

Keep Pets Safe Around Pesticides

EM 9052 • August 2012

David Stone and Ted Bunch

Pests can damage homes and yards, be a nuisance, and carry disease. Pesticides can be useful tools to deal with many pest problems. But, pesticides must be applied correctly and carefully to limit the risk to people, animals, and nature.

When you apply any pesticide in your home or yard, be sure to think about the safety of your pets. Dogs and cats are curious by nature, and they can get to places that their owners cannot reach. Pets eat things that people would not. They can take in chemicals when they groom their fur and paws and roll around or dig in the yard. Also, dogs and cats can be at high risk for poisoning depending on their breed, age, or health.

In this booklet, you'll learn the common risks to pets from using pesticides. You'll also find out how to reduce those risks when you use pesticides for these pests:

- **Slugs and Snails** **page 1**
- **Fleas and Ticks** **page 2**
- **Rodents** **page 4**
- **Weeds** **page 5**

You'll also learn ways to control these pests without using pesticides.

David Stone, director; and Ted Bunch, pesticide specialist; National Pesticide Information Center, Oregon State University



Slugs and Snails

Slugs and snails avoid sunlight and tend to be more active at night. People often don't see these pests, but they do find their distinct signs: plant damage (such as holes in leaves) or telltale slime trails. In the Pacific Northwest, many people have problems with slugs and snails in their gardens and yards.

Molluscicides

One way you can control slugs and snails is to use a **molluscicide** (moll-usk-i-side). There are only a few of these chemicals that people can use around their homes. The main chemicals are **metaldehyde** and **iron phosphate**. On a pesticide label, the main chemical is also called the **active ingredient**.

Be sure to read the pesticide label. The label tells you which active ingredient is in the container. The label also has directions that tell you how to apply the product.

Metaldehyde is highly toxic. It is also very attractive to dogs, cats, and other animals. So, it is very important that you apply metaldehyde in your yard in places that pets or wildlife cannot reach. This is very important to remember if your pet spends time in the yard on its own.



Metaldehyde exposure can cause twitching and seizures, vomiting, severe irritation of the mucous membranes, and diarrhea. Signs of poisoning usually appear within minutes to hours. The poison can be fatal without treatment. If you suspect that your pet has swallowed metaldehyde, you **must** contact your veterinarian **at once**.

Iron phosphate is the other main chemical used for slug and snail control at home. Products that contain iron phosphate are often sold as “dog safe.” This chemical tends to be less toxic to dogs compared with metaldehyde, but you must treat it carefully. There have been reports of iron poisoning in dogs from the use of iron phosphate.

Controlling slugs and snails without chemicals

There are ways to control slugs and snails without pesticides. These methods are part of an **integrated pest management (IPM)** approach to controlling pests.

Cultural controls include knowing the right time to water plants and removing cover for slugs. Slugs need moisture, but they avoid sunlight. Water your plants in the morning, not in the evening, to reduce damage to plants. Also, you can limit soil moisture by using drip irrigation. A drip system waters only the soil near plants. Remove debris, weedy growth, and other cover that slugs use for shelter.

Barrier control means to set up a physical barrier to keep slugs and snails away from your plants. You can sprinkle diatomaceous earth or borates along a garden’s edges. Or, you can put in more lasting barriers such as copper strips.

Biological control means allowing into your yard and garden the natural enemies that prey on slugs and snails. To do this, improve nearby habitat for snakes, amphibians, birds, or beneficial insects that eat slugs and snails.

Repellents such as garlic extract, limonene, or cinnamon oil may be other options for control of slugs and snails as well.

A **molluscicide** is a **granular pesticide**. When you use any granular pesticide, be sure to store the product in a place where pets cannot reach it. A locked cabinet high off the ground works well. Also, when you apply molluscicides, do not put the granules in piles where pets can find them.

Follow the label directions. Be sure to follow directions that call for watering in the soil until the granules have dissolved. It is a good idea to keep pets off treated areas until everything is dry.

Fleas and Ticks

Fleas and ticks can carry diseases and transmit them to pets through their bites. People who have pets (mostly dogs and cats) often rely on pesticides to help keep their pets free from these pests.

Insecticides

Products to fight fleas and ticks come in many forms. You can find shampoos, collars, dusts, and spot-on products (so named because the product is applied to a certain spot on the

animal's body). These flea and tick products contain chemicals called **insecticides**.

Be sure to read and follow all label directions carefully. The label tells you what type of animal the product is for. This is important because dogs and cats differ in how chemicals affect them. For example, cats are at high risk for poisoning from the chemicals called **pyrethroids**. So, never apply to cats a product labeled for use on dogs.

If you have more than one pet, the label directions might tell you to keep treated animals away from each other. This is to prevent them from licking each other and taking in more chemicals.

Be careful when you choose an insecticide to put on dogs and cats. Consult your veterinarian before using a product.

Spot-on flea and tick products are commonly made for a certain weight and species of animal. For example, smaller amounts or lower concentrations are used on younger or smaller animals. Be sure to check your pet's weight before you apply any pesticide or medicine.

After you use a spot-on product, keep checking your pet. Watch the place you applied the product for any sign of redness, swelling of the skin, or hair loss. Also look for any changes in behavior, such as a decreased appetite or increased thirst for water. Consult a veterinarian if you notice any changes.



Controlling fleas and ticks without chemicals

Ticks often climb grasses and brush so they can come into contact with people and animals passing by. Mow the lawn often and clear brush and yard debris to limit ticks' access to hosts.

If you find fleas in your home, vacuum often to remove food, larvae, and eggs. Wash infested fabrics and bedding in hot water. Drying clothes or other fabrics in a hot dryer will also kill ticks.

Other least toxic forms of pest control include steam-cleaning and using flea combs.

Integrated Pest Management (IPM)

IPM is a set of tools that uses biological, physical, and cultural methods to control pests before turning to pesticides. If pesticides are needed, choose the least toxic products first. For flea control, insecticides known as insect growth regulators (IGRs) can help to break the flea life cycle and cause fleas to die out.

Fleas and ticks may also become a problem for people. An infested home can cause severe stress. Also, some people are allergic to flea bites. Tick bites are mostly painless, but ticks can spread diseases like Lyme disease.

Rodents

Rodents, especially rats and mice, are serious pests. Rodents can carry disease, contaminate food, and destroy your belongings. Having rodents in your home is against housing codes. Keep them from getting into your home or garage.

Rodenticides

There are many types of pesticides made to kill mice and rats. They are called **rodenticides**. These products range in how toxic they are, and in how many times a rodent must feed on them before it is killed.

Rodenticides are made to attract animals, so they can also attract your pets. Dogs especially may work hard to reach baits placed behind structures or buried in the yard.

When an animal eats the poison bait, it can show many symptoms. Symptoms can differ depending on the type of rodenticide the animal ate.

Many rodenticides stop the body's ability to clot blood. (These are known as **anti-coagulants**.) Symptoms from eating these rodenticides are not always obvious, but they can be severe. Some of these symptoms are bleeding that won't stop, difficult breathing, weakness, and lethargy. These signs of poisoning can take up to 5 days before they show.

Other rodenticides, such as **zinc phosphide**, can cause vomiting, nervous pacing, muscle tremor, weakness, and convulsion. These signs can take more than 18 hours to show.

If you suspect that your pet has eaten bait, contact your veterinarian as soon as you can. Be sure to bring the product label or write down the active ingredient listed on the label so that the veterinarian can figure out the right treatment.

Animals can also be harmed by rodenticides if they eat rats or mice that have been poisoned. This is called **secondary poisoning**. Wildlife,

especially birds, are more at risk for secondary poisoning, but it can happen to dogs and cats as well. The most common rodenticides for secondary poisoning are difethialone and brodifacoum.

To reduce the chance of children and pets being poisoned, some products are sold in child- and pet-resistant packages.

Controlling rodents without chemicals

Traps. Two common ways to catch rats and mice are with spring-loaded traps and glue-boards. Putting these traps in the right place is the key to success.

Mice and rats like familiar places and shy away from open space. So, put your traps at a right angle to walls and baseboards, instead of in open areas without shelter. If you are dealing with roof rats, set your traps high off the ground along the rats' runways and tracks. To find out where their runways are, spread baby powder or flour where you think they might be. Then, check to see if there are rodent tracks in the powder.

Barriers to food. One reason mice and rats come into our garages and homes is in search of food. Pet food, birdseed, and other food products stored in packages that don't close well attract rodents. Keep these food products in glass or steel containers. Rodents can eat through many plastics.

Compost bins and garbage cans also lure rodents. Keep them well covered.

Barriers to shelter. Another reason rodents come into our homes is in search of shelter. Rodents, especially mice, can fit through really small holes. Find these holes and make barriers to keep rodents out. Look carefully for small holes along the threshold of the garage door and all outside doors. Also look at vents, drainage holes, and other spots that could be entry points into your home.

Good barrier materials are galvanized steel, hardware cloth, brick, and some kinds of wood.

Weeds

Herbicides

Herbicides are among the most widely used type of pesticide in the world. Some common products contain the chemicals glyphosate, 2,4-D, MCPA, dicamba, and triclopyr. Herbicides are heavily used on farms, golf courses, forests, parks, and home lawns to control unwanted plants and weeds. Pets can be at risk in any of these places.

Dogs and cats may be exposed to herbicides by eating treated grass. Or, they may get herbicides on their fur by walking on lawns that were recently treated. To reduce the risk to your pets, do not allow them onto treated areas until the product has dried completely. If the product gets wet again within 1 or 2 days of applying it, wait until the treated area has dried again before letting your pet onto it.

Wet paws can track herbicide residue into your home. Simply wipe your pet's paws with a towel to reduce the amount of toxic residue they bring in. Then, be sure to wash the towel in a normal washer on a hot cycle.

Glyphosate and 2,4-D are two common herbicide chemicals. **Glyphosate** is the chemical in Roundup® that kills grasses and broadleaf weeds. Symptoms in pets that have been



The way a pesticide works is called its **mode of action**. Herbicides work by interfering with a plant's normal growth cycle. They do this in a number of ways. For example, some herbicides disrupt a plant's ability to photosynthesize (capture sunlight and convert it into energy to grow).

Herbicides attack biological targets unique to plants, so generally they are less toxic to mammals than insecticides or rodenticides. But, as with any pesticide, use them with care.

exposed to high amounts of glyphosate are weight loss, weakness, vomiting, diarrhea, and salivation. Signs can appear within 30 minutes to 2 hours after taking in the chemical.

2,4-D causes uncontrolled growth in broadleaf weeds. Signs of harm to animals can be weight loss, salivation, diarrhea, weakness (especially in the hind legs), and convulsions.

The signs and symptoms of herbicide poisoning vary. They can be hard to detect in some animals. Be sure you know where to find the product label in case your pet is exposed to pesticides.

Controlling weeds without chemicals

You can lessen your pet's risk for exposure to herbicides by using these methods of weed control:

- Fertilize your lawn properly. (Note that fertilizers can be toxic to pets as well.)
- Water the lawn correctly.
- Aerate your lawn to help improve its health.

- Set the height of lawn mowers higher. This helps reduce the number of weeds by shading out new weed sprouts.
- Use a mix of different turf grasses to reduce the growth of some weeds.
- Pull weeds by hand or with a tool, or just ignore them.

Ask your local OSU Extension agent about how to control the weeds that are common in your area.

Reminders

You can help keep your pets safe around pesticides by doing these things:

- Follow the product label instructions.
- Store pesticides in a place where pets cannot reach them.
- Be alert to prevent exposure after you have applied the pesticide.

Remember that your pet behaves in different ways from humans, so it is at risk from pesticides in a different way than humans.

If you have questions, consult your veterinarian. Or, contact one of the centers listed below to find out more about pesticides and your pets.

American Society for the Prevention of Cruelty to Animals (ASPCA) Animal Poison Control: 1-888-426-4435, <http://www.aspcanet.org/Home/Pet-care/poison-control>

National Pesticide Information Center: 1-800-858-7378, <http://www.npic.orst.edu>

Pet Poison Hotline: 1-800-213-6680, <http://www.petpoisonhelpline.com/>

© 2012 Oregon State University. Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties. Oregon State University Extension Service offers educational programs, activities, and materials without discrimination based on age, color, disability, gender identity or expression, marital status, national origin, race, religion, sex, sexual orientation, or veteran's status. Oregon State University Extension Service is an Equal Opportunity Employer. Published August 2012.

References

- Buhl, K., F. Berman, and D. Stone. 2012. Metaldehyde and iron phosphate exposures reported to the National Pesticide Information Center (NPIC), and potential iron toxicosis in canines: 61 dogs (2000-2011). *Journal of the American Veterinary Medical Association* (in press).
- National Pesticide Information Center. 2008. 2,4-D Technical Fact Sheet. Oregon State University. <http://npic.orst.edu/factsheets/2,4-DTech.pdf>
- National Pesticide Information Center. 2010. Glyphosate Technical Fact Sheet. Oregon State University. <http://npic.orst.edu/factsheets/glyphotech.pdf>
- National Pesticide Information Center. 2011. Could snail bait hurt my dog? <http://npic.orst.edu/capro/SlugSnailPD.pdf>
- National Pesticide Information Center. 2012. Rodenticides Topic Fact Sheet. Oregon State University. <http://npic.orst.edu/factsheets/rodenticides.pdf>
- Rosetta, R. Slime and Punishment. *Digger*, Oregon State University, April 2011. http://www.oan.org/associations/4440/files/digger/Digger_APR_2011_p49-53.pdf

Use pesticides safely!

- **Wear protective clothing and safety devices as recommended on the label. Bathe or shower after each use.**
- **Read the pesticide label—even if you've used the pesticide before. Follow closely the instructions on the label (and any other directions you have).**
- **Be cautious when you apply pesticides. Know your legal responsibility as a pesticide applicator. You may be liable for injury or damage resulting from pesticide use.**