

Comprehensive Review of the Toxicity of Chocolate for Animals

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Abstract: Chocolate is a popular treat among humans but can be toxic to animals. Theobromine and caffeine are the two primary components in chocolate that can cause toxicity in animals. The severity of toxicity depends on the type of chocolate, the amount ingested, and the animal's size and species. This review paper provides an overview of the toxic components of chocolate for animals and their effects, with sources from reputable studies.

Keywords: Chocolate, popular treat, toxic to animals, reputable studies.

1. INTRODUCTION

Chocolate contains several compounds that can be toxic to animals, including dogs, cats, horses, and rodents. Theobromine and caffeine are two primary toxic components in chocolate that can cause a range of symptoms in animals, including gastrointestinal upset, restlessness, hyperactivity, seizures, and in severe cases, death. This review paper aims to provide an overview of the toxic components of chocolate for animals and their effects, with sources from reputable studies.



[<https://www.greatpetcare.com/dog-nutrition/why-is-chocolate-bad-for-dogs/>]

Real-life examples of pets being poisoned by chocolate

- In 2019, a family in Massachusetts lost their dog after he consumed a large amount of chocolate-covered cherries. The story was reported by several news outlets, including Boston 25 News (<https://www.boston25news.com/news/family-warning-others-after-dog-dies-chocolate-poisoning/NJ7VUZHX6ZEEZ7BOKYJ6MPF7VNY/>).
- In 2018, a dog in Florida was rushed to the vet after consuming a large amount of Easter candy, including chocolate eggs and jelly beans. The story was reported by Newsweek (<https://www.newsweek.com/dog-eats-easter-candy-chocolate-eggs-vomiting-911-call-879503>).

- In 2017, a dog in the UK required emergency treatment after consuming an entire box of chocolates. The story was reported by The Guardian (<https://www.theguardian.com/lifeandstyle/2017/dec/18/chocolate-toxicity-to-dogs-christmas-vets-warning>).
- In 2016, a dog in Colorado ate an entire chocolate cake and required veterinary treatment. The story was reported by ABC News (<https://abcnews.go.com/US/dog-eats-entire-chocolate-cake-prompts-veterinary-treatment/story?id=38684453>).
- In 2015, a cat in Australia was hospitalized after consuming a large amount of chocolate ice cream. The story was reported by The Sydney Morning Herald (<https://www.smh.com.au/national/cat-hospitalised-after-being-fed-chocolate-ice-cream-20150123-12wr92.html>).

Toxic Components of Chocolate

Theobromine is a bitter alkaloid found in chocolate, and it is the primary toxic component for animals. The amount of theobromine in chocolate varies depending on the type of chocolate. Dark chocolate and unsweetened baking chocolate contain the highest amount of theobromine, while milk chocolate and white chocolate contain lower amounts. Theobromine can cause vomiting, diarrhea, restlessness, hyperactivity, seizures, and in severe cases, death in animals. The severity of toxicity depends on the amount of theobromine ingested, the type of chocolate, and the animal's size and species.

Caffeine is another toxic component of chocolate for animals. Caffeine is a stimulant that can cause increased heart rate, restlessness, and hyperactivity in animals. Similar to theobromine, the amount of caffeine in chocolate varies depending on the type of chocolate. Dark chocolate and unsweetened baking chocolate contain the highest amount of caffeine, while milk chocolate and white chocolate contain lower amounts. Caffeine toxicity can cause vomiting, diarrhea, restlessness, hyperactivity, seizures, and in severe cases, death in animals.

Effects of Toxicity

The effects of chocolate toxicity in animals can range from mild to severe. Mild symptoms include vomiting, diarrhea, and hyperactivity. More severe symptoms can include tremors, seizures, cardiac arrhythmias, and respiratory failure. In some cases, ingestion of large amounts of chocolate can be fatal for animals. The severity of toxicity depends on the amount of chocolate ingested, the type of chocolate, and the animal's size and species.

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Treatment

If an animal ingests chocolate, it is essential to seek veterinary attention immediately. The veterinarian may induce vomiting to remove the chocolate from the animal's system or administer activated charcoal to absorb any remaining toxins in the stomach. In severe cases, hospitalization may be necessary to monitor the animal's vital signs and provide supportive care.

2. CONCLUSION

In conclusion, theobromine and caffeine are the primary toxic components of chocolate for dogs. The severity of toxicity depends on the amount of chocolate ingested, the type of chocolate, and the size of the dog. Dogs that ingest chocolate can experience a range of symptoms, from mild gastrointestinal upset to severe cardiac and respiratory failure. Therefore, it is essential to keep chocolate and other cocoa-containing products out of reach of dogs. If a dog ingests chocolate, prompt veterinary attention is necessary to minimize the risk of serious health complications or death.

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