



**Veterinary Emergency  
+ Referral Center**  
of Hawaii

**Ettinger: Textbook of  
Veterinary Internal Medicine, 7th Edition  
Non-Neoplastic Infiltrative Bowel Diseases**  
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### **What is non-neoplastic bowel disease?**

Non-neoplastic (non-cancerous) infiltrative bowel diseases are a group of disorders that cause infiltration of the gastrointestinal tract with inflammatory cells. Broadly speaking, there are two major causes: inflammatory bowel disease and fungal or algal infections. The significance of these disorders is that they cause chronic debilitating disease, and they are reliably diagnosed only by gastrointestinal tract biopsy. The cause(s) and therapy for these disorders are widely divergent.

### **What are the symptoms of non-neoplastic bowel disease?**

**Inflammatory bowel disease** is the most common cause of intractable vomiting and diarrhea in dogs and cats. Although the exact cause of inflammatory bowel disease is unknown, inflammatory cells probably infiltrate the gut in response to dietary or bacterial challenges. The inflammatory bowel disease disorders may occur anywhere in the gastrointestinal tract, but the small intestine and large intestine are primarily affected. Middle-aged pets are most often diagnosed with this disease.

Symptoms may vary depending on the severity of inflammation and the extent of gut involvement. A diagnosis of inflammatory bowel disease is one of exclusion (everything else is ruled out, leaving only this diagnosis) and requires ruling out many other diseases that may cause intestinal inflammation.

Some symptoms of inflammatory bowel disease include the following:

- Vomiting
- Diarrhea
- Loss of appetite
- Weight loss

**Fungal or algal infections** are caused by various organisms that are introduced into the gastrointestinal tract, inciting an inflammatory response to their presence. Histoplasmosis is the most frequently diagnosed fungal infection affecting the gastrointestinal tract of animals (primarily dogs).

Some symptoms of bowel fungal infection include the following:

- Intractable diarrhea
- Loss of appetite
- Weight loss
- Fever
- Labored breathing
- Enlargement of the lymph nodes

**Pythiosis** and **protothecosis** are rare fungal and algal infections that cause infiltrative gastrointestinal disease in animals. Both diseases are common in dogs, and both preferentially affect the large intestine.

Some symptoms of pythiosis and protothecosis include the following:

- Diarrhea
- Weight loss
- Generalized debilitation

### What tests are needed?

Baseline diagnostic tests for **inflammatory bowel disease** that may be recommended by your veterinarian include the following:

- Multiple fecal examinations
- Routine blood work (to test the kidneys, liver, etc.)
- Urinalysis
- Radiographic imaging procedures
- Thyroid testing (in cats)
- Tests for feline viral diseases (e.g., feline leukemia virus, feline immunodeficiency virus)
- Surgical or endoscopic biopsy of the intestine (required to confirm the presence of inflammatory cells and to exclude other diseases that mimic inflammatory bowel disease)

In the case of **fungal or algal infections of the bowel**, diagnosis requires detecting the organisms (contained within inflammatory cells) in rectal scrapings or in surgical or endoscopic biopsy specimens of the intestines.

With **pythiosis** and **protothecosis**, diagnosis is made only by demonstrating the organisms in affected gastrointestinal tract tissues.

### What treatment is needed?

Therapy for **inflammatory bowel disease** includes the use of anti-inflammatory drugs to decrease gut inflammation and use of a hypoallergenic diet to reduce the workload on the gut. Your pet is likely to require several weeks to months of drug and/or dietary therapy and to require a hypoallergenic diet indefinitely.

Therapy for **fungal or algal bowel infections** consists of antifungal drugs given over several months.

In the case of **pythiosis**, surgical removal of all infected tissue, if possible, is the preferred treatment. Presently no effective therapy exists for **protothecosis**.

### What is the prognosis?

Most animals with **inflammatory bowel disease** respond favorably to therapy; however, relapses should be expected.

The prognosis for **fungal or algal bowel infections** varies with the extent of disease activity. Animals with severe symptoms or widespread disease generally fail to respond to therapy.