

Pesticides

Pesticides - Re-entry Interval

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What is a "re-entry interval"?

The re-entry interval (REI) (also known as restricted entry interval or re-entry time) is the minimum amount of time that must pass between the time a pesticide was applied to an area or crop and the time that people can go into that area without protective clothing and equipment.

NOTE: The term "pesticide" describes a very large and diverse group of chemicals or products. It is very important to always get specific information about the exact product you are using.

For more information, other OSH Answers documents in this series include:

- [Pesticides - First Aid](#)
- [Pesticides - General](#)
- [Pesticides - Labels](#)
- [Pesticides - Health Effects](#)
- [Pesticides - Working Safely](#)

Why are "re-entry intervals" important?

Re-entry intervals are set to protect people (and animals, for example in a kennel) against poisoning by pesticides if they enter a treated area too soon after application without proper protective equipment.

There are many ways a person can come in contact with a pesticide. In general, exposure to pesticides may occur by:

- Inhalation of vapours, dusts or mists.
- Skin contact with residues.
- Eye contact with vapours, dusts or mists, or by rubbing your eyes with your hand, a glove or clothing that is contaminated with pesticide residue.
- Ingestion (eating food that has been treated or eating without first washing hands).

When treated plants are touched during work activities such as weeding, thinning, or brushing against plants, some pesticide may be transferred to skin. Workers in a field can also cause residues on plants and on the soil surface to "fly up" as a dust. The dust then settles on the worker's skin and/or is inhaled. People in treated areas may also breathe vapours from a recent pesticide application.

Sometimes it is not as easy to avoid residues. For example, it is also important to be aware of spraying activities on neighbouring properties. On windy days, spray drift can travel a surprising distance. If you smell a "solvent" smell or if you notice a residue on the leaves of the plants you are handling, leave the area and ask the grower if the area has been sprayed recently.

Where do I find information on re-entry intervals?

The label on the pesticide container provides information on the re-entry intervals. A pesticide container label consists of several panels of information. If all the information does not fit on these container panels then additional information related to the re-entry time may be found in a separate booklet. There could also be stickers, tags, seals, leaflets, brochures and wrappers on, or attached to a container. For more information on labels, please see the [OSH Answers Pesticide - Labels](#).

Provincial re-entry guidelines may also be available. For example, the WorkSafeBC Occupational Health and Safety Regulations (section 6.89) state that a person must not enter a treated area until the restricted entry interval has expired. This length of time is determined by what is stated on the label of the pesticide used. If the label states different re-entry times for different types of activities, choose the activity that most closely matches. If more than one pesticide is being used, use the longest time. If the label does not state a re-entry time, the regulations state the restricted entry interval is:

- 24 hours if the pesticide is classified as slightly toxic pesticide (label identification - skull and crossbones symbol in triangular or diamond shapes).

- 48 hours if the pesticide is classified as moderately (label identification - skull and crossbones symbol in octagonal or diamond shape) or very toxic (label identification - skull and crossbones symbol in octagonal shape).

See Table 2 in the OSH Answers [Pesticide - Labels](#) document for examples.

For some pesticides, longer restricted intervals may be indicated on labels, and this interval must be followed.

Signs should also be posted that indicate spraying has occurred and what the re-entry interval is.

Workers who are trained and certified in handling pesticides may be allowed to enter the treated area to do short-term work before the re-entry interval is finished. Special precautions must be taken in these situations depending on how early the area is entered. However, nobody should enter the area in the first four hours after the application.

What factors affect the re-entry interval?

Different pesticides will have different re-entry intervals. In addition, each pesticide may have one or more different re-entry intervals. These intervals are established by considering the following:

- The toxicity of the active ingredient (actual poison) of the pesticide.
- If it is a mixture, what remains in the residue after application.
- How the pesticide is formulated (including adjuvants) - for example, organic solvents in pesticide formulations may increase the skin toxicity of some insecticides.
- If the pesticides are converted into more toxic compounds under certain environmental conditions.
- The rate and method of application including whether it is applied outdoors or in a confined space (such as greenhouses or barns).
- Characteristics of the plant being sprayed (type of crop, height of crop at maturity, density of leaves, and how the plant will be handled, how close the pesticide is applied to harvest). Since different rates are used for each crop, the REI can vary between crops. For example, the REI for raspberries could be 7 days while the REI for apples could be 14 days.
- Weather conditions may change how the pesticide disperses and dissipates (such as variations in temperature, sunshine, moistness and wind). For example, organophosphates and carbamates in hot and dry climates take longer to break down and longer re-entry intervals (1-2 weeks) are sometimes necessary to prevent acute poisoning of field workers.

- The type of work being done after the pesticide is applied. Human contact with treated plants can vary. For example, a REI could be 14 days for thinning, but only 48 hours for irrigating.

If several pesticides are applied at the same time, the longest re-entry interval should be followed.

How do you know if you have been exposed?

Recognizing symptoms of pesticide exposure helps you to know to leave the area immediately and to begin first aid treatment if required. For a list of health effects, please see the OSH Answers document [Pesticides - Health Effects](#).

Some health effects can be vague and be confused with other illnesses such as flu, excess heat, or food poisoning. Be aware that symptoms may appear within a few minutes of exposure or may not be evident for hours. Use the "buddy system" and keep an eye on your co-workers as well. If anyone is acting or feeling unusual, or showing signs of health effects, see a doctor and call your local Poison Control Centre.

If you notice symptoms in yourself or a co-worker:

- Leave the area immediately. Find out what pesticide had been applied.
- Get medical help. Take any information you have about the pesticide (e.g., bring a clear picture of the label or container) to the doctor or hospital.
- If exposure happens on the job, report your condition to your supervisor immediately.
- Thoroughly wash any exposed areas with soap and water, especially hands, including under fingernails.
- Launder any contaminated clothing (wash twice separately from uncontaminated clothing; do an "empty" rinse cycle afterwards to clean your washing machine).

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