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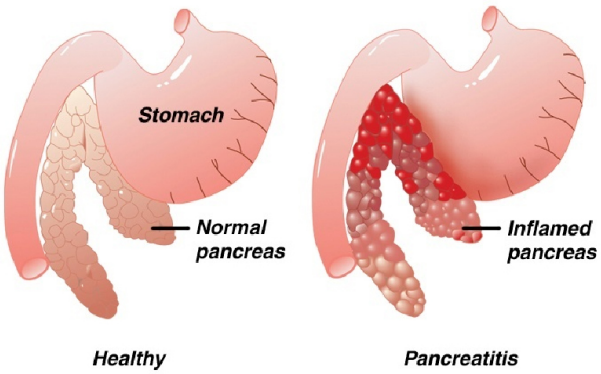
# Pancreatic Lipase Immunoreactivity in Dogs

## What is pancreatitis?

Simply stated pancreatitis is inflammation of the pancreas. The pancreas is a small fleshy organ located between the stomach and small intestine. The pancreas has many functions related to digestion and the regulation of blood sugar levels (See our handout "Pancreatic Disease – Testing").

Dogs with severe acute pancreatitis are often very ill and show loss of appetite, vomiting, lethargy, abdominal pain and fever. However, clinical signs can vary; some dogs experience only mild clinical signs, while others may have low-grade chronic disease with recurring episodes of illness and apparent complete recovery between these episodes.




## What routine tests are available to diagnose pancreatitis? Are they specific?

Routine blood tests include a Complete Blood Count and Biochemistry Profile, both of which usually reveal abnormalities that are typical of pancreatitis (See our handout "Pancreatic Disease – Testing"). While these changes are suggestive of the disease, they do not provide a definitive diagnosis. For example, high levels of two enzymes, serum amylase and serum lipase, have traditionally been considered diagnostic for pancreatitis in dogs. However, both of these enzymes can be elevated for reasons other than pancreatitis and many dogs with pancreatitis do not have the expected elevation in amylase and lipase. Therefore, these enzymes are no longer considered the tests of choice for diagnosing pancreatitis in the dog.

## What is pancreas-specific lipase? How is it different from serum lipase?

"...blood values increase *only* when there is pancreatic inflammation."

**Pancreas-specific lipase** is a form of lipase produced only in the pancreas. It is highly specific to the pancreas, and blood values increase *only* when there is pancreatic inflammation. By comparison, serum lipase can come from other tissues besides the pancreas, and levels may be high for reasons other than pancreatitis.

## How is pancreas-specific lipase measured? What sample is required?

Pancreas-specific lipase is measured with a test called **Canine Pancreatic Lipase Immunoreactivity**, known simply as **cPLI**. The test requires only a small blood sample. A fasting sample is preferred whenever possible, but this is not essential for the accuracy of the test.

## Does the sample have to be sent away to a diagnostic laboratory?

A preliminary screening can be done by the veterinarian in-clinic (SNAP cPL©) and a second more definitive test is done at the laboratory. The suggested procedure is that if the in-clinic screening test is positive, the same sample should be sent to the laboratory to confirm the diagnosis of pancreatitis.

## How reliable a test is cPLI?

Studies have demonstrated that cPLI correctly diagnoses pancreatitis in 82% of dogs that have the disease. The same studies showed that in more than 96% of cases, cPLI was elevated only if pancreatic inflammation was present. The cPLI did not rise in dogs given cortisone, and the test was able to distinguish pancreatitis from a variety of diseases that often mimic pancreatitis.

The cPLI performs better than other blood tests used to detect canine pancreatitis. It is currently considered the best available blood test for the diagnosis of pancreatitis in the dog.

## Can cPLI be used to monitor clinical pancreatitis?

Yes. Pancreas-specific lipase is cleared from the blood very quickly, which means that cPLI can be used to monitor changes in the pancreas in response to treatment. A rapidly falling cPLI together with improvement in the dog's condition indicates a good response to treatment.

## Which dogs should be tested for pancreatitis using cPLI?

The cPLI test should be considered for:

- Dogs with signs of acute vomiting, abdominal pain, or loss of appetite, especially if a cause cannot be found on preliminary evaluation.
- Dogs with recurring episodes of vomiting or poor appetite.
- Dogs at increased risk for pancreatitis, e.g., some Miniature Schnauzers, and dogs being treated with anticonvulsants (e.g., potassium bromide).

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