

## Pancreatitis in Dogs: Symptoms and Treatments

**Pancreatitis** is inflammation and swelling of the **pancreas**. It can occur in a mild or severe form. The cause of spontaneous pancreatitis in **dogs** is not well understood. Dogs taking corticosteroids are at increased risk. There is a higher incidence of pancreatitis in dogs with Cushing's syndrome, diabetes mellitus, **hypothyroidism**, and idiopathic hyperlipemia (a disease of Miniature Schnauzers). These diseases are associated with high serum lipid levels. Pancreatitis is also more prevalent in overweight spayed females and dogs on high-fat diets. An attack may be triggered by eating table scraps or a fatty meal.

Acute pancreatitis is characterized by the abrupt onset of **vomiting** and severe pain in the abdomen. The dog may have a tucked-up belly and assume a prayer position. Abdominal pain is caused by the release of digestive enzymes into the pancreas and surrounding tissue. **Diarrhea**, **dehydration**, weakness, and shock may ensue.

The diagnosis can be suspected based on a physical examination. It is confirmed by blood tests showing elevated **amylase** and/or lipase levels, along with a new serum test called canine pancreatitis lipase immuninol reactivity and TAP (trypsinogen activation peptide). Abdominal ultrasonography may reveal an enlarged and swollen pancreas.

Mild pancreatitis produces loss of appetite, depression, intermittent vomiting, and diarrhea and weight loss.

Fulminant necrotizing pancreatitis is an acute, extremely severe, usually fatal form of pancreatitis. In hours, your dog will go into shock. Dogs may vomit or simply show signs of severe abdominal pain. If you suspect this problem, get your dog to the veterinarian immediately!

Following an attack of pancreatitis, the pancreas may be permanently damaged. When it is, the dog may develop diabetes mellitus if the islet cells have been destroyed or may develop exocrine pancreatic insufficiency if the acinar cells have been destroyed.

**Treatment:** Dogs with acute pancreatitis require hospitalization to treat shock and dehydration. The most important step in treating pancreatitis is to rest the gland completely. This is accomplished by giving the dog nothing by mouth for several days and maintaining fluid and electrolyte balance with intravenous saline solutions. **Antibiotics** are used to prevent secondary bacterial infections. Pain is controlled with narcotics. Cardiac arrhythmias, if present, are treated with anti-arrhythmic drugs.

Dogs who do not respond to medical treatment may require surgery to drain an infected pancreas. The prognosis for dogs with shock and spreading **peritonitis** is poor.

Dogs who recover from pancreatitis are susceptible to recurrent attacks, which can be mild or severe. These episodes can be prevented, in part, by eliminating predisposing factors. For example, place overweight dogs on a weight-loss program. Feed the total daily ration in two or three small servings to avoid overstimulating the pancreas. Do not feed table scraps. Dogs with high serum lipid levels (determined by your veterinarian) should be placed on a fat-

restricted diet. If scarring has damaged the acinar or islet cells, your dog may need supplemental treatment such as enzymes or insulin.

## **Exocrine Pancreatic Insufficiency**

The acinar cells in the pancreas manufacture digestive enzymes that empty into the duodenum in response to the stimulation of a meal. Without them, food cannot be adequately digested and nutrients therefore cannot be adequately absorbed. For reasons that are unknown, the acinar cells may atrophy and stop producing enzymes. This condition is called pancreatic acinar cell atrophy (PAA), and is one of the major causes of pancreatic insufficiency.

PAA begins in dogs under 2 years of age. All breeds are affected, but there is a predisposition in large breeds, particularly German Shepherd Dogs, in whom the disease may be inherited as an autosomal recessive trait.

A less common cause of pancreatic insufficiency is pancreatitis. Following a bout of inflammation, the pancreas may become scarred and contracted. This produces the same effect as acinar cell atrophy. This form of pancreatic insufficiency tends to affect middle-aged and older dogs of the small breeds.

Dogs with pancreatic insufficiency lose weight despite a voracious appetite and increased food consumption. The unabsorbed food produces a diarrhea with large, gray, semi-formed cow-pie stools with a rancid odor (see [Malabsorption Syndrome](#)). The hair around the anus is often oily from undigested fat. Intense hunger may cause the dog to eat his own stool.

The diagnosis of pancreatic insufficiency can be suspected from the appearance of the stool and other observations. The best and most accurate test is the serum trypsinlike immunoreactive assay (TLI), available to veterinarians through special mail-out laboratories. Folate and vitamin B12 levels may also be used as diagnostic aids.

Treatment: Most dogs respond well to having the missing enzymes added to their meals. Powered pancreatic extracts (Viokase-V and Pancrezyme) are superior to enteric-coated and uncrushed tablets.

Dogs who do not respond completely to pancreatic enzymes may do so when the maintenance diet is switched to a highly digestible, fat-restricted diet such as Hill's Prescription Diet i/d. An acid-blocker such as cimetidine (Tagamet) or ranitidine (Zantac) may be prescribed by your veterinarian to prevent destruction of the pancreatic enzymes by acid in the stomach.