

## **Immuno-Proliferative Small Intestinal Disease and Exocrine Pancreatic Insufficiency (EPI) of the Basenji Dog – as per [basenji.org](http://basenji.org)**

Immuno-Proliferative Small Intestinal Disease and Exocrine Pancreatic Insufficiency are presented together because they are both disorders of mal-digestion or mal-absorption.

IPSID stands for Immuno-Proliferative Small Intestinal Disease but it is a disease of many names. It is also called Basenji Enteropathy, Immunoproliferative Lymphoplasmacytic Enteritis, Basenji Diarrheal Syndrome, and malabsorption. IPSID is a type of inflammatory bowel disease (IBD), which results in the dog not being able to utilize and absorb nutrients correctly from food.

A predisposition to IPSID is inherited, but inheritance appears to be only one of the factors involved. A dog genetically predisposed to IPSID and its resultant immunological impairment might present with usual IBD and eventually progress to IPSID. Physical and/or emotional stresses may be aggravating triggers.

Exocrine pancreatic insufficiency (EPI) can be confused with IPSID but the treatment is very different. A dog with EPI is not able to produce the enzymes needed for digestion. EPI occurs when a dog's exocrine glands in the pancreas become atrophied and can no longer produce or secrete pancreatic digestive enzymes. Some food particles then remain undigested and unabsorbed causing Small Intestinal Bacterial Overgrowth (SIBO). That results in the dog, although eating copious amounts of food, being constantly undernourished and literally wasting away. Without proper treatment, the EPI dog can suffer greatly and even die a painful death from malnourishment, starvation or organ failure.

EPI should be ruled out before a diagnosis of IPSID is made. The only way to confirm EPI is with a TLI (Trypsin-Like Immunoreactivity) blood test. If your dog is diagnosed with pancreatic insufficiency or if you have questions about the disorder, information is online at <http://www.epi4dogs.com>.

## For the Owner

IPSID symptoms can include diarrhea, vomiting, weight loss, increased or decreased appetite, gas, and depression. EPI symptoms are very similar and include weight loss despite a strong appetite, greasy globs of voluminous yellowish stools, diarrhea, vomiting, and personality changes. The type of symptoms and their severity differ from dog to dog, and from one episode to another. Dogs with IPSID or EPI often will have good periods as well as bad spells. Rarely will a dog present with profound weight loss but no other symptoms. Testing for EPI and IPSID can rule out instances where a dog suffering from either condition is not suffering from other outward symptoms like vomiting and diarrhea.

Diagnosing IPSID involves investigating and eliminating other possible causes of the dog's symptoms. Blood serum protein levels may be low. Intestinal biopsy is the only reliable way to diagnose IPSID; it is done to rule out irritable bowel syndrome, inflammatory bowel syndrome and other diseases, lymphangiectasia (which most basenjis with IPSID have as a secondary condition), colitis, cancer, and systemic fungal infections. Endoscopic biopsies are preferred to prevent complications with healing.

Traditional methods of treating IPSID include systemic prednisone and antibiotics. Some dogs do well on a holistic regimen; it is important to discuss a long-term treatment plan with your veterinarian. Symptoms may diminish or increase over time. A veterinarian must oversee treatment and changes to treatment. IPSID affected dogs can harbor microorganisms that may cause problems for other dogs in the household; proper household hygiene is important.

A change to the dogs diet may be required to optimize nutrient utilization. Some veterinarians suggest switching diets on a monthly basis. A homemade diet also can be used and additional vitamin supplementation may be indicated.

EPI should be confirmed with a trypsin-like immunoreactivity blood test. This test detects trypsinogen and trypsin levels in the pancreas. Values below 2.5 g/L indicate EPI. Values between 3.5 and 5.7 g/L may be indicative of other pancreatic disease.

Treatment for EPI includes supplementation with enzymes and changes to the dogs diet. Antibiotics and supplementation with vitamin B-12 (cobalamin) may also be required. The most common enzymes used to treat EPI dogs are porcine-based (from pigs). However, some EPI dogs do not tolerate porcine enzymes. These dogs are often helped by plant-based (soy) enzymes that aid digestion.

There are many web resources for dogs and owners dealing with EPI, including discussion lists for owners of affected dogs. See, for example: <http://www.epi4dogs.com/>.

### **For the Breeder**

While IPSID and EPI are not common, they are serious diseases. Dogs with IPSID or EPI should NOT be used for breeding. While the mode of inheritance is not known, susceptibility to these diseases, rather than direct inheritance, may be involved.