

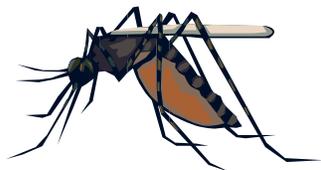


Understanding PESTICIDE HAZARDS



Pesticides are chemicals used to control organisms usually referred to as "pests."

Pesticides are chemicals to control organisms usually referred to as "pests." Various types of pesticides are available based on the type of pest the chemical will control or kill. For example, insecticides control insects, herbicides control unwanted vegetation, rodenticides control rodents and fungicides control plant diseases.



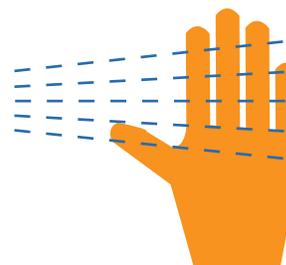
Some pesticides are so highly toxic that accidental exposure to them without proper protection can sicken or kill humans. Other pesticides are much less toxic; large exposures would be necessary to cause illness. Even slightly toxic pesticides can irritate the nose, throat, eyes and skin of some people.

Pesticides can enter the body in three major ways. These paths are frequently referred to as routes of entry. Pesticides can enter through the mouth (**orally**), through the eyes or skin (**dermally**) or through the lungs (**inhalation**). People may be poisoned without realizing the seriousness of the exposure, especially if the pesticides enter through the skin or lungs.



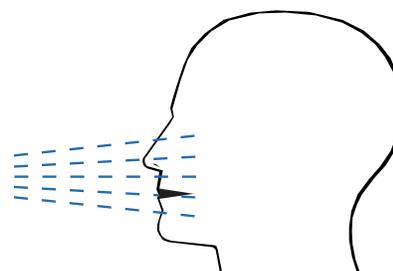
Oral poisoning can be caused by:

- Not washing hands before eating, drinking, smoking or chewing.
- Mistaking the pesticide for food or drink.
- Accidentally applying pesticides to food.
- Carelessly splashing pesticide into the mouth.



Dermal poisoning can be caused by:

- Not washing hands after handling pesticides or their containers.
- Splashing or spraying pesticides on unprotected skin or eyes.
- Wearing pesticide-contaminated clothing (including gloves and boots).
- Applying pesticides in windy weather.
- Wearing inadequate protective clothing and equipment during mixing and application.



Inhalation poisoning can be caused by:

- Prolonged exposure to pesticides in closed or poorly ventilated spaces.
- Accidentally breathing vapors from fumigants and other toxic pesticides.
- Breathing fumes, dust or mist during application without appropriate protective equipment.
- Inhaling fumes present immediately after a pesticide is applied (reentering the area too soon).
- Not having a good seal on your respirator or using an old or inadequate cartridge or canister.

Exposure to pesticides may be either acute or chronic. Acute exposure is a single incident of exposure to a pesticide. Usually the symptoms of poisoning begin and leave little doubt about the cause of illness. Acute exposure is usually caused by an accident such as splashing a pesticide into your mouth, spilling or spraying a pesticide on your clothing or using broken equipment.

Chronic exposure is repeated exposure to pesticides over a period of time. Chronic exposure may go unnoticed because some pesticides may persist in the body for a long time without obvious signs or symptoms of poisoning. If you continue to be exposed to these pesticides, residues in your body may increase. Additional risk is that even low-level chronic exposure may lead to serious illness. Chronic exposure most often occurs in the workplace because of faulty or inadequate protective clothing or equipment, early reentry, inadequate cleanup of clothing and body or contaminated working conditions.

The U.S. Environmental Protection Agency (EPA) registers every pesticide used in the United States after extensive testing by the manufacturer. The EPA assigns the pesticide to a particular toxicity category based upon its acute oral, dermal and inhalation toxicity and its potential for damaging the eyes or skin of the user. These categories are based on strict scientific parameters. But so that the user can tell quickly the relative toxicity of the pesticide, the agency assigns signal words to the various categories. The signal word must appear in large letters on the front panel of the pesticide label. It immediately follows the statement "Keep Out of Reach of Children," which must appear on every pesticide label.

DANGER – This word signals you that the pesticide is highly toxic. A taste to a teaspoonful taken by mouth could kill an average-sized adult. Any pesticide that is highly toxic orally, dermally or through inhalation or causes severe eye and skin burning will be labeled DANGER.

All pesticides that are toxic orally, dermally or through inhalation also will carry the word POISON in red and the skull and crossbones symbol.



WARNING – This word signals you that the pesticide is moderately toxic. As little as a teaspoonful to a tablespoonful by mouth could kill the average-sized adult. Any pesticide that is moderately toxic orally, dermally or through inhalation or causes moderate eye and skin irritation will be labeled WARNING.

CAUTION – This word signals you that the pesticide is slightly toxic. An ounce to more than a pint taken by mouth could kill the average adult. Any pesticide that is slightly toxic orally, dermally or through inhalation or causes slight eye and skin irritation will be labeled CAUTION.

Pesticide labels also must contain precautionary statements to help you decide the proper precautions to take to protect yourself, your helpers, other people and domestic animals. Sometimes the statements are listed on the label under the heading, "Hazards to Humans and Domestic Animals." These precautionary statements are composed of many sections.

The statements that immediately follow the signal word, either on the front or side of the pesticide label, indicate which route or routes of entry (mouth, skin, lungs) you must particularly protect. Many pesticide products are hazardous by more than one route, so the user should study these statements carefully before using the pesticide.

Specific action statements usually follow the route of entry statements. These statements recommend the specific action you should take to prevent poisoning accidents. They are directly related to the toxicity of the pesticide (signal word) and the route or routes of entry that must be particularly protected. The specific action statements help the pesticide user prevent pesticide-poisoning by taking the necessary precautions and wearing the correct protective clothing and equipment.

Pesticide labels vary in the type of protective clothing and equipment they recommend. Many carry no statement at all. The best way to determine the proper protective clothing and equipment is to use the signal word, the route of entry statement and the specific action statements, along with basic guidelines on safety.

You should follow all advice on protective clothing or equipment that appears on the label, but the absence of a specific statement does not excuse the user from following basic precautions. At the very least, anytime you handle pesticides you should wear a long-sleeved shirt and long-legged trousers or a coverall type of garment. Clothing should be made of closely woven material or laminated fabric manufactured for this purpose. If the pesticide is a concentrate or highly toxic, you should also wear a liquid-proof apron. Gloves should also be worn; liquid-proof neoprene gloves are

best. Do not wear cotton or leather gloves or gloves lined with fabric. These materials may absorb pesticides. The gloves should be long enough to protect the wrists.

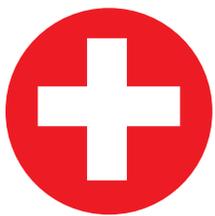
You also should wear something to protect your head, preferably a wide-brimmed hat that does not have a cloth or leather sweatband. Plastic "hard hats" with plastic sweatbands give good protection. Sturdy shoes and socks are sufficient for some pesticide applications. Neoprene or rubber boots are a wise precaution with many pesticide applications because canvas, cloth and leather shoes can readily absorb pesticides. Round out your protection by wearing goggles or a face shield when there is any chance of getting pesticides in your eyes. Eyes readily absorb pesticides, and the temporary blindness caused by an accident may delay or prevent self-treatment.



Labels also often list other precautions to take while handling a product. Most are self-explanatory:

- Do not contaminate food or feed.
- Remove and wash contaminated clothing before reuse.
- Wash thoroughly after handling and before eating, drinking or smoking.
- Not for use or storage in and around a house.
- Do not allow children or domestic animals into the treated area.

These statements represent actions that any competent person will always follow. **Do not ignore them!**



Pesticide labels also tell you the first-aid treatments recommended in case of an accident. Sometimes these statements are under the heading, "Statement of Practical Treatment." Typical statements include:

- In case of contact with skin, wash immediately with plenty of soap and water.
- In case of contact with eyes, flush with water for 15 minutes and get medical attention.
- In case of inhalation exposure, move from contaminated area and give artificial respiration, if necessary.

- If swallowed, drink large quantities of milk, egg white or water. Do not induce vomiting.
- If swallowed, induce vomiting.

All DANGER labels and some WARNING and CAUTION labels contain a note to physicians describing the appropriate medical procedures for poisoning emergencies and identifying an antidote. If you suspect that you, or someone with you, has been poisoned, seek medical attention and take a clean, uncontaminated copy of the pesticide label with you.

The pesticide label represents the best source of information about that particular pesticide. The label will tell you the relative toxicity of the pesticide, any precautions you should take while using it and what to do in case of an accident. It also will tell you what pests the pesticide will control and the directions for using the chemical safely and effectively.

It is a violation of the law to use a pesticide in a manner inconsistent with its label. Use the pesticide only as the label directs. Pesticides can be used safely and effectively, without damage to the applicator, other humans or domestic animals and the environment if used according to label directions.

**Remember:
before using any pesticide,
read the label thoroughly,
understand the label completely
and follow the label carefully!**

In Case of Poisoning:

Louisiana Drug and Poison Information Center

1-800-256-9822 (Louisiana only)

(318) 342-1710

24-Hour Service

Nationwide Toll Free Poison Control Center

1-800-222-1222

National Pesticide Information Center

1-800-858-7378

(1-800-858-PEST)

Monday-Saturday 6:30 a.m.-4:30 p.m. (Pacific Time)

www.npic.orst.edu

READ THE PESTICIDE LABEL FOR YOUR AREA

Understanding PESTICIDE HAZARDS

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