

FELINE DIABETES MELLITUS

Diabetes mellitus, the medical name for diabetes, is a metabolic disease caused by a lack of insulin or a resistance to insulin. Insulin is a hormone produced by the pancreas; a lack of insulin affects the level of glucose, or sugar, in your cat's blood. Healthy pets easily produce insulin, but diabetic pets are unable to.

Glucose is absorbed from the intestines into the bloodstream, where it travels to cells throughout the body. These cells need insulin in order to absorb glucose. If there is a lack of insulin, or if the tissues are resistant to the insulin, the sugar level in the blood remains too high. The sugar ultimately passes into the urine, causing increased urination and drinking. Your cat's appetite will increase because the body is unable to utilize the sugar in the blood.

If left untreated, the body may begin producing ketones (organic compounds that result when body fat is broken down for energy), resulting in lowered blood pH, vomiting, and dehydration, which can ultimately lead to coma or death.

Obesity predisposes cats to diabetes. Aging, genetics, physical inactivity, and other insulin-resistant diseases (such as pancreatitis or hyperthyroidism) may also be contributing factors.

Clinical signs of diabetes include excessive drinking and urination, increased appetite, weight loss in spite of ravenous appetite, poor coordination, inappropriate urination, vomiting, lethargy, lack of grooming, and thinning or dull coat. Many pets with diabetes mellitus have underlying infections, such as urinary tract infection. In cats, chronic pancreatitis is thought to be a cause of diabetes mellitus.

Important Treatment Guidelines

1. Insulin is injected under the skin twice daily (12 hours apart). We will teach you how to give the injections. There are several types of insulin; your doctor will decide which type is best for your cat. Some cats may eventually be able to transition off insulin.

2. Glipizide is an oral drug that stimulates the pancreas to produce more insulin. Some cats may be regulated with glipizide. There is evidence that treatment with glipizide reduces the chance of the cat's diabetes being controlled by diet alone, so the cat will later require insulin administration.

3. Diet is very important in controlling diabetes. A high-protein, low-carbohydrate diet is most effective because it provides extra energy without extra carbohydrates that turn into excess sugar. Canned cat foods may also help regulate diabetes mellitus. Many cats who exclusively eat wet food can eventually be weaned off insulin, although this won't happen in all cases.

4. Monitoring and re-examination:

It is important to monitor blood and urine sugar carefully until your cat's condition is stabilized. We can discuss ways you can monitor urine or blood glucose at home. Fructosamine testing (done at our office) may also be necessary; this test lets us measure how well your cat's diabetes is regulated over a period of time.

During the early weeks of treatment, several re-examinations may be needed. Once your cat is stable, blood and urine glucose plus fructosamine will need to be monitored periodically.

5. Low blood sugar reactions:

Occasionally, insulin treatment may result in blood sugar levels that are too low. This is most likely to happen 3–7 hours after insulin treatment, especially after strenuous exercise. Your pet may seem weak, tired, or uncoordinated, or may have a seizure. Always have a sugar-containing syrup (such as Karo) on-hand to treat low sugar levels. If your pet has a seizure, rub the syrup on the gums and inside the lips, being very careful not to be bitten, then immediately call your veterinarian. Do not try to force a convulsing animal to swallow the syrup.

Notify your veterinarian immediately if any of the following occur:

- You cannot give insulin as directed.
- Your pet's thirst and urination increase.
- Your pet has diarrhea or vomits.
- Your pet acts weak or depressed.
- Your pet has trouble breathing.
- Your pet's breath has an acetone smell; this can be caused by a life-threatening condition called ketoacidosis which requires emergency treatment.
- Your pet has a seizure. This is also an emergency. Rub Karo syrup on the gums, then immediately take your pet to the doctor.

With effective treatment and monitoring, a diabetic cat can expect to have the same life expectancy as a non-diabetic cat. Managing your kitty's diabetes will require some effort, but with appropriate treatment, your diabetic pet can maintain a good quality of life.



For additional information about diabetes mellitus in cats, please speak with one of our doctors or visit www.felinediabetes.com.