



## What's Diabetes Mellitus?

Diabetes mellitus, sometimes referred to as “sugar diabetes,” is a disease where the concentration of glucose (blood sugar) is poorly regulated. Insulin, a hormone produced by the pancreas, works to regulate the glucose concentration keeping the levels steady throughout the day. Diabetes mellitus results when there is insufficient insulin or its function is impaired. This causes the glucose levels to become unregulated and rise above normal.

### What Are the Signs?

While diabetes mellitus can occur at any age, it's most often seen in adult and senior dogs and cats. Early signs of diabetes, such as changes in the coat, appetite and energy level are often so subtle that they are easily overlooked. As the disease progresses, the clinical signs become more apparent and usually include polyuria (excessive urination), polydipsia (extreme thirst) or changes in weight (usually a decrease).

### How Is It Diagnosed?

Because the signs and symptoms of diabetes mellitus are not specific to diabetes alone, your veterinarian is likely to do a full workup on your pet that includes a chemistry panel, a CBC and a complete urinalysis. The presence of elevated blood glucose and glycosuria (glucose in the urine) is indicative of diabetes mellitus but could be the result of excessive stress, particularly in cats. If the trip to the vet or the examination is particularly stressful to your pet, you should alert your veterinarian. They may choose to also run a fructosamine test to determine if the cause of your pet's elevated glucose is stress or diabetes.

### How Is It Managed?

Insulin injections, usually twice daily, and often a special diet are needed to manage diabetes in dogs and cats. Oral diabetes medications are typically not effective. While a diagnosis of diabetes mellitus can seem overwhelming at first, it can be managed by you and your veterinarian. Your veterinarian will review the necessary changes in your pet's diet, advise you on how to store the insulin, review how to give the insulin, how to recognize signs of hypoglycemia, how to monitor your pet at home and give you a schedule of recheck evaluations and lab work. Initially, your pet will be rechecked and lab work will be done frequently until glucose levels are once again regulated. After that your pet will need to be reevaluated every three to six months to ensure that the glucose levels remain controlled. It is critical to follow your veterinarian's instructions regarding insulin administration and diet, and to contact them if you have any questions.

# Managing Your Pet's Diabetes

## Understanding My Pet's Treatment and My New Responsibilities

To begin, your veterinarian will discuss with you how to best monitor your pet's diabetes using glucose curves and fructosamine testing. Don't be frightened by the terminology here, it's much simpler than it sounds:

**GLU** – glucose

**FRU** – fructosamine

Your veterinarian may recommend that you do glucose curves at home. Monitoring these at home for the first several weeks helps remove the element of stress from factoring into the results. Your pet will be much more comfortable and relaxed in a familiar environment. Fructosamine tests are performed in-house at the doctor's office or sent to a reference laboratory.

You'll need to evaluate these curves every two to four weeks during the initial treatment of your pet, and then every three to six months after that. The good news is once you have the baseline numbers treatment will become much easier to manage, and after you start treatment you'll notice a dramatic increase in your pet's quality of life.

## Administering Insulin Medication

When it comes to insulin administration many owners will find themselves outside of their comfort zone. A good piece of advice is to practice your injection on a soft piece of fruit before injecting your pet. There are three important rules when using insulin:

1. **Keep it refrigerated or stored as instructed on the bottle.**
2. **Use it as prescribed.**
3. **Handle it carefully.**

At first, this might seem too complicated, but soon it will become second nature. Be sure to call your veterinarian right away with questions.

## Once Treatment Has Begun, How Will I Know If Something's Gone Wrong?

Regular fructosamine and glucose testing can be your first and best indication of a problem. Other warning signs to watch out for include the following: loss of appetite, behavioral changes, lethargy, sleepiness, vomiting, diarrhea, seizures or tremors. Should you see any of these, contact your veterinarian right away.

## Prevention/Risk Factors

Some veterinary textbooks list obesity as a risk factor, particularly in cats; therefore, it is prudent to keep your pet from becoming overweight. Other concurrent diseases can also be a factor. Diabetes mellitus is more likely to occur in male cats and female dogs. Certain breeds of dogs including Australian terriers, beagles, Samoyeds, keeshonds, miniature schnauzers, Cairn terriers and miniature poodles appear to have a higher risk of developing diabetes—suggesting that a genetic component may be involved.

