

Ultra-Low-Fat Diets in Dogs with Protein-Losing Enteropathy

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In the literature

Nagata N, Ohta H, Yokoyama N, et al. Clinical characteristics of dogs with food-responsive protein-losing enteropathy. *J Vet Intern Med.* 2020;34(2):659-668.

FROM THE PAGE ...

Protein-losing enteropathy (PLE) is characterized by intestinal protein loss, often as a consequence of various intestinal disorders (eg, intestinal lymphangiectasia, chronic enteropathy). Therapies involve immunosuppressive agents and dietary modifications (ie, novel or hydrolyzed protein, fat restriction). Dogs with PLE carry a poor prognosis, with many becoming refractory to standard therapy. Recent studies have suggested that ultra-low-fat diets may be of benefit to dogs with PLE, especially those with intestinal lymphangiectasia.¹⁻⁴

This retrospective study describes clinical characteristics of dogs with PLE ($n = 33$). Diagnosis of PLE was based on presence of hypoalbuminemia (albumin < 2.6 g/dL) after exclusion of other causes of hypoalbuminemia. Dogs with concurrent disorders (eg, intestinal lymphoma, pancreatitis, hepatic dysfunction), with other causes of hypoalbuminemia (eg, renal protein loss), and/or that were lost to follow-up were excluded.

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WARNINGS:

Cats: Do not use on sick, debilitated, or underweight cats. Do not use on cats less than 9 weeks of age or less than 2 lbs. body weight.

Ferrets: Do not use on sick or debilitated ferrets.

HUMAN WARNINGS: Not for human use. Keep out of the reach of children. Children should not come in contact with the application site for 30 minutes after application. Causes eye irritation. Harmful if swallowed. Do not get in eyes or on clothing. Avoid contact with skin. Wash hands thoroughly with soap and warm water after handling. If contact with eyes occurs, hold eyelids open and flush with copious amounts of water for 15 minutes. If eye irritation develops or persists, contact a physician. If swallowed, call poison control center or physician immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or physician. People with known hypersensitivity to benzyl alcohol, imidacloprid, or moxidectin should administer the product with caution. In case of allergic reaction, contact a physician. If contact with skin or clothing occurs, take off contaminated clothing. Wash skin immediately with plenty of soap and water. Call a poison control center or physician for treatment advice. The Safety Data Sheet (SDS) provides additional occupational safety information. For a copy of the Safety Data Sheet (SDS) or to report adverse reactions call Bayer Veterinary Services at 1-800-422-9874. For consumer questions call 1-800-255-6826.

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ADVERSE REACTIONS: Cats: The most common adverse reactions observed during field studies were lethargy, behavioral changes, discomfort, hypersalivation, polydipsia and coughing and gagging. **Ferrets:** The most common adverse reactions observed during field studies were pruritus/scratching, scabbing, redness, wounds and inflammation at the treatment site, lethargy and chemical odor.

For a copy of the Safety Data Sheet (SDS) or to report adverse reactions call Bayer Veterinary Services at 1-800-422-9874. For consumer questions call 1-800-255-6286.

Advantage Multi is protected by one or more of the following U.S. patents: 6,232,328 and 6,001,858.

V-03/2016

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Of the 33 dogs, 27 received a homemade, boiled, ultra-low-fat diet as initial management. The diet consisted of 1 part skinless chicken breast and 2 parts rice or white potato without skin.⁴ Fat content was 0.35 g/100 kcal.

Response was defined as a decrease in clinical activity (see **Suggested Reading**), and responders were subclassified as complete (ie, normal serum albumin ≥ 2.6 g/dL), no requirement for additional prednisolone treatment) or partial (ie, only partial improvement in serum albumin and/or required additional prednisolone). Of the 27 dogs receiving the ultra-low-fat diet, 23 (85%) responded; of those, 12 were classified as complete and 11 as partial. Median duration to response was 15 days (range, 6-32 days). Responders had significantly lower clinical activity scores as compared with nonresponders. Survival times were longer in responders as compared with nonresponders.

After initial improvement, dogs were gradually transitioned (median, 47 days) to either a commercial dry low-fat (fat content, 2.03 g/100 kcal or 2.3 g/100 kcal) or hydrolyzed diet (fat content, 4.25 g/100 kcal) to prevent secondary nutritional deficiencies.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** Dietary modifications are crucial in the management of dogs with chronic enteropathy, with several studies showing that most dogs respond to dietary intervention alone. However, because of the complexity of PLE, there is no one-size-fits-all approach, and clinicians should experiment with different diet types. This study confirms that a homemade ultra-low-fat diet can be beneficial in dogs with PLE. After initial response, some dogs can be transitioned to a commercial low-fat or hydrolyzed protein diet.
- 2** Ultra-low-fat diets have a considerably lower fat content than commercial low-fat diets. It is important for clinicians to correctly assess the macronutrient content (ie, fat, protein, fiber) of different diets. When comparing diets, it is best to assess these nutrients per caloric concentration (eg, grams of fat per 100 or 1000 kcal).
- 3** Incorporating clinical activity scores (see **Suggested Reading**) when assessing the patient can add valuable information about the prognosis and clinical response to therapy. Although both the canine inflammatory bowel disease activity index (CIBDAI) and canine chronic enteropathy clinical activity index (CCECAI) are used, the CCECAI may be more useful for dogs with PLE, as it incorporates serum albumin concentrations, which are important when monitoring response to treatment in dogs with PLE.

References

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3. Peterson PB, Willard MD. Protein-losing enteropathies. *Vet Clin North Am Small Anim Pract.* 2003;33(5):1061-1082.
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Suggested Reading

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