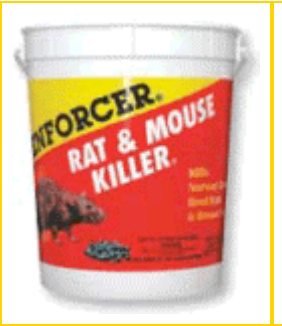
Rodenticide Toxicity

Rodents are common and very destructive pests, ruining property and carrying diseases. This means that the use of poison to kill them is very common. These poison baits are harmful (often deadly) to pets or people who eat them.

There are several types of rodenticides (rodent killing compounds) available. The traditional products are called anticoagulant rodenticides and are discussed here. Other rodenticides are also very toxic and no antidote is available for them.



Typical active ingredients are: brodificoum, diphacinone, warfarin, bromadoline, and others. Most of these products include green dyes that identify them as poisonous. However, dogs and cats have poor color vision and to them these pellets may look like kibbled pet food. In order to tempt the rats, manufacturers of these rodenticides make the poison very tasty – some are even flavored like peanut butter!

Anticoagulant rodenticides do not produce signs of poisoning for several days and up to several weeks after the toxic dose has been consumed.

Anticoagulant rodenticides cause internal bleeding. A poisoning victim will appear weak and pale, but bleeding may not be obvious externally.

The anticoagulant rodenticides work by decreasing the ability of the blood to clot. To help counteract the poison we give Vitamin K. Vitamin K is used by the liver to make the "clotting factors" that allow a blood clot to form when tissues are injured.

In most cases of poisoning we expect the symptoms to be nearly immediate, but in the case of anticoagulant rodenticide poisoning it takes days to weeks to deplete the body's own stores of Vitamin K. After that, even the smallest bump or scrape can lead to life-threatening bleeding. Every time we eat and chew there is also minor damage to tissues in the mouth. Our bodies normally repair this damage quickly and easily. However, when the blood doesn't clot properly, bruising of the gums or skin may quickly become obvious.

Symptoms

Most of the time external bleeding is not obvious and owners only notice that the pet is weak and/or cold. If you look at the gums, they may look pale or have small purple or red bruises. Sometimes bloody urine or stool is evident or nose bleeds may be seen. Signs of bleeding in more than one body location are a good hint that there is a problem with blood clotting.

Therapy

If the patient has recently ingested the poison, he or she may be made to vomit it up. We can also use a special form of charcoal to decrease the absorption of the poison into your pet's body. We will still recommend that your pet receive the antidote to the poison, in case some of was absorbed. ***The antidote is Vitamin K,*** given orally for a minimum of 2 weeks.

If bleeding is already occurring we will give your pet an injection of a large amount of Vitamin K and blood transfusions if needed.

If ingestion of the rodenticide occurred several hours to several days ago we will need to treat for a longer period of time, and we will need to monitor how long it takes for your pet's blood to clot. There are different kinds of anticoagulant poisons and they remain in the body for varying lengths of time, making it hard to know when to discontinue therapy. After a couple of weeks of therapy, medication is discontinued; 48 hours later a clotting test is run. If there is still rodenticide in the patient's system, the time it takes for your pet to clot his blood will be abnormal but he will not yet have started to bleed. The results of the clotting test will tell the veterinarian whether or not another couple of weeks of Vitamin K are needed.

It is very important to return for the recheck clotting test on schedule. Waiting an extra day or two can allow internal bleeding to recur.

There is no point to doing the clotting test while the patient is still taking Vitamin K. The test must be done 48 hours after discontinuing the medication.

When the clotting test has returned to normal it is safe to discontinue therapy.

Other Rodenticides

While anticoagulant rodenticide poisoning is a life-threatening event, at least there is an antidote readily available. Other rodenticides are not as readily reversed, and treatment will involve more intensive care. Other rodenticides on the market include:

- Vitamin D Analogs (Rat-B-Gone, Quintox)
- Bromethalin
- Strychnine (gopher bait)
- Zinc phosphide (gopher bait)

It's very important that you bring us a label if your pet ingests rodenticide so that we can accurately treat the problem!