

## Diabetes Mellitus

Diabetes mellitus is a complex metabolic disorder that results when the pancreas cannot secrete enough insulin or when insulin is ineffective at the peripheral tissues. This disorder results in abnormalities in carbohydrate, fat and protein metabolism. Without the action of insulin, glucose is not used properly by the body, high blood sugar levels develop along with related health problems. Treatment for most animals requires insulin injections.

Early signs of diabetes include:

- Increased thirst and urination
- Weight loss
- Increased appetite
- Unthrifty appearance, dehydration

Diabetes can be a serious and life-threatening disease if left untreated; however, most diabetic animals that are diagnosed and treated properly, and respond well to treatment can live a normal or near normal life-span with a good quality of life. Cats have a very good chance of remission when their diabetes is detected early and are put on Glargine insulin combined with a low carbohydrate/high protein diet and weight loss if needed.

The most important factor in treating a diabetic animal is consistency and adhering to a routine. Meals and treatments should be given as close as possible to the same time every day. Twice per day insulin should be given every 12 hours, and should stay at a consistent dose unless changes are recommended by your veterinarian.

Diabetic animals are more susceptible to infections, especially urinary tract infections as sugar in the urine provides a good environment for bacterial growth. Watch for signs of urinary tract infection including: straining to urinate, frequently urinating small amounts, inappropriate urination, blood in urine, and painful urination. Untreated infections, including urinary tract infections and dental disease, can reduce response to insulin.

A newly diagnosed patient will require blood glucose monitoring until the correct dose of insulin is determined based on blood tests and clinical signs. A blood glucose check will be performed 7-10 days after starting insulin, and with each dose change at the beginning of treatment. Once the diabetes is well regulated, the frequency of veterinary visits will lessen, but home monitoring is very important. Changes in water drinking, urination, and eating habits can indicate changes in insulin requirements. In cats, we will start looking for remission when their diabetes has been controlled on insulin for at least 2 weeks.

Insulin is a fragile substance that can lose its activity if not handled properly. Keep insulin refrigerated, never frozen. Handle the bottle carefully; roll or rock the bottle gently to mix, do not shake.

## **Feline Diabetes Treatment**

Again, consistency is very important in treating diabetes.

Administer \_\_\_\_\_ units of \_\_\_\_\_ insulin by injection under the skin every \_\_\_\_\_ hours with a meal. Try to keep insulin injections and feeding as close to the same time every day as possible. Handle the insulin carefully as described previously. Make sure you have U100 needles.

Appropriate diet is important for best treatment response, and in combination with Glargine insulin, can induce remission. A diet low in carbohydrates and high in protein **that your cat will eat** and does not cause adverse effects is recommended. Moist (canned) food is best, as it is lower in carbohydrates and increases water intake. It is difficult to find dry diets that have the recommended carbohydrate levels (< 7-10%) Weight loss is also important in overweight cats

Recommended diet:

Low carbohydrate (<7-10%), high protein diet.

A list of appropriate diets for diabetic cats (and other information on diabetics) can be found on the following web site: [binkyspage.tripod.com](http://binkyspage.tripod.com).

Another helpful website for many cat problems, including diabetes and feeding diabetic cats, is: [www.catinfo.org](http://www.catinfo.org)

Monitor for signs of hypoglycemia including: lethargy, weakness, ataxia (unsteady, appearing clumsy), disorientation or seizures. If noted, you can give Karo syrup orally, and call your veterinarian. Do not give any additional insulin until you have talked to your vet.

If your cat stops eating, give only ½ dose of insulin until eating more regularly. Call the clinic if anorexia continues for more than 1-2 days.

Monitor water drinking, urine output, appetite, and body weight. If these factors are normal, the cat is usually well controlled. Watch for vomiting, diarrhea or anorexia.

Recheck appointment: 7-10 days after starting insulin – pre-insulin blood glucose check.

Appointment should be made in the morning or evening, right before her usual insulin dose. This will give us an idea of the highest glucose level for the day.

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