



Managing Your Diabetic Dog

Pets are members of the family and it is Lake Shore Pet Hospital's pleasure and honor to treat your family member. Your dog has been diagnosed with diabetes mellitus. This handout will help introduce you to some of the terms and treatments that accompany this diagnosis.

What is diabetes mellitus and why is it harmful?

Diabetes mellitus has many symptoms with the most common client concerns being polyuria (excessive urination) and polydipsia (excessive thirst). Diabetes mellitus is a serious medical condition where your pet cannot control their own blood sugar levels due to problems with insulin production or function.

Glucose is the main energy source that body cells need to operate efficiently. Your dog's digestive system breaks food down into various parts, including glucose, which then enters the bloodstream. Insulin, which is made by the pancreas, is a hormone that acts as the "key" for cells to absorb glucose from the bloodstream. When insulin levels are too low or when the body is resistant to insulin, cell "doors" remain closed and glucose stays in the bloodstream where cells cannot utilize it.

The dog's cells tell the body they are starving, even though there may be high levels of unused glucose in the bloodstream. Because of the vast amounts of glucose in the body, the dog urinates more often and drinks excessively to make up for the increased water loss.

Untreated, the cells will begin to utilize other, less desirable fuel sources since glucose is not available. Without treatment, severe problems such as liver and kidney damage and even death can occur. **The good news is that diabetes is a treatable condition!** Diabetes can be permanent, temporary, stable or variable, but does require lifelong attention.

There are two main types of diabetes mellitus

- **Type I diabetes mellitus** can be regulated by insulin injections (insulin dependent). This form of diabetes is most closely related to the human form of diabetes seen in children where there is a very low or no production of insulin by
- **Type II diabetes mellitus** is non-insulin dependent and is similar to the human form of diabetes that develops in adult humans. There is a high or normal initial blood insulin level but the body is resistant to the function of insulin. Insulin, diet and other medications may be used to treat this form of diabetes mellitus.

- Diabetes in dogs is usually Type I, which is when the pancreas produces little or no insulin. **These pets will need insulin injections for life.**
- Feline diabetes is typically Type II, which is where the body is resistant to the insulin that is produced.

How will the doctor treat my diabetic dog?

After confirming the diagnosis and determining if your dog has any other health concerns, your veterinarian will most likely begin treatment with a diet change and insulin injections. Regulating a diabetic pet can be a challenge for a veterinarian as every pet responds to insulin differently. Frequent trips to Lake Shore Pet Hospital will be needed to assess how your pet is doing and if any modifications to the treatment plan are needed. Several blood tests may be run at weekly intervals for many weeks to monitor how your dog's blood glucose levels are responding to the prescribed therapy. The goal of insulin therapy is to keep the blood glucose level below 300 mg/dl, with the lowest point being 100 mg/dl; your dog's level may be higher or lower.

The first few weeks will be a learning curve for both you and your dog and overall care will be more expensive. Your veterinarian can provide you with a treatment plan to set your expectations.

What do I need to do?

After a proper insulin dose is decided on, your dog may only need a few trips to the hospital a year to reassess the treatment regimen. An important part of treatment is consistency in timing of feeding and medication administration. Develop a method that works well for you and your family to monitor when injections were given, how much your dog ate, any abnormal behavior, etc... We recommend placing a simple chart on the refrigerator that can be checked off (see chart on back).

Proper feeding is a very important component in the management of canine diabetes. The optimum diet for a diabetic pet is one that is low in fat and high in fiber. Many newly diagnosed diabetic pets are overweight, which can increase the amount of insulin needed. Eating a low-fat diet helps with weight reduction and the high fiber content adds complex carbohydrates that are digested more slowly to help reduce the sharp changes in the blood glucose level. The addition of the fiber in the diet also helps the pet feel full, which aids in weight management. Be sure to speak to your veterinarian about any other foods or treats to assure compatibility. Diabetics must be fed as prescribed by your veterinarian to coincide with the insulin administration. **Do NOT administer insulin if the pet does not eat.** Otherwise, the blood sugar could drop dangerously low.

Although oral forms of medications to treat diabetes exist, giving injectable insulin usually best regulates dogs. Your veterinarian will go over with you how to properly give your dog an insulin injection and suggest ways to practice before trying your skills on your dog. **Insulin is stored in the refrigerator.** Before being withdrawn from the vial, insulin should be mixed by gently rolling the bottle between your palms. Do not shake vigorously, as this can damage the proteins causing the insulin to be ineffective. Insulin is administered under your dog's skin (not a vein or muscle). Pinch and pull up the skin to form a tent over

your dog's shoulder. Give the injection in the middle of the tent. Because the needle is very short and narrow, few dogs even notice the injection. Most dogs adjust easily to the injections and will even remind their pet parents that it is time for their injection... and their food!

Caring for a diabetic pet will place some restrictions on your ability to spend time away from home. Your pet must be given insulin or other medications, fed properly and observed every day after meals. Thus, it is important to plan ahead so the diabetic pet can be properly monitored.

What should I be aware of after insulin therapy is initiated?

Diabetic dogs DO need to be carefully monitored for signs of hypoglycemia (low blood sugar) such as; vomiting, sluggishness, difficulty seeing, disorientation, excessive salivation, and in very advanced cases, seizures. Eventually most diabetic dogs will have a hypoglycemic event and knowing how to handle the situation will lower the stress levels for you and your dog. Talk with your veterinarian about methods for quickly boosting your pet's glucose levels during these episodes. Determine where your local emergency hospital is in case your pet needs medical attention after hours. As always if you have any questions or concerns, please contact Lake Shore Pet Hospital.

Never adjust your pet's insulin dose without first consulting your veterinarian.

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