

# PANCREATITIS

## About the Diagnosis

The pancreas is an organ in the abdomen that produces substances that are critical for digestion and for the body's normal metabolism. Microscopically, the pancreatic tissue is composed of two parts: *exocrine* and *endocrine*. Exocrine pancreatic tissue is responsible for producing and releasing enzymes (digestive juices) that help to break down and digest food in the intestine. Appropriate digestion permits nutrients to be absorbed and used by the body, and in this way, the pancreas is essential for transforming food into energy and building blocks that the body can use. The endocrine pancreatic tissue produces hormones that circulate in the bloodstream and are necessary for vital processes like blood sugar (glucose) control.

**Cause:** Acute pancreatitis is a sudden onset of inflammation within the pancreas. The exact trigger is often difficult to pinpoint in most dogs and cats. With acute pancreatitis, the enzymes that are normally produced and released to digest food begin to digest the pancreas itself. A variety of symptoms may result. These can range from mild signs of indigestion such as vomiting and loss of appetite to severe, life-threatening symptoms such as lethargy, painful abdomen, loss of appetite, and vomiting to respiratory difficulty, kidney failure, shock, and death. Diabetes mellitus occasionally occurs as a result of pancreatitis.

**Dogs:** Acute pancreatitis can develop in any dog; however, most affected dogs are overweight and middle-aged or older. It is thought that a high-fat diet plays an important role in allowing pancreatitis to occur. There is a high occurrence of this disease in miniature Schnauzers, suggesting that this breed may be genetically predisposed to pancreatitis. Some medications are suspected causes in dogs.

**Cats:** The symptoms are more subtle in cats. Therefore acute pancreatitis is less commonly diagnosed in these pets. However, the effects can be just as severe in cats as in dogs. Some infectious diseases can cause acute pancreatitis in cats, and some medications are suspected causes. But in many cases, other disorders such as inflammatory bowel disease and chronic liver disease are present concurrently and may be contributing to symptoms more than pancreatitis.

**Diagnosis:** Many disorders can mimic the symptoms of acute pancreatitis. Furthermore, there is no single test for diagnosing pancreatitis, and rather, several clues are necessary to make the diagnosis. Therefore several tests may be required to eliminate some of these other possibilities in order to determine that pancreatitis is responsible for symptoms. Your veterinarian will start by asking you for a complete history (including inquiring about the duration and exact appearance of symptoms, current and past medications, and type and amount of foods and treats given daily) and will perform a complete physical examination. Routine blood and urine tests, including a complete blood count (CBC), serum biochemistry panel, and urinalysis, can help to determine the degree of inflammation and dehydration in the body and to look for other causes of the same symptoms as pancreatitis since kidney problems, liver problems, and many other diseases can mimic pancreatitis. Similarly, abdominal x-rays help rule out some problems with the intestinal tract and tumors in the abdomen that could produce similar symptoms. Ultrasound exam of the abdomen is extremely valuable for helping to identify specific changes in the appearance of the structure of the pancreas expected with pancreatitis. A newer test known as the pancreatic lipase immunoreactivity (PLI) assay is used by some veterinarians and appears promising for identifying pancreatitis. Rarely, a biopsy of the pancreas is required for diagnosis, but in the vast majority of cases, pancreatitis is recognized from the results of a combination of the noninvasive tests (i.e., those not involving a biopsy) described above.

## Living with the Diagnosis

No medication exists that cures pancreatitis, but a majority of dogs and cats with pancreatitis improve on their own with medications and nursing care. Treatment is centered on medical care that is supportive: medications and treatments that help the pancreas to heal itself, reduce the likelihood of further pancreatitis being triggered, treat any complications that the pancreatitis can cause, and support vital functions (e.g., nutrition). The extent of supportive care can vary widely from minimal or at-home care to intensive, round-the-clock medical care, depending on the severity of the pancreatitis.

If medication is necessary, it should be given exactly as directed. Even when it has improved or resolved completely, pancreatitis may possibly be triggered again in the future by inappropriate food. Therefore, it is important to feed only diets that are of an appropriate composition and nutrient profile for patients with a history of

pancreatitis. Your veterinarian can help you determine which is the best type of food. If weight loss is recommended, ensure that your dog or cat follows the diet and exercise regimen prescribed.

It is important to note that cats that eat less than normal or stop eating altogether for any reason, including having pancreatitis, are at risk for developing a serious, life-threatening liver disease called hepatic lipidosis. Monitor your cat's food intake closely, and notify your veterinarian if your cat has not eaten for 24 hours, even if symptoms of illness are not apparent yet.

## TREATMENT

If the cause of pancreatitis can be identified, it is treated in an attempt to eliminate it. Intravenous fluids are given to treat dehydration. Your veterinarian may withhold food if vomiting is a problem so that the pancreas and entire gastrointestinal tract can rest and heal. If vomiting does not subside, a specially-prepared liquid diet may be given through an intravenous line (parenteral feeding) or a feeding tube may be placed in the digestive tract. Medication to control pain (analgesic) may be given if necessary.

When a dog or cat with pancreatitis has not vomited for a specified length of time (usually approximately 24 hours), a very small amount of water and a low-fat food is offered. If the dog or cat eats and vomiting does not recur, the amount is gradually increased during the next several days. If vomiting returns at any time, food and water often are once again withheld. Since many disorders can cause symptoms that look like pancreatitis (but are a different disease altogether), ongoing vomiting or worsening of symptoms often warrants additional testing. Similarly, during the course of treatment, several diagnostic tests may be repeated to help assess the effectiveness of treatment.

If diabetes mellitus develops, which can occur as a complication of pancreatitis but is fairly rare, insulin is given. Your veterinarian should discuss these events, the treatments, and how they affect the prognosis with you.

## DOs

- Inform your veterinarian if your cat or dog has ever been diagnosed with a medical condition and is taking medication.
- If pancreatitis is present, give medication exactly as directed by your veterinarian, and if you are concerned about possible negative effects, discuss them with your veterinarian immediately rather than simply discontinuing the treatment.
- Understand the importance of short-term withholding of solid food during pancreatitis. Since digestion of food triggers the pancreas to excrete its digestive juices, this makes pancreatitis worse. Therefore, during treatment of pancreatitis, food is almost always withheld for 24 hours or more, until vomiting has stopped and the pancreas has begun to regenerate.

## DON'Ts

- Do not postpone visiting your veterinarian if you observe any symptoms of acute pancreatitis (see Signs to Watch For below) in your dog or cat. Prompt treatment can prevent more severe effects.
- Do not give medication that you have at home that has been prescribed for human use; some of these may interfere with treatment and cause even more severe problems.
- Do not feed large amounts (or even normal amounts) of food during the days following recovery from pancreatitis. The pancreas needs to heal, and this is helped by feeding small, frequent meals that add up to the same daily amount of food, but distributed over several feedings.

## When to Call Your Veterinarian

- If you cannot keep a scheduled appointment.
- If you are unable to give medication as directed.
- If your pet is not improving after treatment begins, and especially if your pet will not eat.

## Signs to Watch For

- Watch for signs of not feeling well, such as a new onset of "low spirits" (mental dullness), weakness, loss of appetite, vomiting, or diarrhea.

## Routine Follow-Up

- Follow-up appointments are typically scheduled to monitor progress, to determine if treatment should be adjusted, and to pursue any abnormalities on previous blood tests. Since pancreatitis has a very wide degree of variability in its severity, your veterinarian can discuss the frequency and extent of these rechecks with you.

## Additional Information

- Although pancreatitis can be inherited in humans (genetically), this has not yet been proven as a possible cause in dogs and cats.