



PANCREATIC DISEASE

FACT SHEET 16

INTRODUCTION

The pancreas is a large gland consisting of two main lobes and is situated in the abdomen close to the stomach, liver and small intestine. The most familiar function of the pancreas is in producing insulin, which regulates the level of glucose in the blood. Insulin is produced by the hormone producing (endocrine) cells within the pancreas known as the islets of Langerhans. Disorders in this area of the pancreas give rise to diabetes, a condition which is covered in our fact sheet on Diabetes.

The second function of the pancreas, which is equally as important, is in the production of digestive enzymes. This is referred to as the exocrine function of the pancreas. The enzymes produced by the pancreas constitute pancreatic juice, which digests food so that it can be absorbed by the body. If the enzymes are not present, an animal cannot digest or absorb food adequately.

Apart from its role in producing digestive enzymes, the pancreas is involved in:

- Assisting with the absorption of vitamin B₁₂ and other nutrients
- The neutralisation of gastric acid
- The prevention of overgrowth of unwanted bacteria in the small intestine

PANCREATITIS

This is basically inflammation of the pancreas and occurs either in acute or chronic forms. There are numerous causes, including bacterial infection, drug reactions and trauma. Obese animals and those fed on high fat diets appear more at risk from pancreatitis.

SIGNS & SYMPTOMS OF PANCREATITIS

• Acute pancreatitis

Symptoms are sudden in onset and the animal may appear depressed, may vomit or pass loose stools. Enzymes leak from the pancreas and damage surrounding cells. Abdominal pain may be apparent and in severe cases the animal may collapse. If you suspect that your animal is suffering from this condition, then consult your vet immediately

• Chronic pancreatitis

Long term inflammation of the pancreas is termed chronic pancreatitis. This leads to changes within the tissues of the pancreas and, ultimately, causes impairment of function with associated digestive problems

DIAGNOSIS OF PANCREATITIS

If your vet suspects pancreatitis, he may suggest taking a blood sample. By doing so, a laboratory can measure the levels of pancreatic enzymes in the blood. Abnormally high levels would indicate pancreatitis. Other factors measured in the blood may also give diagnostic indications.

TREATING PANCREATITIS

Whilst acute pancreatitis requires urgent veterinary attention, chronic cases can be managed more easily.

- **Dietary control**

Diet plays an important part in the control of the illness. Ideally, a high carbohydrate, low protein, low fat diet should be fed. **Denes Low Calorie With Chicken & Liver** canned recipe is ideal to feed in this situation, with a protein content of around 7% and a fat (oil) content of approximately 3% when measured on an 'as fed' basis.

- **Using herbal remedies**

In addition to dietary measures, herbal remedies can often help. **Denes Greenleaf Tablets** have a natural anti-inflammatory effect and **Denes Garlic Tablets** can help ward off infection and control overgrowth of bacteria in the bowel.

PANCREATIC INSUFFICIENCY

This differs from pancreatitis and is principally a loss of the exocrine cells that are responsible for the production of pancreatic digestive enzymes. Signs of exocrine pancreatic insufficiency (EPI) will not appear until more than 90% of the gland has been destroyed.

The most common cause of EPI is atrophy of the exocrine cells. This only occurs in the dog and the exact cause is not known. It can occur in any breed, at any age, although it is especially prevalent in young German Shepherds, where there is believed to be a genetic link to the condition. Other less common causes of EPI include pancreatitis and congenital deformities of the pancreas.

- **Symptoms of pancreatic insufficiency**

Animals with this condition are unable to either digest or absorb their food well. This can cause:

- Weight loss in spite of eating well
- Increased appetite. Some animals will rapidly devour all food in sight and seek more
- Scavenging from waste bins
- Tendency to consume other animals faeces, a condition often referred to as coprophagia or pica
- Semi-formed stools or soft stools
- Bouts of watery diarrhoea, which can be explosive in nature
- Appearance of undigested food in the stools
- Flatulence
- Odd abdominal rumblings and other noises
- Loss of body condition as the illness progresses, with muscle wasting and a shabby looking coat

DIAGNOSIS OF EPI

Other than by clinical signs, EPI can be diagnosed by laboratory tests. Microscopic examination of the faeces for undigested food is often used, but is rather subjective and not always accurate. More modern tests are more reliable, including measurement of enzymes (specifically trypsin and trypsinogen) in the blood by immunoreactivity, absorption tests and estimation of enzyme activity in the faeces.

TREATMENT OF EPI

The most common method of treatment involves supplementing the diet with dried pancreatic enzymes, replacing those which the animal is unable to produce. Ideally, the animal should be fed either once or twice daily, adding the powder, capsules or tablets at the recommended level to each meal. Symptoms normally resolve in a few days and, gradually, weight lost during the illness is regained. Once the symptoms are under control, treatment is maintained to prevent recurrence.

- **Dietary help for EPI**

Once again, diet plays an important factor in managing this condition. The most ideal diet is easily digested and should have a low fibre content and a lower fat level. The following recipes are worth consideration:

Canned dog foods:

Senior With Chicken, Lamb & Rice
Senior With Turkey, Rabbit & Rice,

both of which are low in fat.

Low Calorie With Chicken & Liver

which is low in fibre and fat

Dry dog food:

OPTIONS Sensitive Digestion Rich in Lamb & Rice
OPTIONS Healthy Skin Rich in Chicken With Turkey & Rice

Both of which are low in fat when compared on a dry matter basis.

Where periodic watery diarrhoea is a problem, biscuit should be replaced with rice as the main carbohydrate source.

- **Remedies for EPI**

As well as dietary help, there are several other things you can do to manage this condition. Overgrowth of bacteria in the small intestine can be a problem with EPI. This causes diarrhoea and can often be controlled using **Denes Garlic Tablets**, which can help inhibit the growth of unwanted bacteria. Adding **Denes Probiotic+ Powder** will also help, by supporting the friendly bacteria within the bowel and by limiting the growth of those which are detrimental to health. Where diarrhoea is a recurrent problem, **Denes Digestion Plus Tablets** can also help, by soothing the gut and binding the stools. **Denes Milk Thistle Plus with Dandelion** can also be

of benefit in certain situations, as the herbs can act as a general tonic to the pancreas.

Dogs with EPI can suffer from vitamin deficiencies, particularly the B vitamins and vitamin E. Supplementation is usually recommended. **Denes All-in-One Tablets** are ideal and can be added to the food on a daily basis.

If you have any queries concerning your pet's health or feeding problems, you can contact us for free pet care advice by:

- Visiting our website www.denes.com
- Emailing us at info@denes.com
- Calling us on **01273 325364** Mon-Fri, 9am – 12Noon
- Writing to us at:
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