

What We Really Know About Ice Water Ingestion in Dogs

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By now most of us in the veterinary and working dog community have seen the social media notice from a dog owner warning us that feeding a dog ice water can cause bloat. The author of the warning states that their dog was hot from exercise, and that they gave their dog ice cubes to cool down. A short time later, after also having fed the dog, they noticed the dog was acting abnormally and had the dog examined by a veterinarian, where he was found to have gastric dilation (aka “bloat.”). According to the current version circulating on the internet, the description sounds like the dog did not have gastric dilation-volvulus. According to the author, however, the veterinarian told the owner that the dog had bloated because of the ice cubes that he’d been fed, and that the owner was “really lucky,” because ice water in the stomach cause “violent spasms which caused the bloating.”

Also by now, most of us have seen the multiple rebuttals on social media and even television from a variety of veterinarians stating that ice cubes were not likely to be the cause of this dog’s condition¹⁻². Some veterinarians call into question the terminology regarding ice water causing “violent spasms” of the stomach. Others note that the dog had also be recently exercised and then fed a short time later, which is widely thought among the canine community to be a risk factor for bloat. They bring up the fact that this confounds the claim of the ice water being the cause, and question why the veterinarian who treated the dog focused on blaming the ice water instead.

First of all, this warning was on social media, which is not exactly the most reliable source on information. This warning has popped up in cycles via various social media and email sources for the past six or seven years. In fact, I remember getting it over email about four or five years ago, with slightly different details to the case than in the current version. Second, and possibly even more importantly, the author of the warning is telling us what their veterinarian supposedly told them. Veterinary personnel know how misunderstanding and misinterpretation effects client communication, especially with emergencies. And canine owners know how some veterinarians aren’t the always the greatest communicators, leaving the owner to fill in some of the blanks or rely on other sources to decipher what the vet has said. So with this social media warning, we don’t really know if this is what the veterinarian actual said or

meant, at all. Even if the veterinarian actually said that, and it was represented accurately on the social media warning, let's look closer at what we *really know* about ice water and gastric dilation.

The Scientific Evidence

Several scientific studies in dogs have evaluated use of ice water gastrointestinal lavage for treatment of conditions like heatstroke³⁻⁴ and bleeding gastrointestinal ulcers⁵⁻⁷. In these studies, ice water was pumped directly into the stomach through a tube through the dogs' mouths into their stomachs, ensuring that it was still ice cold when it got to the stomach. None of these studies reported adverse effects such as gastric dilation or gastric dilation-volvulus in response to ice or ice water in the stomach. None of these studies specifically evaluated the effects of ice water on muscle contraction of the stomach, so we don't know if these dogs suffered "violent spasms of the stomach." What we do know is that out of the relatively small number of dogs studied in these multiple studies (less than 50 total), gastric dilation was not reported as a result of administration of ice water into the stomach.

There have also been several scientific studies on risk factors and possible causes of gastric dilation and GDV⁸⁻¹². None of these studies have specifically looked at the association of ice cube or ice water ingestion and gastric dilation, but none of them discovered this as a possible risk factor when reviewing hundreds of medical records of dogs with GDV. In the end, with this one, we can't say one way or the other if ice or ice water ingestion is a risk factor for gastric dilation. But given that none of the studies on risk factors revealed ice as a culprit, and several experimental studies where ice water was deliberately pumped into dogs' stomachs also didn't report any problems with it, the scientific evidence points to ice water having little to no relation to gastric dilation.



The Common-Sense Evidence

Common sense evidence, and evidence from experience, is called "anecdotal evidence" in scientific terms. Sometimes when we don't have scientific evidence from actual studies to base our clinical opinion, we have to rely on anecdotal evidence to guide our healthcare decisions. In this case, we have some really strong anecdotal evidence that ingestion of ice by dogs with high temperatures from exercise is not a risk factor for bloat. Each year about a

thousand dogs run the Iditarod sled dog race in Alaska and the Yukon Quest spanning Alaska in the United States and Yukon Territory in Canada. It is commonplace for these dogs, that have elevated temperatures from strenuous exercise, to eat snow as a source of water and cooling along the route. Gastric dilation or GDV is not considered a significant problem of racing sled dogs, although most of them fit the deep-chested body type considered at risk for GDV. Think of all the other dogs who have been fed “Pupcicles” and other homemade frozen dog treats without developing bloat.

Coincidence or Cause?

When something bad happens to our dogs, we naturally want to know what caused it to happen. Often we can find something specific to attribute it to, and then we can hopefully correct the situation to prevent it from happening in the future. But there are a lot of bad things that happen to dogs where we never know the actual cause. Gastric dilation and GDV are conditions where we don't really know the cause. Even scientific studies from reputable veterinary researchers on risk factors for bloat contradict each other. One study says male dogs are more at risk, while another states intact females are at the most risk. One study says that dogs who ran the fence line (i.e. exercised) close to feeding time were less likely to bloat, while common thought is that exercising too close to feeding is a cause of bloat and should be avoided. Despite not having scientific evidence to back up possible risk factors for bloat, that doesn't seem to stop us from trying to tie a specific event or condition to why it happened. In this case, the warning seems to ignore the fact that the dog was fed shortly after exercise, and specifically blames the ice cubes instead. What else happened to that particular dog that day? Given that we have such little consistent evidence on true risk factors or causes of bloat, any particular thing that happened with the dog that day has just as much chance of being the “cause” as any other. A veterinarian comes in the picture, tells the owner that the ice cubes were the cause, and there you have it: All-Points Bulletin on the horror feeding ice cubes to dogs goes viral.

As canine owners and enthusiasts, we have the responsibility to sift through an onslaught of often conflicting information in attempt to provide the best care possible to our dogs. As veterinarians, we have the responsibility to make sure the information we provide our clients is accurate, backed by the available evidence, and grounded in common sense. Given the available information on this topic including the scientific evidence, a lot of anecdotal evidence, and finally, common sense, we can be confident that feeding a bowl of ice or ice water to dogs to help them cool down is not going to cause them to bloat.

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