

Chocolate Toxicity

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Over the years I have found that one of the most misunderstood toxicities in pets is chocolate toxicity. So, now with left over Halloween candy and plenty of See's gifts filling every corner, it's time to revisit this subject.

Chocolate has an ingredient called theobromine that can be toxic to pets. Theobromine is in a class of chemicals called methylxanthines. The two other foods we use with methylxanthines are coffee with caffeine and tea with theophylline. All these three chemicals work the same and are part of our love affair with coffee, tea, and chocolate. They all have many similar effects. Primarily, they are a stimulant in nature, making us feel more energetic, give us more oxygen by dialing bronchi, and they strengthen our breathing. When used in moderation, all these are fine with little side effects, but with overconsumption we can get jittery, nervous, sweaty, and nauseous. These are the side effects of too much methylxanthine.

Chocolate causes a dose dependent stimulatory effect and dogs don't metabolize theobromine well. What that means is that too much chocolate is like way too much caffeine to the point of injuring the nervous system and internal organs. The stimulatory effect of can be so severe that it can cause unstoppable tremor and shaking that can lead to overheating. It can cause seizures that lead to brain dysfunction. Ultimately it can lead to multiple organ dysfunction and death.

One little chocolate covered peanut is not toxic to any dog. Neither will a box of milk chocolate covered almonds. What most of us use is a chart based on patient weight and type of chocolate and these charts are available online. But briefly chocolate toxicity depends on what kind of chocolate, how much was eaten, and the weight of the pet.

Toxicity is dangerous and needs treatment. However, even though lower doses may not be toxic, it can still make pets sick with vomiting and or diarrhea. If you have any question use common sense and seek treatment if you are not sure. Always take the bag, box, or container of chocolate when you go. Chocolate toxicity almost always comes from eating pure solid chocolate and rarely if ever from chocolate covered or chocolate coated anything. Below is kind of a general approach to know when to seek immediate attention for consumption of pure chocolate.

- Coco powder is the most toxic and has the highest amount of theobromine, 737mg per ounce. A ¼oz for a 10 pound and about 1oz for a 100 pound dog is toxic so immediate attention is needed if Cocoa powder is consumed.
- Baker's unsweetened chocolate is half as strong but still very toxic. The amount of theobromine is 393 mg per ounce. That means ½oz for a 10 pound and 3oz for a 100 pound dog is toxic.
- Semisweet chocolate chips and Dark Sweet Chocolate are about the same with about 135mg of theobromine per ounce. So for these two 1oz for a 10 pound and 10oz for a 100 pound dog is toxic.
- Mild Chocolate is the lease toxic and has about 58mg of theobromine per ounce. So it would take 4oz for a 10 pound and 26oz for a 100 pound dog of pure milk chocolate to be toxic

If your pet consumes a toxic amount of chocolate, take them immediately to your veterinarian and they will assess the problem. Typical treatments include inducing vomiting if the consumption was recent to have them bring up as much chocolate as possible. The next step is dosing them with activated charcoal to absorb the excess toxicity still in the intestine; placing an IV catheter and giving fluids improves the circulation and hastens the metabolism of the theobromine; and placing a urinary catheter to collect urine as it is formed prevents the reabsorption of theobromine from the bladder. A variety of sedative and muscle relaxants are used to control tremors and seizures. With quick and thorough care most pets recover well after about 24-48 hours. The best thing of course is to prevent toxicity by eating all the chocolate right away as soon as you get it. That is what I do!

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