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The Role of Nutrition in Acute Diarrhea

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What Is Acute Diarrhea?

Diarrhea is defined as the elimination of ≥ 3 watery or loose stools within a 24-hour period or the elimination of ≥ 1 loose stools containing blood.¹ Diarrhea can occur in conjunction with other signs of illness such as nausea, vomiting, and/or fever. However, in many cases, diarrhea can occur as an isolated issue in dogs that are otherwise apparently healthy.

In dogs with diarrhea, it is important to characterize the duration of diarrhea. Acute diarrhea is typically defined as diarrhea that has persisted for <1 to 2 weeks.¹ Distinguishing acute diarrhea from chronic diarrhea plays a key role in the diagnostic investigation, as well as in guiding recommended treatment strategies.

Some cases of acute diarrhea are linked to infectious diseases.² Parasites, including roundworms, hookworms, and protozoa such

as *Giardia* spp, *Coccidia* spp, and *Cryptosporidium* spp, are a common cause of diarrhea in puppies, although they can also affect adult dogs.² Bacterial infections such as with *Salmonella* spp, *Escherichia coli*, *Campylobacter jejuni*, and *Clostridium* spp are also possible, as are viral infections like parvovirus, coronavirus, distemper virus, and rotavirus.²

Not all diarrhea is caused by infection; noninfectious causes are also commonly implicated in acute diarrhea² and can include diet (eg, dietary indiscretion, sudden food change, dietary hypersensitivity, spoiled food), systemic diseases (eg, neoplasia, sepsis, uremia), inflammatory disease, toxin or drug reaction, and stress, among others. In a study of risk factors for diarrhea in dogs, identified risk factors included a history of scavenging, a homecooked diet, a recent diet change, or a recent kennel stay.³ In many cases of acute diarrhea, however, an underlying etiology cannot be identified, despite appropriate diagnostic testing.⁴

Why Is Acute Diarrhea Important?

Diarrhea is a relatively common presenting complaint in canine patients. According to a national pet insurance provider, gastroenteritis (which includes pets presented for diarrhea and/or vomiting) was the second most common presenting complaint for dogs in 2023.⁵ Diarrhea is also commonly reported by dog owners who do not necessarily seek care for that concern. In a study of dogs presented to their veterinarian for any reason, 28.6% of the 248 dogs evaluated had experienced diarrhea within the preceding month.⁶



Acute diarrhea is often self-limiting,^{4,7} but it can pose challenges for pet owners. Although veterinary team members may realize that a dog's acute diarrhea is likely to be self-limiting, for pet owners, witnessing their pet's gastrointestinal distress can be concerning and worrisome. Clients also must manage fecal accidents that may occur indoors, which can be frustrating and stressful. In addition, clients may feel forced to keep their dog in a crate, outdoors, or in another easily cleaned location. This separation can cause stress for both the dog and its owner while negatively impacting the human-animal bond. Although many cases are mild, diarrhea can sometimes lead to dehydration or systemic decline, particularly in puppies, senior dogs, and those with underlying health issues, making timely support and monitoring important.

How Is Acute Diarrhea Diagnosed?

In many cases of acute diarrhea, an underlying cause cannot be identified. However, it is still important to rule out serious, treatable causes of diarrhea. In all cases of acute diarrhea, fecal flotation via centrifugation should be performed to rule out common intestinal parasites. If intestinal parasites are detected, these should be treated appropriately.

Additional testing may be recommended based on the patient's history and clinical signs. Packed cell volume and total protein can provide valuable information about the patient's hydration status and help guide treatment decisions. CBC and serum chemistry profile can be used to assess electrolytes and look for evidence of systemic disease. Abdominal radiography can help rule out obstructions and/or masses. In young and/or unvaccinated dogs, parvovirus testing may be indicated. Fecal parasite PCR testing can also be used for further intestinal parasite screening.

If diagnostics fail to identify a clear cause of acute diarrhea, symptomatic treatment is often recommended.

How Is Acute Diarrhea Treated?

Veterinarians have long used metronidazole, an

antibiotic, to treat acute diarrhea in dogs. However, recent research suggests that alternatives may be preferred for the treatment of dogs experiencing acute diarrhea.

In 2019, a study demonstrated that metronidazole treatment offered no statistically significant benefit as compared with a probiotic or placebo in the treatment of noninfectious acute colitis.⁸ A later study examined the impacts of a highly digestible diet on dogs with acute noninfectious colitis when combined with metronidazole, psyllium supplementation, or a placebo.⁹ In this same study, combining a highly digestible diet with psyllium or a placebo resulted in more rapid resolution of the patient's diarrhea than metronidazole treatment.⁹ In addition, the use of metronidazole in this study was associated with dysbiosis. Based on these findings, the study authors recommend avoiding the use of metronidazole in the management of noninfectious acute canine colitis.⁹

Mounting evidence suggests that there is an association between antimicrobial-induced dysbiosis and susceptibility to other disease processes. In addition, metronidazole is an antibiotic, and thus its use may contribute to antimicrobial resistance.¹¹

Hill's Prescription Diet Gastrointestinal Biome is specifically formulated with the nutritional support that is needed to support resolution of diarrhea and other GI signs quickly. This food contains ActivBiome+ Digestion, a proprietary blend of synergistic prebiotic fibers that allows beneficial intestinal bacteria to flourish and produce postbiotics to help the host.¹² By promoting the growth of desirable bacteria, it also helps to reduce the growth of potentially undesirable bacteria and their metabolites.¹² Research studies on Hill's Prescription Diet Gastrointestinal Biome have primarily focused on dogs with chronic diarrhea, but studies have demonstrated rapid results. In a study of 31 client-owned dogs with chronic large-bowel diarrhea, significant improvement in fecal consistency was noted within just 24 hours of consuming Hill's Prescription Diet Gastrointestinal Biome.¹³

Treating Acute Diarrhea: A Team-Based Approach

Client Service Representative

- Provide support and empathy for clients who are coping with acute diarrhea in their pets, understanding the ways this can cause stress for clients and disrupt the human–animal bond.
- Recommend prompt veterinary care for dogs with acute diarrhea, and schedule veterinary appointments appropriately.
- Advise clients that their pet will likely need a fecal parasite examination, and discuss sample collection. Specify whether the client should bring a fresh fecal sample to the clinic or whether your team will collect a sample during the veterinary visit.
- Discuss financial solutions that may help clients better afford the cost of diagnostic testing and/or treatment, if necessary.
- Obtain an accurate body weight at every patient visit, especially when pets are presented for a gastrointestinal concern.
- Encourage clients to contact the veterinary clinic if their pet's diarrhea does not respond to treatment as expected.
- Schedule follow-up visits and make follow-up phone calls as needed for pets with diarrhea.
- Ensure that clients are sent home with relevant handouts, nutritional plans, and other information to support their pet's care.

Veterinary Technician/Assistant

- Ensure an accurate patient weight is recorded at every visit, especially in pets with GI concerns.
- Obtain a thorough medical history, including a nutritional history, for dogs experiencing acute diarrhea.
- Be empathetic and understanding when addressing client concerns related to acute diarrhea and the impact it may have on the human–animal bond.
- Identify potential risk factors for the development of acute diarrhea.
- Discuss the veterinarian's recommendation for fecal parasite testing via centrifugation for all dogs with acute diarrhea and explain to clients why this test is necessary.
- Collect diagnostic samples and perform tests according to the veterinarian's instructions and/or clinic protocols.
- Ensure clients have received all diagnostic test results and ask if they have any follow-up questions for the veterinarian regarding their pet's diagnosis.
- Review the treatment recommendations that were prescribed by the veterinarian.
- Encourage clients to contact the veterinary clinic if their pet's diarrhea does not respond to treatment as expected.
- Ensure that clients are sent home with relevant handouts, nutritional plans, and other information to support their pet's care.

Veterinarian

- Educate clients about common, avoidable risk factors for the development of acute diarrhea (eg, sudden diet changes, stress).
- Assist clients in their efforts to avoid future episodes of diarrhea by helping them avoid potential risk factors.
- Perform a comprehensive physical examination to look for underlying causes of acute diarrhea.
- Recommend appropriate diagnostic tests for dogs with acute diarrhea. Although some cases of acute diarrhea are self-limiting, the goal of diagnostics is to rule out serious conditions rather than to always find a definitive cause.
- Interpret diagnostic tests performed in dogs with acute diarrhea, and review results with clients.
- Create a customized approach for the treatment of acute diarrhea.
- Educate clients about the role of nutrition in managing acute diarrhea.
- Avoid antibiotics for the treatment of acute diarrhea, unless there is a clear medical indication for their use.
- Recommend follow-up phone calls to be made by the veterinary assistant, veterinary technician, and/or client service representative.
- Recommend rechecks as needed for pets with acute diarrhea.

Conclusion

Acute diarrhea is a common issue in dogs, and it is one that is often treated in small animal general veterinary practice. Early nutritional intervention can be an effective tool in the management of acute diarrhea. Hill's Prescription Diet Gastrointestinal Biome is specifically formulated for the nutritional management of diarrhea in dogs. Taking a thoughtful, proactive approach to the management of acute diarrhea can help patients feel better, help alleviate stress for clients, and help maintain and restore the human-animal bond.

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