

November is National Pet Diabetes Month

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Did you know that 1 in every 200 cats may be affected by diabetes mellitus (DM)?

November is National Diabetes Month, and while this month was originally designed to increase awareness of this common endocrine disease in humans, we need to be aware of the growing prevalence of DM in dogs and cats also. Untreated, diabetes mellitus can be fatal in dogs and cats.

In veterinary medicine, there are two types of diabetes mellitus: Type I DM and Type II DM.

Type I DM is when the body doesn't make enough insulin (which is a hormone that is normally produced from the pancreas), and requires life-long insulin therapy (delivered via a syringe twice a day). This is most commonly seen in dogs – in other words, once a dog becomes a diabetic, he or she is diabetic for life.

Type II DM is when the body has some insulin being produced from the pancreas, but it is an inadequate amount or something is interfering with its ability to be used by the body. This is most commonly seen in cats and can be transient. In other words, if your cat has recently been diagnosed with Type II DM, he or she may only need insulin injections (via a syringe twice a day) for a few to several months, not necessarily for life.

Clinical signs of diabetes mellitus in dogs and cats include:

- Excessive thirst
- Excessive urination
- Inappropriate urination

- Weight loss (most commonly over the back), despite an overweight body condition
  - Increased hunger
- Increased “whiteness” of the lens of the eye due to cataracts
  - Blindness
  - Weakness
  - Lethargy
- Poor skin condition (like excessive dandruff or an oily hair coat)

Certain breeds are more predisposed to DM. In cats, breeds such as Siamese are over-represented. In dogs, breeds such as the Samoyed, Keeshond, miniature pinscher, Cairn terrier, Schnauzer, Australian terrier, dachshund, poodle, Beagle, and Bichon Fris are over-presented. In dogs, the female sex seems to be more likely to develop DM, with the disease being seen twice as frequently in female than in male dogs. In cats, males are over-represented. DM is typically seen in older pets – typically from 7-9 years of age in dogs, and 8-13 years of age in cats. While juvenile (young) diabetes mellitus can also occur, this is less common.

With DM, the body doesn't have enough insulin (or the insulin is not effective), which is the hormone necessary to push sugar (“glucose”) into the cells of the body. As a result, the cells of the body are starved, and the body is stimulated to produce more and more glucose as a result. However, without insulin in the body (or being delivered by syringe), the sugar can't get into the cells.

The excess sugar that is produced by the body results in the clinical signs of excessive thirst and urination. Untreated, the body develops diabetic complications called diabetic ketoacidosis (DKA), where it breaks down fat in an attempt to feed the starving cells. These fat breakdown products

(e.g., ketones) poison the body, resulting in vomiting, dehydration, no appetite, electrolyte abnormalities, and even too much “acid” production in the body. DKA can be life threatening, and typically requires intensive supportive care (which can be expensive to treat, as it typically requires 24/7 care).

Treatment for diabetes can differ somewhat between dogs and cats in regards to the type of insulin recommended. In dogs and cats, treatment requires twice a day injections of insulin, frequent reevaluations and careful blood work monitoring. Oral medications (called oral hypoglycemic agents like glipizide), which are often used in people are not recommended in dogs and cats. These oral medications do not work in dogs, and usually do not work well in cats either. They are only used in cats, when owners cannot give insulin injections. In cats, dietary changes to a low-carbohydrate, high-protein diet, along with weight loss and in combination with short-term insulin therapy, may help resolve diabetes (diabetic remission).

If you notice any of these signs (e.g., excessive thirst, excessive urination), please bring your pet into your veterinarian as soon as possible. With diabetes, the sooner it is diagnosed, the sooner it can be treated. Also, there’s less of a likelihood of an expensive emergency visit for treatment of diabetic complications.

With supportive care, the prognosis for DM is fair to good, although it does require frequent trips to the veterinarian to regulate the blood sugar and dedicated pet owners (who can give twice-a-day injections of insulin).

*If you have any questions or concerns, you should always visit or call your veterinarian – they are your best resource to ensure the health and well-being of your pets.*