

An Overview of Protein-Losing Enteropathy for Caregivers

Helping you understand your dog's condition and treatment options



Center for Canine Protein-Losing Enteropathy

What is Protein-Losing Enteropathy?

Protein-losing enteropathy (PLE) is a syndrome characterized by the excessive loss of protein from the bloodstream into the intestinal tract, which is then eliminated in the feces. It occurs due to disease of the intestine. When protein losses become significant and the body cannot replenish them quickly enough, blood protein concentrations fall below normal levels. Severely low protein levels can lead to fluid accumulation in body cavities (such as the abdomen and chest) or under the skin, in addition to other serious complications.

Common Causes

The most common causes of PLE syndrome in dogs include:

- **Chronic inflammatory enteropathy** (previously referred to as inflammatory bowel disease)
- **Intestinal lymphangiectasia** (a disorder of the lymphatic system in the intestine)

These two conditions frequently occur together in dogs with PLE.

Less common causes of PLE include intestinal obstructions, infections, and cancers. In some breeds, PLE is believed to have a genetic component, even when signs don't develop until middle or older age.

Clinical Signs

Dogs with PLE commonly show:

- Diarrhea
- Weight loss
- Vomiting (less commonly)
- Changes in appetite (may be absent, decreased, or increased)
- Fluid accumulations (in some cases)
- Less commonly: tremors, seizures, and difficulty breathing

Diagnosis

Diagnosis of PLE follows a step-by-step process:

1. **Initial blood tests** in dogs with clinical signs reveal low blood proteins
2. **Ruling out other causes** of low blood proteins through:
 - Urine testing
 - Liver function testing
3. **Additional diagnostics** once intestinal protein loss is suspected:
 - Fecal testing
 - Abdominal ultrasound
 - Chest and abdominal radiographs (when indicated)
 - Specialized blood tests (for Addison's disease, pancreatic function, vitamin deficiencies)
4. **Definitive diagnosis of the cause of PLE** usually requires:
 - Intestinal biopsy (usually obtained via endoscopy) under general anesthesia
 - Microscopic gastrointestinal tissue evaluation
 1. The microscopic examination helps determine the degree and type of inflammation, presence and degree of lymphangiectasia, and rules out infectious or cancerous causes.

Treatment

Treatment is tailored to the specific cause of PLE:

- **Dietary management** is the cornerstone of therapy
 - Special diets are often required lifelong
 - A variety of diets may be effective in the management of canine PLE and recommendations should be specifically tailored to the individual dog based on all available clinical and diagnostic information
 - In some cases, diet changes alone may be sufficient to control the disease
- **Medication**
 - Steroids to reduce inflammation and help control an over-active immune system are often used, though not always necessary
 - Steroid dosages can often be reduced over time and in some cases can be discontinued

- **Other medications**

- A medication to prevent excessive blood clotting is often prescribed
- Supplementation of Vitamin B12 is often indicated. Supplementation of calcium, vitamin D, and/or folic acid may be needed on a case-by-case basis.

- **Supportive care** as needed

- Medications to treat nausea and vomiting and stimulate the appetite are prescribed on an as-needed basis.

Prognosis

The prognosis for dogs with PLE varies depending on:

- The specific underlying cause
- Overall health status

It's important to understand that PLE is a syndrome with multiple potential causes. Determining the exact cause refines treatment approaches and improves outcomes. Consultation with a veterinary internal medicine specialist, particularly one focused on gastroenterology, is recommended for dogs with PLE—even when advanced diagnostics cannot be performed.

Historically, the prognosis for PLE was considered guarded. However, improved understanding of the syndrome and a shift toward focusing more on dietary management and less on immunosuppression has led to better long-term outcomes for many dogs with PLE.

In dogs not responding to traditional management strategies, shifting the focus toward diet and supportive care and away from immunosuppression is our typical strategy based on the most up-to-date understanding of PLE syndrome in dogs.

This information is provided by the Center for Canine Protein-Losing Enteropathy. For more information please contact us at centerforcanineple@gmail.com or request a consultation.