



# Feline Diabetes

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## ■ What is diabetes mellitus?

Diabetes mellitus, also known as “sugar” diabetes, is a common disease in which a cat’s body does not produce insulin or does not properly utilize insulin. During digestion, dietary fats, carbohydrates and proteins are broken down into smaller components. These smaller components, including glucose, are used by cells in the body for energy and other metabolic processes.

Insulin is a hormone produced by the pancreas that regulates cellular use of glucose. When insulin is deficient or ineffective, the cat’s body begins to break down fat and protein for energy because it no longer can readily use glucose from carbohydrates. Cats with diabetes often eat more but still lose weight. They also develop high levels of sugar in their blood, which is eliminated in the urine. Urinary losses of sugar (glucose) causes excessive urination and thirst. Appetite, weight loss, increased urination and increased water consumption are the four primary signs that indicate to cat owners that their pet has diabetes.

Diabetes occurs in two types in cats: insulin-dependent diabetes mellitus (IDDM) and non-insulin-dependent diabetes mellitus (NIDDM). More than half of cats have IDDM and require insulin injections as soon as the disease is diagnosed. Cats with NIDDM will often need insulin injections as well in order to control the disease.

Diabetes can affect any cat, but it most often occurs in older and obese cats. Males are often more affected than females. The exact cause of diabetes in cats is not known, although obesity, chronic pancreatitis, other hormonal diseases and certain medications have all been linked to diabetes.

## ■ How is diabetes diagnosed?

Diabetes is diagnosed based on a cat’s signs, physical examination results, laboratory test results and the persistent presence of abnormally high levels of sugar in the blood and urine. Once the disease has been diagnosed, immediate treatment is needed.

If diabetes is left untreated, the cat’s lifespan will likely be shortened. Ketoacidosis is a dangerous and sometimes fatal condition that may develop. Signs of ketoacidosis

include loss of appetite, vomiting, diarrhea, lethargy, weakness, dehydration and breathing abnormalities. Diabetes can also lead to liver disease, unhealthy skin and coat, and secondary bacterial infections. A diabetes-related disorder called diabetic neuropathy may cause cats to become progressively weaker (especially in the hind legs), impairing their ability to jump and causing them to walk with their butt touching the ground.

## ■ How is diabetes treated?

Diabetes treatment is based on the severity of the disease. Cats with ketoacidosis need prompt and intensive care, which usually includes fluid therapy and short-acting insulin injections. For cats that are not severely ill, our veterinarian may recommend a treatment plan that includes insulin injections or oral medications, along with some dietary changes.

Each diabetic cat is an individual, and each responds differently to treatment. Some diabetic cats are easy to regulate, whereas others are not. Some can be treated with oral medications, and others require insulin injections. Regardless of the variability of treatment, all diabetic cats do best with consistent medication and feeding, as well as with a stable and stress-free lifestyle.

### *Insulin*

Many diabetic cats need insulin injections administered under their skin twice a day. The injections can be given at home, preferable at the same times each day. Our veterinarian will show you how to give these painless injections. Because each type of insulin is different, we will determine the proper type, dose and frequency of insulin administration for your cat.

### *Diet*

In addition to medication, an important step in treating diabetes is to change your cat's diet. Obesity is a major risk factor for insulin sensitivity, and it is recommended that all overweight cats lose weight to reduce their risk for diabetes. Our veterinarian will help you to create a safe weight-loss program that incorporates high-fiber and high-complex carbohydrate foods into your cat's eating regimen. Altering your cat's diet will help your cat to lose weight and achieve more stable blood sugar levels. If your cat is underweight, it should be fed a high-calorie diet until it reaches its ideal body weight. Some diabetic cats respond well to carbohydrate restrictions. We will help you to determine the best dietary changes for your cat.

Your cat's feeding routine is also important. Many cats are "free-choice" feeders and eat whenever they are hungry, but this may not be ideal for a diabetic cat. A cat receiving insulin should be fed half of its daily food needs at the time of each injection. Any food that the cat does not consume at the time of insulin administration can be left out for consumption throughout the day.

## ■ **What are potential complications of treatment?**

Hypoglycemia (low blood sugar) is a potentially dangerous condition that is usually caused by an overdose of insulin. Signs of hypoglycemia include weakness, lack of coordination, convulsions and coma. If left untreated, hypoglycemia is fatal. If hypoglycemia develops, the cat should be immediately offered its normal food. If the cat cannot eat, the owner should rub some corn syrup or honey onto its gums or, if the cat can swallow, administer corn syrup/honey via syringe into the cat's mouth. Fingers, food and fluids should never be forced into the mouth of a convulsing or comatose cat. If your cat exhibits signs of hypoglycemia, offer it food or administer corn syrup/honey immediately. Bring your cat into the nearest veterinary clinic and contact our office to inform us of your cat's emergency.

## ■ **How do I monitor my diabetic cat?**

Monitoring your cat is a joint effort between you and our veterinarian. Because your cat's insulin requirements may change over time, periodic checking of serum fructosamine or blood glucose is essential. Seek veterinary treatment at the first reappearance of diabetes signs (increased thirst, weight loss, appetite or urination).

At home, you'll need to be constantly aware of your cat's appetite, weight, water consumption and urinary output. It is important to feed a consistent amount and type of food at the same times each day, so that you can be aware of days that your cat does not eat or is unusually hungry after feeding. Additionally, water consumption is highly variable between cats and should be monitored for a few weeks to determine normal fluid intake. Urine output can be roughly estimated by determining the amount of litter that is scooped out of the litter box. This is less accurate if more than one cat uses the litter box. Any significant variation in your cat's food or water intake, weight or urinary output can be a sign that diabetes is recurring and should be reported to our veterinarian.

## ■ What is the prognosis for a diabetic cat?

There is no cure for diabetes. However, some diabetic cats may no longer need insulin months or years after diagnosis. If diabetes has resulted from obesity, it is likely to improve or even resolve once the cat's weight is under control. If obesity or another disorder is not a factor, the diabetes will probably not go away with time; however, it can be successfully managed. The serious chronic complications that affect people with diabetes (eg. kidney disease) are uncommon in diabetic cats. Once control is attained with proper treatment and home care, a diabetic cat can live many healthy years. Nonetheless, successfully managing a diabetic cat requires much dedication and communication between you and our veterinarian.

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Source:

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