

# Feline Diabetes Mellitus

- Most diabetic cats have diabetes mellitus type 2, meaning the body's cells develop a "resistance" to insulin; sometimes the body fails to make enough insulin to serve its needs (diabetes mellitus type 1).
- After treatment for diabetes is started, periodic blood and urine testing may be recommended to help ensure that the current treatment (including insulin dosage) is adequate.
- Many cats live active, happy lives once their diabetes is well regulated. Some cats go into "remission" and no longer require insulin, whereas other cats need insulin for the rest of their lives.

## What Is Diabetes?

Diabetes mellitus is an illness caused by the body's inability to either make or use insulin, which is a hormone produced and released by specialized cells in the pancreas. Insulin permits the body's cells to take sugar (glucose) from the blood and use it for their metabolism and other functions. Diabetes mellitus develops when the pancreas doesn't make enough insulin or when the body's cells are unable to use available insulin to take glucose from the blood.

Type 1 diabetes (referred to as "insulin dependent" diabetes) occurs when the pancreas doesn't make enough insulin. Type 2 diabetes, also referred to as "relative insulin deficiency," occurs when the body's cells develop "insulin resistance," meaning that they are unable to effectively use available insulin, or when the pancreas is producing some insulin, but not enough to serve the body's needs. Most diabetic cats have type 2 diabetes. However, many of them still require insulin for adequate control of their illness.

## What Are the Clinical Signs of Diabetes in Cats?

Diabetes can exist for a while before it begins to make an animal obviously ill. Clinical signs may vary depending on the stage of disease, but they can include the following:

- Increased drinking and urination
- Urinating outside of the litterbox

- Weight loss
- Vomiting
- Dehydration
- Lethargy (tiredness)
- Increase or decrease in appetite

## How Is Diabetes Diagnosed?

Your veterinarian may suspect that your cat has diabetes if any suspicious clinical signs, such as increased drinking, have been observed at home. After performing a thorough physical examination, your veterinarian may recommend some of these tests to help confirm a diagnosis:

- **CBC (complete blood count) and chemistry profile:** When a pet is ill, these tests are commonly performed together during initial blood testing to provide information about the pet's organ systems. The CBC and chemistry profile may show dehydration, an elevated blood sugar level, or other changes that can occur with diabetes.

After treatment for diabetes is started, periodic blood and urine testing may be recommended to help ensure that the current treatment (including insulin dosage) is adequate.

- **Urinalysis:** Evaluation of a urine sample may show the presence of sugar (glucose) in the urine if a cat has diabetes.
- **Fructosamine:** Fructosamine is a protein in the blood that binds very securely to glucose. The fructosamine level is therefore a close estimation of the blood glucose level, but it is less likely to change due to stress and other factors that change the blood glucose level.

## Common Conditions

Additionally, the fructosamine level indicates where the blood sugar levels have been during the previous 2 to 3 weeks. In a cat with diabetes, the blood sugar levels are likely high for long periods of time, which would be reflected by an increased fructosamine level.

### How Is Diabetes Treated?

Because many cats have type 2 diabetes, insulin injections may not be required in all cases. Your veterinarian may first recommend dietary changes, weight loss and/or medication to control your cat's diabetes. If this therapy is not successful, insulin injections are generally recommended to control the condition.

It is very helpful to write a medication schedule for your cat on the calendar, including the date and time that any medications, including insulin, need to be administered to maintain accurate records. This will help you avoid forgetting to give a dose of insulin to your cat and aid in tracking your cat's treatment.

After treatment begins, periodic blood and urine tests are generally recommended. This helps ensure that the current treatment (including insulin dosage)

is right for your cat. Your cat's weight, appetite, drinking and urination, and attitude at home can all provide useful information that helps determine if diabetes is being well managed. Your veterinarian will consider all of these factors when making recommendations for continued management.

Many cats live active, happy lives once their diabetes is well regulated. Some cats even go into "remission," meaning that they no longer require insulin. For other cats, insulin therapy must continue for the rest of their life.

### Can Diabetes Be Prevented?

Certain medical conditions, such as being overweight or obese, can lead to insulin resistance and increase the risk of a cat developing diabetes. Keeping your cat's weight within a healthy range can reduce the risk of diabetes. However, not all cases of diabetes are preventable. Scheduling regular checkups and wellness screening with your veterinarian can increase the chances of diagnosing diabetes early and initiating treatment as soon as possible.

Ask your veterinarian what steps you can take to keep your cat healthy and reduce the risk of diabetes.