



DIABETES

FACT SHEET 21

Most of us are familiar with **Diabetes mellitus**, or sugar diabetes, as a condition that can affect humans. The same condition can also affect both dogs and cats and can be worrying, as it presents a number of problems for both the patient and owner in its management.

Diabetes is basically a failure of the body to regulate the levels of glucose (a type of sugar) in the blood, a process normally carried out by a hormone called insulin. Without insulin, the body cannot store or utilise glucose properly. This type of diabetes differs substantially from the other type of diabetes, **diabetes insipidus**, which is caused by damage to the pituitary gland and affects the body's water regulation mechanism.

• CAUSES OF DIABETES

There are several forms of diabetes mellitus, but fundamentally they all cause the same problem; too high a level of glucose in the blood. The illness affects between 0.4-0.5 percent of dogs, with a lower incidence rate in cats. The likelihood of developing the disease increases with age. The most common form is caused by the failure of the insulin-producing beta cells in the pancreas to manufacture enough of this vital hormone. In some instances, there may be a hereditary link with this form of the illness (in breeds such as Keeshonds) and genetic links towards diabetes in some breeds, including Dachshunds and Miniature Poodles. In some animals, diabetes is triggered by damage to the immune system by drugs or viruses, or from repeated bouts of inflammation to the pancreas (pancreatitis).

Diabetes can also arise as a result of an animal developing insulin resistance. In this case the body produces enough of this hormone, but for some reason is unable to respond to it. This form is more likely to be seen in overweight animals, but can also arise as a result of drug therapy with steroids and some hormonal treatments based on progestagens, as well as excess amounts of the hormone thyroxine (hyperthyroidism) in cats.

• SIGNS AND SYMPTOMS

The most noticeable signs are:

- Increased thirst
- Increased urine production
- Increased appetite
- Possible weight loss, mainly due to muscle wasting
- Loss of general condition and well being
- Other less obvious symptoms include the development of cataracts and retinal degeneration (both of which can lead to blindness), liver enlargement, kidney damage, damage to blood vessels and reduced resistance to infections.

- **DIAGNOSIS**

Initially, this may be made from a urine sample. Normally there is no glucose present in the urine. However, in diabetes, the blood glucose level is very high and this results in glucose appearing in the urine. Your vet can test for this fairly easily in the surgery. A more accurate diagnosis can be made from a blood sample, which may give a more accurate indication as to the severity of the condition.

- **TREATING AND CONTROLLING DIABETES**

Treatment is aimed at restoring the blood levels of glucose to near normal and to reduce the chances of the animal developing any of the long-term complications, such as cataracts.

Mild cases may respond to dietary management alone or in conjunction with tablets designed to stimulate insulin production by the pancreas. Where this type of approach is not suitable, your vet may suggest using daily injections of insulin to control the situation.

Diet is important in the management of diabetes. This is particularly important in cases where the animal develops diabetes as a result of obesity. In this situation, a reduction in weight is vital and the diet needs to be modified accordingly. Usually a high fibre, low energy type diet is recommended to help the animal lose weight over a period of time. The following Denes recipes may be helpful:

For dogs – canned food

- **Low Calorie With Chicken & Liver**

For cats – canned food

- **Adult Older With Turkey & Lamb** is the most suitable, with the addition of a heaped teaspoonful of either wheat or oat bran to each 400g can of food to increase the fibre level.

Once weight loss has been achieved, a lower dose of insulin is normally needed. In some cases the need for insulin can be dispensed with altogether. It is important from this point on to watch your pet's weight, to make sure that it remains constant.

High fibre type diets in general are suitable for long-term management of diabetes. Diets such as these contain complex carbohydrates, which have to be broken down in the gut into more simple sugars before they can be absorbed into the blood stream. As this takes time, this tends to even out the absorption of glucose from the bowel. This helps avoid peaks and troughs in blood glucose levels and makes the management of diabetes a little easier.

Some animals with diabetes are significantly underweight. Low calorie or high fibre diets are not suitable to use in this situation. Normally a high energy, easily digestible diet is recommended.

Ideal Denes recipes to try include:

For Dogs – canned foods

- **Adult Tripe Mix Rich in Turkey** (91 kcal 100g)
- **Puppy With Chicken** (107 kcal 100g)

For Cats – canned foods

- **Adult With Chicken & Turkey in Jelly** (87 kcal 100g)

OTHER PROBLEMS

Diabetic animals sometimes develop other complications as a result of their illness, including liver or kidney problems, which, ultimately, may be more serious than the underlying diabetic problem. In such circumstances other types of dietary treatment may be advisable.

Whichever type of diet you feed, it is important to keep closely to a regime. To keep your animal stabilised, feed the recommended amounts of food at the same time each day, timed to fit in with the insulin injections. Try not to vary the size of the meals or the content and avoid giving tit-bits as this can upset the balance. Prepared foods have a great advantage over home made diets in this respect, as there is relatively little change in the ingredients and proportions.

• **NATURAL REMEDIES & DIABETES**

Herbal remedies

There are several remedies that can be of benefit and may help to lower blood glucose levels a little. They may also possibly reduce the dose of or need for insulin.

- **Denes Garlic Oil Capsules**
- **Denes Greenleaf Tablets** (which contain nettles)

Both these remedies can help lower blood glucose levels.

- **Denes Kidney Support (tincture based)** can be useful where there are complications involving the kidneys
- **Denes Milk Thistle+ Powder** can be of benefit, helping to support the liver. The herbs in this remedy can also act as a general tonic to the pancreas.
- **Denes All in One+ Powder** is also suitable as it can help improve general condition.

Homeopathic remedies

For general support we would recommend **Denes Phosphorus 30c** given 2 or 3 times daily on a long-term basis.

Other Denes Fact sheets to read

- All in One+ Powder
- Milk Thistle
- Garlic

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
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