

INFLAMMATORY BOWEL DISEASE

Inflammatory Bowel Disease, or IBD, is a chronic (ongoing, long term) problem seen in both dogs and cats. It results from a disorder of the immune system of the gastrointestinal tract, and can involve the stomach, small intestines, large intestine or all three. When an animal has inflammatory bowel disease, the lining of the stomach or intestines is invaded by inflammatory, or immune system, cells.

There are several different kinds of IBD, each involving a different type, or mix of types, of inflammatory cells. The only way to tell whether an animal has IBD and what type is to biopsy the intestines or stomach. The biopsy involves removing small pieces of intestine and stomach, under general anesthesia, and examining them under a microscope to see what abnormal cells are present. Biopsy samples can be obtained via a fiberoptic endoscope slid into the stomach and intestinal tract through the mouth or rectum, or with an incision into the abdomen.

We don't yet understand the exact cause of inflammatory bowel disease. Genetic factors are involved, as some breeds of dogs, namely basenjis, Wheaton terriers and Shar peis, are much more prone to it than others. For some reason, in pets with IBD the immune system of the intestinal tract is hyper-reactive. The body's own immune system, in other words, causes the disease. It becomes overly sensitive to certain foods, bacteria, intestinal parasites or even the body's own cells.

The normal intestinal immune system consists of several different types of cells whose jobs are to scavenge up and destroy foreign cells, such as bacteria, which invade beyond the intestinal lining. They also destroy toxins and any foreign materials they find. They are sort of like a police force that travels up and down within the intestinal wall, keeping order.

In inflammatory bowel disease, the immune system over reacts, sending too many cells into the lining of the intestines. These cells release histamines and other substances which cause inflammation, and there are so many of them that they clog the tissues so the intestinal lining can't function properly. Food and water absorption are impaired, leading to vomiting, diarrhea, weight loss or abdominal pain. Chronic inflammation also becomes self perpetuating - the damaged intestinal lining becomes leaky, allowing further bacteria and food proteins to enter past the lining, which further stimulates the immune system.

In the normal dog or cat, a simple case of illness from a parasite or sensitivity to a certain food substance is just an intestinal irritation, not a full blown immune system disease. Parasite treatment or a diet change is curative. Most cases of food allergy or intestinal parasites are not inflammatory bowel disease. In IBD, the hair-trigger immune response is very abnormal. Even after the original substance or infection that was the trigger is gone, the immune system is still over-reactive. Treatment is aimed at controlling this hair-trigger response.

The first steps to treatment, then, are to eliminate any parasites, infections or food

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substances which may be triggering the disease.

The most common parasites involved are Giardia, a one celled protozoa, and whipworms, which are tiny, hair fine worms too small to see without a microscope. Both of these parasites are difficult to detect on routine stool checks. Often when IBD is suspected we simply treat for them, assuming they may be there, even if stool checks have been negative.

Antibiotics are usually used to eliminate certain types of bacteria which may be triggering the disease. Because the intestinal tract is not normal with IBD, abnormal bacteria are sometimes growing in the intestinal tract along with the normal "good" intestinal bacteria which are supposed to be there. With careful antibiotic use, we attempt to eliminate the bad bacteria while saving the good kinds that help to digest food.

Another standard treatment is the hypoallergenic diet trial. Many IBD patients have developed allergies to certain ingredients in their food. Food allergies develop slowly over time, with repeated exposure to the substance that eventually becomes the "allergen". Proteins are the most common allergens - beef, dairy products, chicken, soy, etc. However, grains, artificial colors and flavors, or preservatives may also be the problem. There are no accurate tests yet to determine what food ingredients a pet is allergic to - we can't just send a blood sample to a laboratory and get a result of beef allergy, for instance. What we do is put the pet on a diet that has been specially formulated for food allergies. If his inflammatory bowel disease improves on the new food, we know there was something in the old food that was triggering the disease.

In order to avoid the common food ingredients that most pets are allergic to, hypoallergenic diets contain ingredients not usually found in pet food - venison, duck, lamb, fish, potato, rice - or the food has been processed so that the proteins in the food are broken up into pieces smaller than the minimum size required to produce an allergic reaction by the immune system. The newest of these hydrolyzed protein diets is Hill's Z/D. Not only is it unlikely to trigger an allergic reaction but breaking down the proteins into smaller molecules also makes them easier to digest and absorb. This is an important benefit, since most IBD patients are underweight and have difficulty absorbing nutrients through their inflamed intestines.

Lamb used to be the standard hypoallergenic diet for food allergies affecting either the intestines or the skin. Many manufacturers now include lamb meal in their pet foods, however, so it's a standard ingredient in diets eaten by many pets. The manufacturers advertise, and many people mistakenly believe, that lamb in and of itself is hypoallergenic. This is not true. The body can become allergic to any food, and now that more foods include lamb, we are seeing more and more lamb allergies. Lamb is no better than any other meat, for skin and coat health or nutritional value.

The hypoallergenic food that we decide to feed the IBD patient must be the ONLY food that pet consumes for at least eight weeks. During this time it is very important that the pet is not given ANY treats, snacks or table food, since these foods may be triggering the IBD. It takes a long time for the immune response to die down, so you won't usually notice much improvement of the disease for a long time. If the food change does seem to be beneficial, the animal can stay on the special diet for the rest of it's life, or we can reintroduce one food item at a time to try to determine what ingredient is the culprit. This can take many months of experimentation!

Several medications are used to treat inflammatory bowel disease, in addition to the antibiotics and antiparasitic medications already mentioned. Corticosteroid drugs, usually prednisone, suppress the immune system and decrease inflammation. They are

usually very helpful, and are life saving in severe cases of the disease, but they can also have many side effects, especially in dogs. Other anti-inflammatory drugs are used as well, such as sulfasalazine, which works directly on the intestinal lining and so has fewer side effects on the rest of the body than prednisone does. Medications to alleviate the symptoms of vomiting and diarrhea may be necessary. Sometimes a fiber supplement is helpful, or a special diet made for intestinal disease if a hypoallergenic diet trial does not prove helpful.

Stress is a very important factor in inflammatory bowel disease. Patients will often flare up with symptoms during stressful times, such as with a move to a new home, the introduction into the household of a new pet or baby, boarding at a kennel, or when they suffer from any other physical disease. Antidepressants and tranquilizers sometimes help to ease the pet through these occasions, or an increase in the dose of the pet's regular IBD medications may be recommended at these times.

Often it takes many months to find the right combination of drugs and food to help control the disease. An accurate diagnosis with intestinal biopsy is the best way to ensure that the treatment most likely to be successful is the one that's tried first. Even with an accurate diagnosis, though, IBD can be a frustrating and difficult disease. The goal is not to cure it, but to control it - to minimize the frequency and severity of recurrence and to maximize the quality of the pet's life. In the case of the basenjis, Wheatons and Shar peis, the disease may progress despite all treatment. Intestinal lymphoma, a form of cancer, may also arise as a consequence of the chronic inflammation in the intestinal tract.

Treatment requires a conscientious pet owner who is willing to hang in there during a lengthy period of diagnosis and drug trials. Laboratory testing, including intestinal or stomach biopsy, blood testing and repeated stool checks, is often necessary to rule out other causes of vomiting, weight loss and diarrhea. (There are dozens of different diseases that cause these symptoms.) The pet owner must have a good relationship with the veterinarian and veterinary hospital staff, as it takes a team effort and good communication to manage IBD.