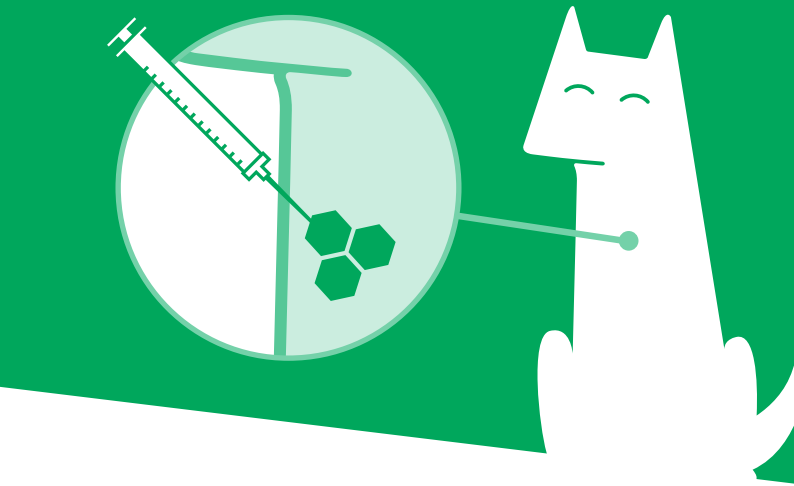
Diabetes



CATS PROTECTION
VETERINARY GUIDE 3

This condition affects the control of blood sugar levels and usually occurs in middle-aged and older cats, particularly those that are overweight. There may be some genetic predisposition to diabetes.

Normal sugar control

When a healthy cat eats, the food is digested and absorbed into the bloodstream. Glucose, a form of sugar, is one of the essential products that results from this digestion and provides the body with energy. As the blood glucose level rises after a meal, the pancreas releases a hormone called insulin into the blood, allowing glucose to leave the bloodstream and enter the body cells where it is needed as a source of energy. As the levels of glucose in the bloodstream drop back down to normal the body stops producing insulin until the next meal.

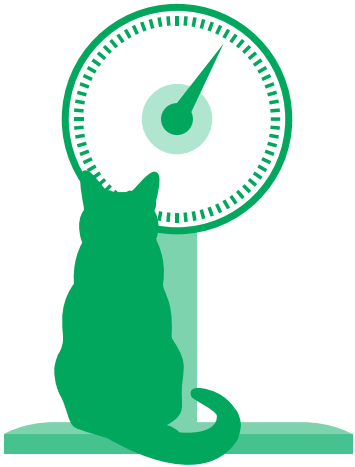
Abnormal sugar control

Being diabetic means that either the pancreas does not produce enough insulin or the body does not respond to it properly. Once the glucose is absorbed into the bloodstream, it is unable to enter the body cells, leaving the body with abnormally high levels of circulating glucose.

The body is forced to use up other substances such as fat or muscle protein to provide energy as the glucose cannot be used. Untreated, this process will eventually create toxic by-products that can make the cat extremely ill.

Which cats are most at risk of developing diabetes mellitus?

- Obese cats are four times more likely to develop diabetes – obesity is a debilitating disease that affects the body in many ways including causing resistance to the effects of insulin
- Inactive cats are at greater risk
- Older cats (over seven years) and male cats are at higher risk of the condition
- Cats with other hormone disorders may be more resistant to the effects of insulin, such as those with acromegaly or hyperadrenocorticism (also known as Cushings disease) – see later
- Cats with other conditions requiring treatment with some medicines – corticosteroids or progesterones – may be predisposed to developing diabetes
- It is common for diabetic cats to suffer from other diseases too, such as inflammation of the pancreas (pancreatitis) or urinary tract infections



What are the signs of diabetes mellitus?

The clinical signs of diabetes can be similar to a number of other diseases and include:

- increased thirst and/or appetite
- passing more urine
- weight loss
- lethargy and weakness
- vomiting
- being more prone to other infections eg skin and urinary tract infections
- some affected cats will have sunken back legs so the cat is standing on its ankles (hocks), as a result of nerve damage – a so-called 'plantigrade stance'

How is diabetes diagnosed in cats?

To diagnose diabetes, your vet will want to take blood and urine samples from your cat to assess several parameters including glucose levels – they will not be allowed any food for several hours before the blood test is taken. Your vet may also want to monitor your cat's bodyweight and its body condition score and how much your cat drinks over a period of time. Further tests can be helpful to rule out other diseases that may mimic diabetes mellitus or affect the success of treatment of diabetes.

How is diabetes treated?

Diabetes is often treated more successfully if detected and treated in the early stages. Treatment may include the following:

Insulin injections

If your cat is diagnosed with diabetes, your vet is most likely to prescribe insulin. Insulin must be given by injection and most diabetic cats require one or two injections a day. Usually diabetic cats require insulin for the rest of their lives but some cats, if treated early, will stabilise and become non-diabetic again for weeks, months or even years.

It often takes time to find the correct dose and type of insulin for your cat. It may be necessary for your cat to stay at the vets to allow them to monitor their glucose levels at regular intervals while starting and stabilising treatment, though if you are able to monitor carefully at home, this may be an option.

You may feel anxious about injecting your cat – many owners do. Staff at your veterinary practice will show you how to give injections, as well as running through the other aspects of looking after a diabetic cat and offering support. Most owners find caring for a diabetic cat incredibly rewarding and injecting a cat soon becomes part of an easy daily routine.

In addition to injections, some veterinary practices will ask you to test urine and/or blood samples at home as an extra method of monitoring your cat's progress.

Diet

It is important to take your vet's advice on diet. The most appropriate feeding regime may depend on your cat's bodyweight when starting treatment, as well as any recent weight loss. The diet recommendation may change as your cat's diabetes becomes stabilised. Ultimately, if your cat is overweight, your vet will aim to help your cat slowly lose weight, but if they are already losing weight as a result of the disease, further weight loss may not be helpful during the initial treatment phase.

Your vet may prescribe a specific veterinary diet to help control your cat's diabetes and in many cases you can continue with your cat's normal feeding times.

Oral medication

In most cases insulin treatment is necessary, but a small percentage of cats respond to a combination of oral drugs to lower the blood glucose and a weight-reducing diet. However, although some cats may initially respond to this treatment, they will usually need insulin injections after a period of time.

Routine

Routine is important for a diabetic cat. Daily injections and feeding regimes should be carried out at around the same time each day.

As the secret to successful treatment is consistency – your vet may recommend keeping a diabetic diary. In it you can record food type quantity, and insulin dose given each day. It allows you to keep an eye on your cat's weight and body condition score, water intake and behaviour changes and to keep track of urine and blood sample results. Both you and your vet can monitor how your cat is coping to help spot any problems as soon as they arise. Any weight loss, reduction in appetite or general illness should be reported to your vet. It is important not to make any changes to the dose of insulin without consulting your vet, as sudden or frequent changes can make stabilisation difficult.

After diagnosis, there will be a period of time when your vet stabilises your cat. Once stabilised, your cat will need check-ups with your vet so they can monitor the condition, but the bulk of treatment and monitoring will take place at home. In general, if excessive drinking, eating and urination have improved it is a strong indication that the diabetes is under control. Your vet will advise you on any problematic signs to watch out for suggesting the diabetes is not stable.

What if I go on holiday?
Many catteries and pet sitters are happy to look after diabetic cats while you are away. To find one in your area, try asking your vet if they can recommend one.

What does the future hold?

Providing the necessary treatment is received and your cat responds well, there is no reason why diabetic cats should not enjoy a relatively normal life for years.

There are many helpful leaflets and videos/DVDs available to help you understand what is involved with diabetic pets. Your vet can provide advice and guidance on further literature and answer any questions you may have.

The unstable diabetic cat

Some cats do not respond well to treatment. In these cases, your vet may want to double-check how you store and administer the insulin, as well as reviewing the cat's diabetic diary. Further investigations may be recommended to rule out other diseases, such as infections, disorders of the pancreas, liver or kidneys, hyperthyroidism, acromegaly or hyperadrenocorticism (see below). In some cases, sadly euthanasia may be considered the kindest option. See our *Veterinary Guides: Digestive disorders*, *Kidney or renal disease* and *Hyperthyroidism*.

Acromegaly

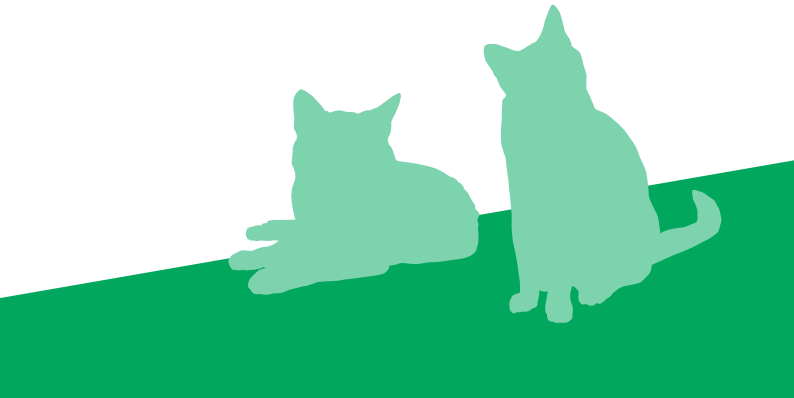
Acromegaly is a condition seen most commonly in male cats that results from high levels of growth hormone being produced, usually due to a benign tumour of the pituitary gland in the brain. The condition is thought to affect around one in four diabetic cats, commonly those which have not lost weight with the condition and have an enormous (not just increased) appetite. Your vet may suspect the condition if your cat also develops broad facial features and protrusion of the bottom jaw, as increased growth hormone leads to physical changes. A blood test can help your vet to diagnose the condition. Cats with acromegaly are often very resistant to the effects of insulin and can be difficult to stabilise, requiring high levels of insulin to control the signs of diabetes. Affected cats may also require pain relief to manage any joint pain and treatment for kidney and/or heart disease if this develops. Specialist radiotherapy or surgery to try to manage the condition are rarely available. Your vet will need to monitor affected cats regularly to assess their quality of life.

Hyperadrenocorticism (Cushings disease)

Cushings disease is a serious but uncommon disease seen most commonly in female cats. It occurs as a result of excessive blood levels of the adrenal gland hormone, cortisol. It may occur in cats treated long-term with high doses of cortisol-like medicines for other conditions, or if the adrenal gland becomes overactive producing too much hormone. It causes increased drinking and urine production, a large appetite, a pot-belly, muscle-wasting and thin, fragile skin often with hair loss. High cortisol levels cause insulin resistance so many cats with Cushings disease are also diabetic. Several blood tests may be needed to diagnose the condition. If caused by cortisol-like medicine, then gradual withdrawal of this, while starting other treatment to manage the original problem may be recommended by your vet. If caused by over-production of hormone, then your vet may recommend tablets, or rarely surgery or radiation may be effective. While some cats with the condition can be managed and enjoy a good quality of life, the condition generally carries a guarded prognosis and sadly euthanasia may become necessary in the cat's best interests.

Learn more about your cat online!

Take a look at our free interactive tool to help you understand cats' origins and their behaviour within our homes. http://learnonline.cats.org.uk/content/ufo



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CATS PROTECTION

For more information about Cats Protection or to make a donation, please visit www.cats.org.uk or phone our Helpline on 03000 12 12 12.

Reg Charity 203644 (England and Wales) and SC037711 (Scotland)

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