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No endorsement of products or firms is intended, nor is criticism implied of those not mentioned. Suggestions in this publication are intended to alert pesticide users to safety concerns, however, following these procedures cannot guarantee total protection from pesticides.

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#### ... and justice for all

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# Understand label precautions

Family Pesticide Safety



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## Understand label precautions

Whether you live in town or in the country, chances are you reach for a pesticide at one time or another to deal with weeds, insects, or rodents. Weed killers are called herbicides and insect killers are called insecticides, but pesticide is a broad term that includes herbicides, insecticides, and other products as well. In general, pesticides kill or help control lawn, garden, and crop pests and nearly everyone uses them occasionally.

The benefits of pesticide use to control pests tend to be widely accepted, but the health risks to individuals using them are less well understood. Pesticides differ in their toxicity or how dangerous they are to human health, but they must all be used with caution because long-term health effects of even the least toxic pesticides are still in question.

This pamphlet alerts you to some of the precautions you should take to use pesticides safely.

### Read the label

You must use pesticides according to their label requirements to avoid putting yourself, other family members, and children at risk of exposure. Before you buy a pesticide for home or garden use, read the label to make sure it is the right one for your pest problem. Then, purchase only the amount needed for your purposes so that you don't have hazardous

waste left over to store around your home. When you apply a pesticide, let other family members know where you used it so they can avoid these areas. Some pesticides require a waiting period after their use before an area can be reentered safely. It is your responsibility to keep children and pets off the grass or away from areas that have been treated until it is safe for them to be there. The label tells you a safe reentry time.

No matter whether you use a spray, a dust, or granules, your hands and clothing can be contaminated as you apply pesticide. Some pesticides are absorbed by the skin, so using personal protective clothing is very important. Also, it is essential that the clothing worn for pesticide application be properly cleaned or disposed of after your application is finished to avoid transfer of pesticide residues to furnishings, vehicles, or family members.

The toxic effects of pesticides are studied carefully by their manufacturers before they receive Environmental Protection Agency (EPA) registration for marketing. But, testing cannot be done with human subjects, so the EPA's toxicity ratings that manufacturers use come from tests with animals such as rats, guinea pigs, or rabbits. This testing is essential to provide evidence to ensure human safety.

### Look for signal words

Look for the SIGNAL WORD—one word in capital letters—on each pesticide label. The signal word shows consumers approximately how toxic or poisonous the pesticide is to human beings. The signal words and the amount of product that might need to be eaten to cause death to a 150-lb person are as follows: DANGER (most toxic), a taste to a teaspoonful; WARNING (moderately toxic), a teaspoonful to a tablespoonful; and CAUTION (least toxic), an ounce to a pint.

It takes much less pesticide to poison children. The exact amount that can cause illness or death varies with the toxicity of the pesticide and your health, size, and method of exposure. Pesticides can enter the body four ways: through the eyes, mouth, skin, or lungs.

### Precautionary statements on labels

Pesticide labels have “precautionary statements” that explain the minimum amount of personal protective equipment (PPE) or protective clothing that is required for using the product. The chart shows the PPE requirements located on pesticide labels for each signal word and toxicity category. But, if you want to be extra cautious, you can wear more PPE than the label recommends. Just be careful and watch for signs of heat stress in hot weather.

Get the right clothes to protect yourself. The chart shows the general type of protection needed, but it does not give details about chemical-resistant materials you might choose and it does not take into consideration the method of exposure (skin, eyes, or lungs). You need to learn about different PPE to make the best choice, especially for gloves. For most CAUTION label products, waterproof gloves are

sufficient. But, for products with WARNING or DANGER labels, it is best to use chemical-resistant nitrile gloves.

### Think layers of protection

Your level of exposure is reduced if you wear more than one layer of clothes. Although not mentioned in the chart, you should wear undergarments such as briefs and T-shirts under long-sleeved shirts and long pants. You should wear clean clothing each time you apply pesticides and not allow dirt and pesticide soil to continue to build up because then it is much more difficult to remove.

### Clothing cleanup

Another way to reduce your pesticide exposure is with good cleanup and laundering practices. Pesticides are never 100 percent removed from clothing with laundering, but they can be reduced to trace amounts. To launder cotton, cotton/polyester, or nylon blends use these steps:

- Wear rubber gloves to handle pesticide-soiled clothes. Store the contaminated gloves in zip-close bags between uses.
- Never wash baseball caps or hats in the dishwasher after wearing them for pesticide application. Discard them.
- Discard clothes contaminated with full-strength liquid concentrate.
- Keep contaminated clothes separate from other family clothes before, during, and after laundering.
- Never put contaminated chemical-resistant gloves in the washer with other clothes, contaminated or not.
- Prerinse, then wash pesticide-soiled clothes in a regular wash cycle with hot water, a high water level, and a strong detergent.
- Line dry clothes when possible. Or use a high-heat setting on the dryer.

### PPE requirements on pesticide labels

Signal word	Toxicity category	Minimum PPE required
DANGER	I (most toxic)	
Skin		Coveralls worn over long-sleeved shirt, long pants and socks, chemical-resistant gloves, chemical-resistant footwear
Breathing		Respiratory protection device
Eyes		Protective eyewear
WARNING	II	
Skin		Coveralls worn over short-sleeved shirt, short pants and socks, chemical-resistant footwear, chemical-resistant gloves
Breathing		Respiratory protection device
Eyes		Protective eyewear
CAUTION	III	
Skin		Long-sleeved shirt and long pants, socks and shoes, chemical-resistant gloves
Breathing		No minimum
Eye		No minimum
CAUTION	IV (least toxic)	
Skin		Long-sleeved shirt and long pants, socks, shoes
Breathing		No minimum
Eye		No minimum

**The amount of personal protective equipment (PPE) varies with toxicity and type of exposure. Generally, as toxicity increases, more PPE is required.**

### Understand pesticide poisoning symptoms

Overexposure to pesticides can result in several health effects. You may experience excessive fatigue, headache, dizziness, nausea, eye irritation, diarrhea, general weakness, and chest discomfort. If you have any of these symptoms when using or shortly after using a pesticide, seek advice from a doctor or poison control center.

Call for help in an emergency. Keep the Poison Control Center number posted beside your telephone for emergencies.

Iowa Poison Center  
1-800-352-2222  
Sioux City

More information can be found in other publications in the *Family Pesticide Safety* series. A single copy of each is available free at any Iowa State University Extension county office. Ask for these titles:

- *What to do when clothes are soiled with pesticides*, PM 1663b;
- *Wear the right gloves*, PM 1663c;
- *Wear coveralls and aprons*, PM 1663d; and
- *Use eye and lung protection*, PM 1663e.