

# Diabetes and Pets

**Pets can suffer from diabetes too. Knowing whether or not your dog or cat is healthy could save their lives. Here's some information about diabetes in animals, and how best to manage the condition.**

## What are the causes of diabetes in animals?

Just like in humans, pets with diabetes may not be able to produce enough insulin, or possibly their bodies do not allow them to use insulin properly.

Insulin is produced by the pancreas, and allows glucose in the blood to enter cells, allowing the body to properly function. Just like people, pets can suffer from both type 1 and type 2 diabetes.

## What are the symptoms of diabetes in animals?

Diabetes symptoms and the complications of the disease are also similar to humans. The following symptoms could indicate that your animal has diabetes.

### Diabetes symptoms

- Weight loss, often despite an increased appetite
- Excessive thirst and urination
- Breakdown of body fat and development of ketacidosis
- Lower appetite
- Pungent breath with a chemical smell
- Complications associated with diabetes

## My animal looks very sick, could this be pet diabetes?

Your pet may be in the throes of hypoglycaemia or low blood sugar. Hypoglycaemia can occur in animals due to insulin overdose. The symptoms of hypoglycaemia include the following:

- Seizure
- Wobbliness
- Weakness
- Dullness
- Sleepiness
- Restlessness
- Coma

When pets are hypoglycaemic they should never be left alone overnight. The complications of untreated diabetes can be awful. These include cataract formation and loss of sight in dogs, and both nerve damage and hind-end weakness in cats.

## Diabetes treatment for pets

Insulin is generally regarded as the benchmark treatment for both type 1 and type 2 diabetes.

Your vet can prescribe special insulin. Owners of diabetic pets should discuss how best to prepare the insulin, and how much insulin is needed for pets, with their vet.

## Insulin tips for diabetic animals

- Insulin should be stored in a refrigerator. Insulin should be mixed before being used.
- Mixing should be carried out using gentle rolling and no shaking.
- When insulin reaches its expiry date do not use it.
- Clip the hair of the pet where you need to inject insulin – this can make the injection process easier for both pet and owner.
- Monitor your pet's blood glucose.
- Remember – pets can be treated with good results!

## Managing pet diabetes

Like diabetes in humans, diabetes amongst animals needs to be closely managed in order for your pet to live a longer, healthier life. When a pet's diabetes is under control, they have normal thirst and urination times, a normal appetite, a stable weight, good vision and alertness and a good level of activity. There are three major parts of controlling blood sugar amongst animals. These are diet, blood glucose monitoring and exercise.

- **Diet.** When a dog or cat develops diabetes, they should be fed on dried or canned foods, but it is important to avoid semi-moist foods because of possible sugar content. Vets should be able to provide more information, and also advise on when to feed pets in relation to insulin.
- **Blood Glucose Monitoring.** Keeping an accurate monitor of your pet's blood glucose levels allows a vet to work out changes to the insulin regime or type. Some pet owner may be taught to do this at home.
- **Exercise.** Diabetes often occurs amongst overweight or obese animals, when excess fat leads to insulin resistance. Daily walks will be good for both the pet and the owner.

## Dogs with Diabetes

### How Common is it?

Diabetes is one of the most common hormonal diseases in dogs. It can occur in dogs as young as 18 months of age. Most dogs are between seven and ten when canine diabetes diagnosis is made. Approximately 70% of dogs with diabetes are female. Any breed can be affected, but dachshunds, poodles, miniature schnauzers, cairn terriers, and springer spaniels are at increased risk. Interestingly, diabetes is seen very infrequently in Cocker Spaniels, shepherds, collies, and boxers.

### Canine Diabetes Signs

What signs might your dog be exhibiting if he/she is diabetic?

There are **3 clinical signs** to look for:

- Diabetic patients usually show a marked increase in their water intake, along with an accompanying increase in urination. They frequently have excellent appetites, yet are losing weight. Finally, the sudden appearance of cataracts in the eyes suggests the possibility of underlying diabetes.
- As with most conditions, it is important to diagnose diabetes early in the disease. If you observe any of the above signs in your dog, don't hesitate to get her to your family veterinarian. Left undiagnosed and untreated, diabetic dogs can develop life-threatening secondary complications due to the metabolic derangements in their body.
- The diagnosis of diabetes is generally fairly simple. The presence of a high blood sugar level

(hyperglycaemia) and sugar in the urine (glucosuria) along with the appropriate clinical signs confirms the diagnosis. In dogs, normal blood sugar levels are 80 to 120, I have seen diabetic patients with values as high as 600.

### Treatment

Although diagnosing diabetes is not demanding, treating it certainly is. That said, it is a treatable disease in dogs and most diabetic dogs can lead very high-quality lives. Virtually all dogs with diabetes require insulin therapy. Just as in humans, the insulin is administered by injection. Most dogs require insulin twice daily to adequately control their disease.

Before you throw up your hands and think you could never give your dog shots, that almost all owners are capable of properly administering insulin to their dogs. The needles used are very small, making the injections quite comfortable.

### Insulin therapy

A complete discussion of insulin therapy is beyond scope here, but there are a few key points you should know. There are many different types of insulin available, be sure you discuss what type is appropriate for your dog with your veterinarian. Insulin should be refrigerated, and mixed gently before administration. This is done by carefully rolling the vial back and forth between the palms. Another important consideration is proper disposal of used insulin syringes and needles. Don't throw them in the trash! Your veterinarian may be able to take care of disposing of the medical waste for you.

### Complexities of Diabetes

Diabetes is a serious and complex disease. Until a "cure" is discovered, diabetic dogs and people will continue to require insulin therapy. This treatment demands close collaboration and communication between owner and veterinarian to make it a success. Treating diabetes can be very rewarding for patient and owner alike, and these dogs can and do live normal lives. If you observe any of the signs of diabetes in your dog, don't delay - take him or her into your veterinarian for an examination.

## Cats with Diabetes

### Frequency

Diabetes occurs less frequently in cats than in dogs. However, when it does occur, feline diabetes can be more difficult to regulate.

When a diabetic cat ingests glucose and can't process it properly, it leads to the build up of sugars in the blood stream. Eventually, the blood sugar gets so high that sugar begins to be spilled in the cat's urine. Both the high blood sugar and the loss of sugar through the urine can have severe, and sometimes life threatening, consequences.

## Common Profiles

Diabetes can occur in cats of any age, though most are over six-years-old. Some cats can be insulin dependent and can be helped by life-long insulin therapy. Other cats can be non-insulin dependent and only require insulin when stressed. Typically, these cats regain their balance once the stressful event is over.

## History and Physical Examination

The common signs of diabetes are increased thirst and urination, along with increased appetite and weight loss. However, these signs can be masked in cats that have other illnesses.

You may see signs of illness, such as:

- Vomiting
- Diarrhea
- Loss of appetite
- Breathing difficulties
- Weakness
- Straining to urinate

These symptoms can appear suddenly, over a few days, or over several months.

## Diagnosis

In many cases, cats that have diabetes can be difficult to diagnose because they also have a concurrent illness or disease that can mimic diabetes.

Some of these diseases are hyperthyroidism, kidney disease or failure, adrenal gland disease, gastrointestinal disease, cancer, liver disease or failure, and some types of drug treatment.

To diagnose feline diabetes, veterinarians use the following tests:

- **Fasting blood-sugar level:** Test results that show a blood-sugar level over 200 indicate the possibility of diabetes. However, stress alone can result in higher blood-sugar levels (up to 300 to 400) in cats without diabetes, attributed to a surge of released adrenaline.
- **Urine glucose:** Diabetic cats have sugar in their urine. They can also have ketones in their urine, which results from a defective fatty acid metabolism. Cats without diabetes that are under stress may also have some glucose in the urine, but it is temporary.
- **Blood chemistries:** Lipemia, which is increased fat in the blood can be evidence of liver dysfunctions.
- **Urinalysis:** In addition to sugar and possible ketones, there may be signs of bladder infections.

## Treatment

Insulin injections are still the most accepted means of treating insulin-dependent diabetic cats. Initially, a diabetic cat is hospitalized and regulated for three to four days. During that time, multiple blood sugar tests are given to establish a proper schedule for the cat.

The goal of treatment is to maintain a blood-sugar level

between 100 and 200 during each 24-hour period and to improve or eliminate any symptoms.

Often, numerous hospitalizations for serial blood sugars are required for monitoring and making adjustments in insulin dosages.

The nature of cats can make diabetes management difficult. As cats have a strong stress response, it can be hard to interpret blood-sugar tests. Some other difficulties in management difficulties are caused by the following conditions

- Variability in insulin activity and dosage requirements
- Feline eating habits. Ideally, diabetic cats should be fed two to four times per day. Since most cats are fed by free choice, it can be hard to change them to interval feeding. Also, some cats will only eat one type of food, making it hard to change to a new diet.
- Transient diabetes. Some diabetic cats may spontaneously lose the need for insulin after years of treatment.
- Failure to perform serial glucose tests. Basing treatment on one random glucose test is considered a hit-or-miss approach, and is usually more time consuming and expensive than doing serial tests. It can also cause wide fluctuations in blood sugar levels.
- Failure to properly educate the diabetic cat owner
- Failure to give the proper dose of insulin
- Improper storage and handling of insulin
- Improper cat diet
- Improper blood-sugar monitoring Prolonged or frequent boarding of the cat Hormonal influences. Blood sugar can be controlled more easily in a spayed or neutered cat.
- Concurrent diseases
- Concurrent drug therapy



Source: [www.diabetes.co.uk](http://www.diabetes.co.uk)