

# Digest

**VOLUME 2:**  
TIPS FOR SUCCESSFUL  
MANAGEMENT OF  
GASTROINTESTINAL  
DISEASE

**Nutritional Management  
of Acute Gastroenteritis**

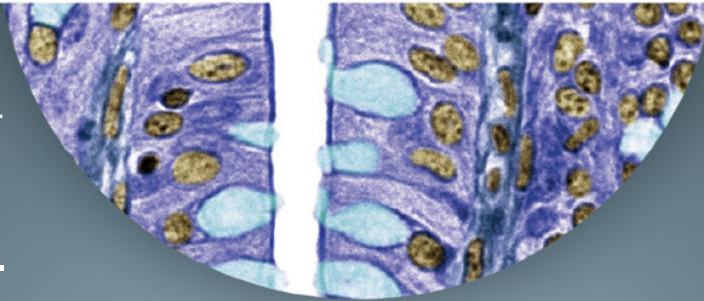
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**Dietary Strategies for  
Dogs and Cats with  
Chronic Enteropathies**

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# Nutritional Management of Acute Gastroenteritis

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Acute gastroenteritis is one of the most common reasons for pets to be presented to their veterinarian. Vomiting, change in stool form and/or frequency, and reduced appetite are the typical clinical signs but more severe signs, such as hypovolemic shock, may also be present. There are many causes of acute vomiting and gastroenteritis in dogs and cats, many of which will not be definitively diagnosed.

The therapeutic approach to patients with acute gastroenteritis is multimodal and includes treating the underlying cause, correcting fluid deficits, and controlling nausea +/- pain. Nutritional therapy should also be included in the treatment strategy. Recent studies refute the once widely accepted practice of withholding food from acute gastroenteritis patients. Fasting has been associated with reduced villus height and increased risk of bacterial translocation in dogs and humans.<sup>1,2</sup> Using antiemetics and waiting 2 to 4 hours after the last episode of vomiting to feed until may help prevent recurrence of signs.

For patients with recent vomiting, it is prudent to initially offer small amounts of food (e.g., 25% of resting energy requirements if hospitalized, divided throughout the day). Division of daily calories over 3 to 6 small meals may be continued during the recovery period. Patients can gradually transition back to their normal feeding regimen as their clinical signs subside. Palatability is an important consideration, particularly for finicky eaters. Strategies for encouraging food intake can be found in **Box 1**.

No single diet will be appropriate for all patients. The ideal macronutrient blend of protein, fat, and carbohydrate for dogs with acute gastroenteritis is yet to be determined. Fiber is a nutrient to pay attention to and tailor to the individual patient. In some cases, supplemental fiber may help with diarrhea<sup>3,4</sup> and provide beneficial prebiotic effects. However, fiber reduces digestibility and may delay gastric emptying, which may be undesirable in vomiting patients.

## Of Note

- Acute gastroenteritis is a diverse syndrome encompassing patients with mild, self-limiting to severe, life-threatening disease.
- Nutrition is a key component of treatment, along with addressing the underlying cause of illness, hydrating the patient, and controlling nausea and pain.
- Clear communication with the client is key to treatment success.

Ultimately, there are many diets that can be effective in acute gastroenteritis. These include commercial (e.g., gastroenteric formulas) and home-cooked diets. Commercially available gastroenteric diets are complete and balanced and contain nutrients such as prebiotics that may support gastrointestinal health. Home-cooked diets will be more labor intensive for clients and should be formulated by a board-certified veterinary nutritionist to be complete and balanced. The veterinary health care team should work together with the client to evaluate each patient as an individual and develop an appropriate nutrition plan.

Optimizing positive outcomes in these patients involves providing realistic expectations to clients. Provided the diagnostic workup did not reveal a specific cause for gastroenteritis and no red flags (e.g., hypovolemic shock, anemia, hypoalbuminemia) were encountered, clients can be counseled that most causes of acute gastroenteritis are self-limiting. However, it may take several days for things to normalize. Clients should be provided with specific instructions regarding feeding, including what diet to offer, how much of the diet to offer and how often, and signs that their pet could need further evaluation.

**Box 1. Strategies for encouraging food intake in patients with acute gastroenteritis**

- Avoid offering a diet intended for long-term use in the hospital, as this may result in aversion to that diet, especially in cats
- Warm the food
- Mix in flavored broth (without added harmful ingredients such as onions or garlic)
- Place the food bowl where the pet can access it without interruption or competition
- Hand feed the patient
- Clean the food bowl regularly

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# Dietary Strategies for Dogs and Cats with Chronic Enteropathies

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Chronic enteropathies (CE) describe a group of diseases resulting in persistent or intermittent chronic gastrointestinal signs. Food-responsive enteropathy represents the largest subgroup of CE, comprising approximately two-thirds of all CE cases presenting to a secondary or tertiary referral hospital in dogs<sup>1</sup> and likely also in cats.

Response to specific dietary therapeutic strategies in dogs and cats with CE is highly variable. Therefore, nutrition should be treated as an individualized therapeutic intervention. Multiple diet trials may be needed to determine the most effective strategy for each animal with CE. The possible pros and cons of different dietary options are shown in **Table 1**.

## Highly digestible gastrointestinal diet

Highly digestible therapeutic gastrointestinal diets may help with clinical signs of CE in both dogs and cats. However, it is important to note that one study showed that while a highly digestible therapeutic gastrointestinal diet was able to induce remission in dogs with CE, the dogs were less likely to remain asymptomatic at subsequent rechecks when compared to dogs managed with a hydrolyzed diet.<sup>2</sup>

## Hydrolyzed protein diet

Hydrolyzed protein diets may help influence the immune system and have high digestibility. Due to the scientific evidence supporting the use of hydrolyzed protein diets in canine and feline CE and the finding that some dogs that failed an elimination diet trial with a novel protein diet responded to a hydrolyzed protein diet,<sup>3</sup> these diets should likely be trialed first. If the animal does not consume the diet or the gastrointestinal signs

## Of Note

- There are multiple different dietary options for dogs and cats with chronic enteropathies.
- Nutrition for pets with chronic enteropathies should be tailored to the individual dog or cat.
- The new diet should be fed exclusively for at least two weeks to determine the response.

do not improve, then a commercial therapeutic limited-ingredient novel protein diet can be tried.

## Limited-ingredient novel protein diet

Nearly 50% of cats and 60% of dogs with chronic gastrointestinal signs respond positively to a novel protein diet.<sup>4,5</sup> Well-pet novel protein diets should be avoided for the treatment of CE.

## Home-cooked diet

There is a subset of dogs and cats with CE that may respond positively to a home-cooked diet rather than a commercial diet. Consultation with a board-certified veterinary nutritionist should be sought if the dog or cat fails trials with commercial therapeutic diets, so that a complete and balanced home-cooked diet can be formulated.

Possible reasons for failure to respond to a therapeutic diet include owner non-compliance with feeding, the need for a different dietary strategy, comorbidities, the patient requires medication to help control clinical signs, or misdiagnosis of chronic enteropathy.

**Table 1.** Possible pros and cons of different dietary options for chronic enteropathies

Diet	Pros	Cons
Therapeutic gastrointestinal	<ul style="list-style-type: none"> <li>High digestibility</li> <li>High palatability</li> <li>Multiple formulas available</li> </ul>	<ul style="list-style-type: none"> <li>Potentially less able to maintain remission</li> </ul>
Therapeutic hydrolyzed protein	<ul style="list-style-type: none"> <li>Limited diet history required</li> <li>Some formulas are lower in fat</li> </ul>	<ul style="list-style-type: none"> <li>Possible issues with palatability</li> <li>Limited canned options for cats</li> </ul>
Therapeutic limited ingredient	<ul style="list-style-type: none"> <li>Increased likelihood of palatability for finicky pets</li> <li>Canned formulas often available</li> <li>Some formulas are higher in fiber</li> </ul>	<ul style="list-style-type: none"> <li>Full diet history required</li> <li>Anecdotal concern for increased relapse or cross reactivity</li> <li>Potential previous exposure with well-pet diets</li> </ul>
Home-cooked	<ul style="list-style-type: none"> <li>High digestibility</li> <li>High palatability</li> <li>Flexibility with nutrient composition when properly formulated</li> </ul>	<ul style="list-style-type: none"> <li>Higher expense</li> <li>Labor intense</li> <li>Board-certified veterinary nutritionist needed</li> <li>Potential sourcing issues for novel ingredients</li> <li>Recipe drift</li> </ul>

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# Nutrition and Pancreatitis in Cats

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Feline pancreatitis can be difficult to diagnose and manage. The treatment plan is usually adjusted depending on the presence of complications and comorbidities. Treatment includes management of any comorbidities, nausea, and analgesia. In all cases, nutritional support is a central part of management.

While there are no specific nutrient requirements described in cats with pancreatitis compared to healthy cats, and the best macronutrient profile for these patients is yet unknown, providing adequate calories and nutrients in the form of a complete and balanced, highly digestible and palatable diet is important to prevent malnutrition and its associated negative effects.<sup>1</sup>

A complete nutritional assessment, including diet history, is important to assess risk of malnutrition and establish a tailor-made feeding plan for each patient. Factors that impact the feeding plan include body condition score (BCS), muscle condition score, and the presence of comorbidities. There are several key nutrients for management of feline pancreatitis, including protein and fat. As opposed to dogs, there has been no association described between pancreatitis and dietary indiscretion or hyperlipidemia in cats. Therefore, fat moderation or restriction is not a common recommendation in cats. One retrospective study of cats with suspected pancreatitis concluded that a diet with 45% fat (on a metabolizable energy – ME – basis) was well tolerated in these cases.<sup>2</sup> It may be wise to select a diet lower in fat if higher fat diets have not been well tolerated. It is also important that all essential nutrients be provided in the form of a complete and balanced diet.

Nutritional management should be implemented as soon as possible, and assisted feeding should be used if needed to ensure adequate energy intake. Using a highly digestible complete and balanced therapeutic gastrointestinal diet is a good starting point for feline pancreatitis with

## Of Note

- The best nutritional profile for cats with pancreatitis has not been yet established.
- Cats with pancreatitis should be fed as soon as feasible, and assisted feeding is required if voluntary intake is insufficient.
- Veterinary therapeutic gastrointestinal diets are adequate choices for cats with pancreatitis given their high digestibility and palatability, but comorbidities will affect diet choice.

the current knowledge of the disease. These diets provide nutrients in an easily assimilable manner, are usually high in energy density, and tend to have good palatability.

In cats with comorbidities, the specific disease(s) will also affect diet choice (**Table 1**). For example, the use of limited ingredient or hydrolyzed protein diets, commonly recommended for chronic enteropathies, can be used in cats with both diseases.<sup>3</sup> The patient's nutritional assessment, especially BCS, may also impact diet selection; for example, choosing a diet higher in energy density than the current diet is indicated in underweight cats.

For patients eating voluntarily, multiple small meals might be better tolerated.<sup>4</sup> It is especially important to provide specific feeding amounts for obese or obese-prone patients. The feeding plan should be adjusted according to the repeated nutritional assessment (including body weight, BCS, muscle condition, and food intake), clinical evolution, and other diagnostics.

**Table 1.** Comorbidities commonly associated with pancreatitis in cats and typical dietary strategies

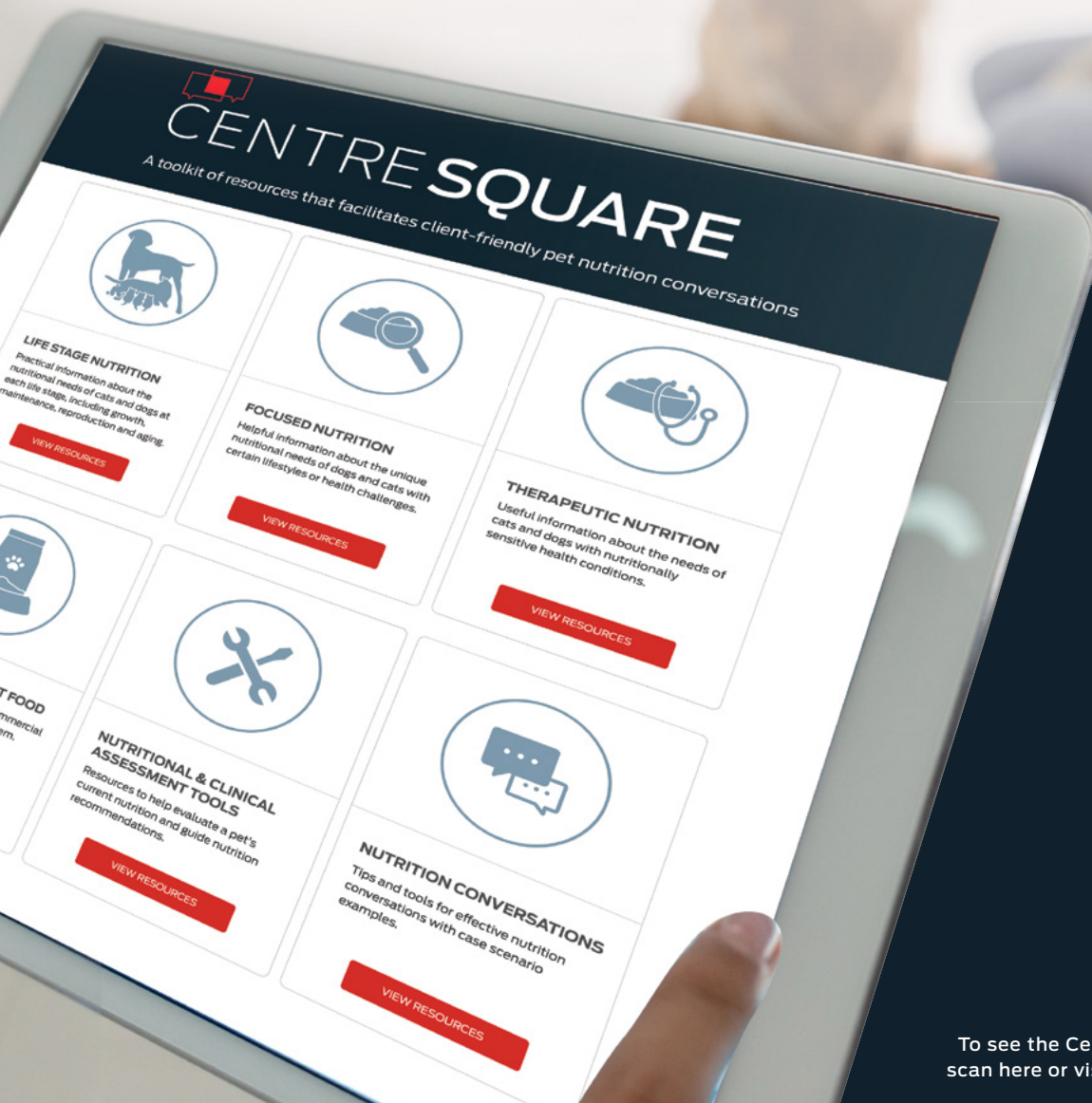
Disease	Typical dietary strategies
Chronic enteropathy	<ul style="list-style-type: none"> <li>▪ Highly digestible, elimination diet (with hydrolyzed protein or limited ingredients)</li> </ul>
Cholangitis	<ul style="list-style-type: none"> <li>▪ Highly digestible diet</li> <li>▪ Protein moderation might be required if there is hepatic encephalopathy although uncommon</li> </ul>
Diabetes mellitus	<ul style="list-style-type: none"> <li>▪ Low carbohydrate/high fat/high protein diets are commonly recommended</li> <li>▪ In overweight cats, weight management is indicated</li> </ul>

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