

Chocolate Intoxication in Pets - Not So Sweet!

Everybody loves chocolate, right?! I can't resist a succulent plump strawberry dipped in semi-sweet dark chocolaty deliciousness. Unfortunately, many of our furry friends also can't resist these sweet sensations either. Yet, their cocoa indulgence can be problematic and even deadly. This week I share with you some words about chocolate toxicity, and I hope you will share them with other pet parents. Happy reading!



Chocolate Intoxication - Why is chocolate toxic?

Chocolate contains two stimulants that belong to a class of chemicals called methylxanthines. The compounds are caffeine and theobromine. The concentration of methylxanthines varies among forms of chocolate.

Methylxanthine Concentrations in Different Forms of Chocolate		
<i>Source</i>	<i>Caffeine</i>	<i>Theobromine</i>
White chocolate (1 oz)	0.85 mg	0.2 mg
Milk chocolate (1 oz)	6 mg	44-56 mg
Semisweet chocolate (1 oz)	22 mg	238 mg
Baking chocolate (1 oz)	35-47 mg	393 mg

Methylxanthines are absorbed quickly from the gastrointestinal tract and processed in the liver. These compounds have many dangerous and potential lethal actions in the body, including:

- Inhibition of special receptors (called adenosine receptors) to stimulate the nervous system - the result is excitement, relentlessness, and a rapid heart rate
- Inhibition of a unique enzyme (called phosphodiesterase) - the result is the release of certain hormones, particularly adrenaline
- Enhancement of calcium levels in muscle cells - the result is increased contraction of certain muscles, including the heart

The median lethal dose of caffeine in dogs is 140 mg/kg; that of theobromine is 250-500 mg/kg. To date, we do not know the minimum toxic doses for either chemical in dogs or cats. However, we do know 1 oz/kg of mild chocolate and as little as 0.2 oz/kg of baking chocolate can be lethal to dogs. Pet parents can contact a veterinary toxicology expert at the ASPCA Animal Poison Control Center to find out if the amount their pet ingested is toxic.

Number of OUNCES of CHOCOLATE a Pet Would Need to Ingest for TOXICITY													
Weight of Pet in Pounds	5	10	15	20	25	30	40	50	60	70	80	90	100
Milk Chocolate (ounces)	2	4	6	8.2	10.2	12.3	16.4	20.5	24.5	28.6	32.7	36.8	41
Dark Chocolate (ounces)	0.7	1.4	2.1	2.8	3.5	4.2	5.5	6.9	8.3	9.7	11	12.5	13.8
Baking Chocolate (ounces)	0.23	0.5	0.7	0.9	1.2	1.4	1.9	2.3	2.8	3.2	3.7	4.1	4.6

Chocolate Intoxication - What does it look like?

The diagnosis of chocolate intoxication is straightforward. Pet parents often find partially eaten products or at least remnants of packaging. Intoxicated pets also have classic clinical signs depending on the amount of chocolate consumed. These signs include:

- Vomiting (often containing and/or smelling like chocolate)
- Diarrhea
- Increased thirst
- Increased frequency of urination
- Excitability and hyperactivity
- Elevated heart rate (called tachycardia)
- Elevated respiratory rate (called tachypnea)
- Tremors
- Seizures
- Weakness and unsteadiness

Patient who ingest chocolate may also develop acute pancreatitis, a painful condition characterized by intense inflammation within the pancreas. To learn more about this condition, [click here](#).

Chocolate Intoxication - How is it treated?

Veterinarians can give animals medication within ~4 hours of chocolate ingestion to make them vomit as long as there are no contraindications to making them do

so. Clinicians can also give by mouth a special liquid medication called activated charcoal to help prevent further absorption of methylxanthines from the gastrointestinal tract. For patients with cardiovascular compromise, veterinarians will recommend supportive measures to stabilize intoxicated patients prior to instituting decontamination procedures. They will also use intravenous fluid therapy, as well as medications to help regulate heart rate and treat seizure activity. Anti-nausea medications can be particularly helpful, especially in those with suspected or confirmed concurrent acute pancreatitis. Placing a temporary catheter in the urinary bladder promotes the elimination of methylxanthine-laden urine as well.

The take-away message about chocolate intoxication in pets...

Chocolate is delicious! Humans and our pets agree on that fact. Yet for our furry family members, chocolate is toxic and can be lethal. Intoxicated pets are often restless, vomit, and have diarrhea. They can have life-threatening abnormal heart rhythms and even seizures. Yet with prompt decontamination and supportive care, pets can make a complete recovery.

To speak with a veterinary toxicology expert, please visit the ASPCA Animal Poison Control Center.

To find a board-certified veterinary emergency and critical care specialist, please visit the American College of Veterinary Emergency and Critical Care.

Wishing you wet-nosed kisses,

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