

## MONITORING THE DIABETIC PET

Test strips to monitor your pet's urine glucose and ketones at home can be purchased from most pharmacies. A trace amount of glucose is considered acceptable. Urine is be monitored at different times of the day, 2-8 times a month.

You may chose to learn how to take your pet's blood and monitor the glucose curve using a glucometer purchased at a pharmacy. Your veterinarian will make dosage adjustments based on these results.

Treatment of the diabetic pet can be a long-term commitment. Interestingly, some cats with DM can revert back to normal after several months or years with treatment.

## CALL A VETERINARIAN IF....

- Negative urine glucose (may be too much insulin)
- Urine positive for ketones (may be too little insulin)
- Urine glucose elevated for several serial checks (insulin may need adjustment)
- Pet becomes unresponsive or seizures- immediately administer sugar by rubbing "Insta-glucose" or karosyrup on the gums

When a diabetic animal becomes ill with another disease or problem, they often become "unregulated." A "glucose curve" may be performed by your veterinarian, where the blood glucose is checked at 4 hours intervals over the course of the day. This indicates when the highest and lowest blood glucose levels occur with the dose of insulin administered. *This is the safest way to determine if alterations in dosage are necessary.*

*The Animal Emergency Center is open 24 hours a day to provide emergency and critical care treatment for your family pet. Our care-givers work closely with you and your primary care veterinarian to provide the most affordable care possible for your ill or injured dog, cat, bird, reptile or small mammal. Our team consists of emergency and critical care veterinary and technician specialists, as well as specialists in the fields of surgery, internal medicine, exotic animal medicine, dentistry, and oncology. Our staff doctors, receptionists and nurses have all received special training to aid you and your pet in your time of need.*



### **Directions**

From I-43, take Silver Spring Drive West Exit for 0.9 miles. AEC is on the north side of Silver Spring, just past Green Bay Road. Turn directly from Silver Spring into the AEC parking lot.

From I-45, take Silver Spring Drive East Exit for 6.0 miles. AEC is on the north side of Silver Spring, just past Teutonia Avenue. Turn left on Crestwood Boulevard at the light to enter the AEC parking lot from this direction.

**Animal Emergency Center  
2100 W. Silver Spring Dr.  
Glendale, WI 53209**

**414-540-5710**

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# **DIABETES MELLITUS**

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Animal Emergency Center



At the heart of critical care

## **WHAT IS DIABETES MELLITUS?**

*Diabetes mellitus (DM)* is a disease of humans and animals, which causes increased levels of blood sugar (glucose). Normally, glucose is brought into the cells by a hormone called insulin. The cells then metabolize glucose to make energy used for all functions of the body.

Animals suffering from DM either lack insulin, or the cells cannot use the insulin that is there. As a result, blood glucose levels increase, and the cells have to use other substances for energy. When blood glucose levels become too high, glucose is found in the urine, causing increased frequency of urination and increased drinking. When blood glucose remains elevated over a period of time, other metabolic changes can occur, such as weight loss, acidosis, seizures, coma, blindness, cataracts, and nerve damage.

Animals that are eating normally and not showing signs of illness may only require a blood or urine test to diagnose DM. Concurrent diseases (such as infection, Cushing's disease, hyperthyroidism, pancreatitis, gastroenteritis, inflammatory bowel disease, hepatic lipidosis, or kidney disease) make diabetes more difficult to diagnose and manage. A complete blood screen and other specific tests may be recommended to obtain the diagnosis and baseline values for treatment and future monitoring.

## **THE SICK DIABETIC ANIMAL**

When the diabetic animal becomes stressed with a concurrent disease, the cells have an increased energy demand. The substances used in place of glucose for energy production are broken down into by-products, such as ketones, which can make the diabetic animal feel sick.

When a diabetic animal becomes sick, intensive care is often required. The sick diabetic is at risk for developing severe dehydration, shock, anemia, and organ dysfunction, and requires frequent monitoring of blood glucose levels in the hospital. A special catheter (central line) may be placed for blood collection, fluid administration and for administration of a continuous controlled insulin infusion to better maintain blood glucose levels. Intravenous nutrition or feeding with a nasogastric tube may also be recommended to prevent breakdown of muscle and fat.

## **HOME TREATMENT**

The diabetic animal must be eating normal amounts at prescribed times without vomiting before insulin is given at home. A combination of dietary regulation and daily insulin injections is typically prescribed. Keys to successful treatment involve a combination of insulin administration, dietary modification, and exercise.

### **Exercise**

- Increasing the activity level of the diabetic pet will promote blood flow, promote weight loss and help with blood glucose control. Your veterinarian can suggest exercise methods based on your diabetic pet's overall condition.

### **Diet**

- A variety of prescription diets for the diabetic dog and cat have been developed by reputable food companies. Your veterinarian will discuss the options based on your pet's needs.
- Since many diabetic animals are obese, a weight loss program may be prescribed. In many cases, the requirement for insulin will decrease, and in some cases stop when optimal body weight is reached.
- Your diabetic pet must have unrestricted access to water to prevent dehydration.

## **Subcutaneous Injection**



### **Insulin**

- Formulations are of the Humulin type (NPH), PZI or Vetsulin, and measured in units
- Orange-capped "unit" syringes (U-100) will hold up to 100 units and red-capped "unit" syringes (U-40) hold up to 40 units
- Always use the same kind of syringe (red versus orange)
- Insulin must be stored in the refrigerator
- Insulin is mixed by gently *rolling* the bottle between your hands. *DO NOT SHAKE!*
- Assign the duty of insulin administration to one person in the household to avoid double dosing, or under-dosing
- Part the hair on your pet's back to insure that the injection is given underneath the skin
- Administer after the pet eats a normal meal to prevent blood sugar from falling too low
- Feed your pet once in the morning and once in the evening to insure that they are eating before their insulin injection is due
- Feed a small snack during the day
- If your pet does not eat the prescribed amount of food, or is vomiting, do NOT give insulin and seek veterinary attention
- Purchase "Insta-glucose" from your local pharmacy in case of an emergency

Your pet's condition should be monitored by your veterinarian to insure that the blood glucose is well regulated, and that the insulin dosage does not need to be adjusted. Treatment of DM can be successful with close monitoring and periodic reevaluation by your veterinarian.