

# Chocolate Toxicosis

- Toxicosis is disease due to poisoning.
- Chocolate toxicosis is a common problem in dogs, but less common in cats.
- Depending on how much chocolate is ingested, the signs can range from a simple stomach upset to life-threatening problems.
- The toxic ingredients in chocolate include caffeine and a chemical called *theobromine*.
- Dark chocolate and baking chocolate are more toxic than white chocolate, but all of these should be withheld from pets.
- Cacao bean mulch used in gardens can cause chocolate toxicosis if a large enough amount is eaten.

## What Is Chocolate Toxicosis?

Toxicosis is disease due to poisoning. Chocolate contains two ingredients that can be toxic to pets—caffeine, and a chemical called *theobromine*. While dogs and cats are both very sensitive to the effects of caffeine and theobromine, cats are usually not attracted to chocolate, so chocolate toxicosis tends to be less common in cats.

The amount of caffeine and theobromine in chocolate varies with the type of chocolate. The general rule is the more bitter the chocolate, the more caffeine and theobromine it is likely to contain. For example, unsweetened baking chocolate contains almost seven times more theobromine than does milk chocolate. White chocolate is also potentially toxic but contains less caffeine and theobromine than milk chocolate does.

Cacao bean mulch contains enough theobromine to be toxic if a dog or cat eats large enough amounts of it. Other products that contain caffeine include coffee, tea, and cola soft drinks. These should be withheld from pets as well.

## Signs of Chocolate Toxicosis

Clinical signs of chocolate toxicosis can begin to occur within an hour of ingestion. Caffeine and theobromine are both stimulants of the brain and

heart, so the clinical signs can include hyperactivity, increased heart rate, muscle tremors, and potentially death. Other clinical signs include the following:

- Vomiting
- Diarrhea
- Chocolate smell on breath
- Lethargy (weakness/tiredness)
- Panting
- Anxiousness, restlessness, and pacing
- Seizures

Complications associated with chocolate toxicosis can lead to death within 24 hours of ingestion.

## Diagnosis

Caffeine and theobromine can be detected in the stomach contents and blood of animals that have eaten chocolate, but diagnosis of chocolate toxicosis is usually based on evidence that the pet has eaten chocolate. Owners may find candy wrappers, an empty baked goods tray, or other evidence that the pet has eaten something.

Cacao bean mulch used in gardens can cause chocolate toxicosis if a large enough amount is eaten.

If chocolate ingestion is suspected, call your veterinarian immediately! Based on your pet's weight and an estimate of the amount of chocolate eaten, your veterinarian may be able to calculate the amount of caffeine and theobromine that was ingested and determine if your pet is at risk for a toxic reaction. For example, if a large dog eats a few small pieces of milk chocolate, the amount ingested may not be enough to cause a problem. However, if a small dog eats one or two squares of bittersweet baking chocolate, this could be an emergency. Don't

## Pet Safety

forget that chocolate can have other dangerous components. For example, macadamia nuts and raisins are also toxic to animals, so be sure to tell your veterinarian if the chocolate that your pet ate contained any other components.

### Treatment

As soon as you discover that your pet has eaten chocolate, contact your veterinarian immediately. If your pet ingested enough chocolate to be dangerous, immediate treatment will be recommended. If the ingestion is detected early enough, your veterinarian may be able to induce vomiting to clear the chocolate from the stomach before it gets absorbed. Further care, including hospitalization for cardiovascular monitoring, may still be recommended. If ingestion occurred more than a few minutes ago, it may be too late to induce vomiting. Your veterinarian may administer activated charcoal to your pet. This is a liquid that is given by mouth and limits absorption of anything in the stomach and upper intestines. Your veterinarian may also recommend hospitalization for administration of intravenous fluids (to help remove the chemicals from your pet's system) and for monitoring. Because caffeine can be reabsorbed

by the bladder wall, keeping your pet's bladder empty can also help speed up recovery time. This is managed by frequent walking or by placing a urinary catheter.

### Prevention

Dogs have a tremendous sense of smell and tend to be very curious about their surroundings. If there is chocolate in your home, there's a good chance that your dog will find it and eat it. This means that leaving candy on a countertop or on a coffee table puts your pets at risk. Dogs will eat the entire contents of a "trick or treat" bag or an Easter basket if they have a chance. They will even knock trays of brownies or cookies off the stove and eat them. Make sure to keep all tempting chocolate treats away from your pets.

Other foods that can be dangerous to pets include raisins (which can cause kidney damage), macadamia nuts (which can cause muscle tremors and shaking), xylitol artificial sweeteners (which can cause low blood sugar, seizures, and liver failure), onions (which can cause anemia), and uncooked bread dough (which can expand in the stomach and require surgical removal).