation to their body weight, infants and children eat and drink more than adults, possibly increasing their exposure to pesticides in food and water.
- Behaviors, such as playing on floors or lawns, swimming in pools, applying insect repellent or putting objects in their mouths, increase a child's exposure to pesticides used in homes and yards.
- Some pesticides may harm a developing child by blocking the absorption of important food nutrients necessary for normal healthy growth.
- Some pesticides may cause harm if a child's excretory system is not fully developed, the body may not fully remove pesticides.
- There are "critical periods" in human development when exposure to a toxin can permanently alter the way an individual's biological system operates.

Persons with occupational exposures to pesticides (e.g. pesticide applicators, farmers) are at an increased risk of exposure but most time applicators that are exposed to pesticides create their own hazards through lack of following label and training procedures.

The elderly or immunocompromised and your pets are also at an increased risk of health hazards associated with pesticides exposure.

How can I reduce the risk of adverse health effects when using these potentially harmful pesticides?

Limiting your exposure to pesticides is the best way to reduce the possible health hazards associated with pesticide exposures. This can be accomplished in the following ways:

- Only apply pesticides when they are needed to combat a pest problem.
- Contact local professional applicators for proper approaches to solve pest issues safely, efficiently and without pesticides wherever possible following Integrated Pest Management principals.
- Implement your own Integrated Pest Management approach in your home, lawn or garden. (see **Integrated Pest Management fact sheet**)
- Wear proper personal protective equipment and only apply pesticides during appropriate times.
- Carefully follow the pesticide label for proper dosage and safety precautions.

For more information on how to reduce the risk when using these potentially harmful pesticides, see the Fact Sheet "**How to Protect Myself While Applying Pesticides**".

What are some health effects that have been attributed to pesticide exposure?

Acute symptoms resulting from large dose exposures to some pesticide over a short period of time could result in the following symptoms:

- headaches
- nausea
- fever
- breathing difficulties
- seizures
- eye pains
- vomiting
- cramps
- diarrhea
- sore nose, tongue or throat
- burning skin
- rashes
- coughing
- muscle pain
- tissue swelling
- blurred vision
- numbness in hands or feet
- incontinence
- anxiety
- irritability
- sleep disorders
- hyperactivity, fatigue
- dizziness
- irregular heart beat
- high blood pressure
- spontaneous bleeding
- temporary paralysis.

Some chronic health effects associated with low dose, long-term exposures to pesticides include:

- fertility problems,
- birth defects
- miscarriages
- blindness
- liver and kidney dysfunction
- neurological damage
- heart trouble
- stroke
- immune system disorders
- endocrine disruption
- CNS (central nervous system) disorders
- menstrual problems
- memory loss.

Some active ingredients in pesticides have been shown to be carcinogens (cancer causing agents), mutagens (causing changes in DNA chromosomes) or teratogens (causing birth defects while still in fetal stages)

It should be noted that the above health effects are attributed to a given specific active ingredient. For more information on the health effects for a given product, identify the active ingredient from the product label and research it's specific health effects on the following website: EXTTOXNET – Pesticide Information Profiles at:

<http://ace.ace.orst.edu/info/exttoxnet/pips/ghindex.html>

How do I choose a professional applicator for my home, yard or garden?

There are many good environmentally friendly, effective and safe products being utilized by professionals daily. The industry as a whole has been moving quickly into Integrated Pest Management for sometime now, through new innovations, more labour intensive programs and less pesticide application wherever possible.

Ask yourself or a professional applicator the following questions before he/she applies potentially harmful pesticides to the area of concern:

- Do you have a pesticide-free lawn care program?
- Do you assess an area for problems before applying pesticides?
- How will your programs contribute to healthy soil?
- Do you provide advice about ongoing lawn maintenance?
- What types of pesticides do you use?

Finally, read the small print. Some companies use innocent sounding terms like weed management instead of herbicide applications. Ask your company for a full explanation of any ambiguous words or statements first, before application.

Why are pesticides an area of concern? Doesn't the government regulate which pesticides are approved?

The Pest Management Regulatory Association (PMRA) evaluates and studies pesticides to determine whether health and environmental risks associated with a pesticide are acceptable and whether the product has value as a pest management tool prior to its approval.

An alarming statistic is that at the present time there are more than 6000 certified products on the market with over five hundred registered active ingredients. Out of these five hundred active ingredients, three hundred were approved before 1981 and more than 150 of those were approved before 1960. This means that there are currently on the market, pesticides that are sold to the public, that contain active ingredients that were assessed based on standards that were often far from those that are deemed acceptable today, both from an environmental and a public health point of view.

The current statute in place regarding pesticides dates back to 1969, and therefore is thirty-three years old. The government is currently trying to pass legislation (Bill C-53) which would call for a re-evaluation of all pesticide products on the market, require special protection for infants and children, strengthen post control of pesticides by increasing fines for pesticide related offences and require an additional ten fold safety factor be used in analysis of pesticide products. The approval for this Bill is still pending.

Can municipalities restrict pesticide use?

Municipalities may place whatever restrictions they wish on the use of pesticides on lands that they own. In addition, under the Cities and Towns Act, a municipality may establish by-laws within its jurisdiction to restrict or ban the use of pesticides on private land. Public input into this subject is an important process in the implementation of such a by-law. If you are interested in the subject, contact your local municipal, town or city office in writing voicing your concerns.

What is the Kenora area doing with respect to pesticide use within the area?

Members of the Kenora city council and the Northwestern Health Unit have formed The Kenora Integrated Pest Management Committee. The Purpose of this committee is to discuss the implementation of an integrated pest management program within the Kenora area.

This Integrated Pest Management (IPM) program will aim to control pests through regular maintenance and monitoring. IPM utilizes threshold limits to determine if treatments are needed and employs physical, mechanical, cultural, biological, and educational tactics to keep pest numbers low enough to prevent unacceptable damage or annoyance. Applying pesticides to crops, animals, buildings or landscapes on a routine basis, regardless of need, is not IPM. Applications of pesticides are always the last resort in an IPM program.

Has there been any studies into interactions between pesticides and other chemicals in our environment?

Synergistic effects refer to the health effects associated with a combination of one or more chemical compounds. There has been little or no studies done on the synergistic effects of pesticides with other chemicals in our environment. This is an area of concern because we have no evidence related to the health effects associated with the combination of pesticides in our environment with other chemicals.