

# Gastrointestinal Signs in a Pancreatitis Patient

Deborah E. Linder, DVM, MS, DACVN  
Sponsored by Hill's® Pet Nutrition



Let's use Chelsea, a 3-year-old spayed female cocker spaniel crossbreed, as a hypothetical case to demonstrate a pet's experience eating a low-fat food that supports a therapeutic plan for a patient with gastrointestinal signs and history of pancreatitis.

## History & Signalment

Chelsea was presented for 3 days worth of vomiting and diarrhea. The patient had a history of pancreatitis and hyperlipidemia, which had been relatively controlled on a moderate-fat adult maintenance food (4 g/100 kcal). A dietary history revealed that Chelsea received 1.5 cups per day of the current food (337 kcal/cup) and varied meats added on top to the main food for palatability. There were no other current medications or supplements, and the owners reported Chelsea had no recent dietary indiscretion.

## Physical Examination

A full physical examination revealed a II/VI systolic heart murmur, a sensitive abdomen on palpation, and loose watery stool on rectal examination. Body condition score was ideal at 5/9, muscle condition score was normal, and body weight was 30 lb (13.6 kg).

## Relevant Diagnostics

Complete blood count, serum chemistry panel, fecal exam, and urinalysis were within normal limits except for mildly elevated triglycerides of 500 mg/dL (range, 30-338 mg/dL). Radiographs revealed no significant abnormalities. The owners declined an abdominal ultrasound or echocardiogram at the time.

## Diagnosis & Treatment

Differential diagnoses for gastrointestinal signs included gastroenteritis, stress colitis,

hyperlipidemia, and pancreatitis. The owner elected to pursue medical management with a focus on dietary management. After anti-emetic medication, fluid therapy, and a 12-hour fast, the patient had an improved appetite, and a dietary plan was developed.

## Nutritional Management

Nutritional goals for this patient included a highly digestible, low-fat, lower sodium, moderate fiber, mixed fiber therapeutic food with specific consideration for a therapeutic food that contained clinically tested prebiotic fiber and met the dietary preferences of the pet (Table). Hill's® Prescription Diet® i/d® Low Fat canned and dry formulas were selected to meet these goals. Due to the association of dietary indiscretion with pancreatitis risk,<sup>1</sup> all additional food items were discouraged initially. Giving the i/d Low Fat dry formula as treats in puzzle toys and dispensing games was recommended instead to ensure owner compliance. The stew formula of Hill's Prescription Diet i/d Low Fat was selected as the main part of the dietary recommendation, which Chelsea readily ate without added meats and allowed for improved compliance with the low-fat dietary regimen.

## Follow-up

The owners were recommended to keep a journal of clinical signs and three months after the initial treatment plan was established no further clinical episodes of vomiting and diarrhea were noted and fasting triglycerides were at normal levels.

## Discussion

Nutritional goals for this patient included modification of the **fat**, **fiber**, and **sodium** content as well as the **digestibility** of the therapeutic food. Due to the elevated triglycerides and history of pancreatitis, restriction in **fat** was the foremost priority and led to the recommendation for a food that has been **clinically tested to lower triglycerides in the serum**. A food restricted in fat can provide benefits for both lowering triglycerides as well as managing

pancreatitis due to the potential for maldigestion of fat that can accompany a variety of gastrointestinal conditions.<sup>2,3</sup> High **digestibility** is also important because it can help manage this maldigestion and malabsorption and is generally recommended in gastrointestinal disease.<sup>4</sup>

**Fiber** can be complicated due to the differing types, although ingredients providing a moderate mix of soluble and insoluble fibers (eg, beet pulp) can aid in the treatment of intestinal diseases and possibly improve nutrient absorption.<sup>5</sup> Further, ingredients such as beet pulp also act as **prebiotics**, which can support the growth of beneficial flora within the gastrointestinal tract.

Aside from the gastrointestinal tract, although the cause of the heart murmur was not discovered, avoiding high **sodium** in patients with potential valvular disease (a working differential given the signalment) is generally recommended.

Lastly, pet preferences and owner adherence were significant factors in this case. **Palatability** of the recommended therapeutic food's **stew formula** eliminated the need for variable meats to be added, which improved compliance. In addition, utilizing the dry kibble of the therapeutic food for "treats" allowed the owner to provide fun and interactive meal times without impacting her nutritional goals.

## References

- Hess RS, Kass PH, Shofer FS, Van Winkle TJ, Washabau RJ. Evaluation of risk factors for fatal acute pancreatitis in dogs. *J Am Vet Med Assoc*. 1999;214(1):46-51.
- Jensen KB, Chan DL. Nutritional management of acute pancreatitis in dogs and cats. *J Vet Emer Crit Care*. 2014;24(3):240-50.
- Xenoulis PG, Levinski MD, Suchodolski JS, et al. Serum triglyceride concentrations in Miniature Schnauzers with and without a history of probable pancreatitis. *J Vet Intern Med*. 2011;25:20-25.
- Cave N. Nutritional management of gastrointestinal diseases. In Fascetti AJ, Delaney SJ, editors. *Applied Veterinary Clinical Nutrition*. John Wiley & Sons; 2012, 175-219.
- Buddington RK, Buddington KK, Sunvold GD. Influence of fermentable fiber on small intestinal dimensions and transport of glucose and proline in dogs. *Amer J Vet Res*. 1999;60(3):354-8.

## Nutrients of Concern and Nutrient Profile of Foods

Nutrients of Concern	Hill's Prescription Diet i/d Low Fat Stew	Hill's Prescription Diet i/d Low Fat Dry	Chelsea's Previous Adult Maintenance Food	AAFCO Minimum for Healthy Adult Dogs
<b>Fat</b> (g per 100 kcal)	2.6	2.0	4.0	1.4
<b>Crude Fiber</b> (g per 100 kcal)	0.9	0.5	1.3	--
<b>Sodium</b> (mg per 100 kcal)	111	86	200	20
<b>Calorie density</b> (kcal per cup or 12.5-oz can)	286	333	337	

## Suggested Reading

Available at [brief.vet/GI-Case](http://brief.vet/GI-Case)

Tear out the Prescription Diet® i/d® Low Fat insert next to this case for a convenient reminder of clinically tested GI Low Fat foods!