

# Diabetes Mellitus in Cats and Dogs

*A brief guide on disease progression including end-of-life symptoms*

## Common Signs of Pain

- Panting
- Lameness
- Difficulty sleeping
- Pacing
- Abnormal posture
- Body tensing
- Poor grooming habits
- Tucked tail
- Dilated pupils
- Licking sore spot
- Muscle atrophy
- Decreased appetite
- Vocalizing/yowling
- Reclusive behavior
- Aggressive behavior
- Avoiding stairs/jumping
- Depressed
- Unable to stand

*Before your pet's condition becomes unmanageable or they are losing quality of life, it is important to begin end-of-life care discussions. Learn about pet hospice care and/or euthanasia services in your area so you are prepared for what lies ahead.*

## What is it?

Diabetes Mellitus (DM) is a condition in which there is a deficiency of, or insensitivity to, insulin. Insulin is produced by the pancreas and is normally responsible for controlling appropriate levels of glucose (sugar) in the blood. Glucose is needed for energy and insulin works by moving glucose into the body's cells where it can be utilized. When insulin is lacking, the blood sugar increases within in the blood. Overweight pets are at greatest risk of developing DM. Dogs and cats typically present to their veterinarian with excessive drinking and urination, an increased appetite in the face of weight loss, and sticky sweet-smelling urine. Diagnosis is accomplished through a simple blood test and urinalysis.

There are two types of DM: Type 1 and Type 2. Type I diabetes occurs when the pancreas cannot produce insulin. This is the most common form in dogs. Type 2 diabetes occurs when the cells cannot utilize the insulin that is present or the pancreas produces only a very small amount of insulin. This is the most common form in cats. Regardless of the type, all pets will need to start a treatment protocol to manage the disease.

## How is it treated?

Insulin administration is the most common treatment for diabetes. It may be a once or twice daily injection under the skin. Glucose levels need to be closely monitored, especially early in the treatment to determine the proper dose of insulin. Too much insulin will lead to hypoglycemia (low glucose) and inadequate amounts will keep glucose higher than ideal. Both low and high blood glucose have particular symptoms to watch for, but low blood glucose can be life threatening.

Along with injectable insulin, there are oral medications that work in some cats helping to stimulate insulin production by the pancreas as well as improve the cell's insulin receptiveness. Diet is also important, for both dogs and cats, to help regulate glucose levels. High protein diets work to maintain proper body weight and keep blood glucose levels lower.

## What is the prognosis for Diabetes Mellitus?

If glucose levels can be regulated, and remain stabilized, your pet can live many happy, quality years. When regulation becomes difficult due to resistance to insulin, concurrent disease, etc., the disease will ultimately shorten your pet's life. If glucose levels remain high, your pet may develop a condition called ketoacidosis in an effort to produce the energy needed to survive. Ketoacidosis is fatal if left untreated. A personalized treatment plan is important to slow the progression of diabetes. Talk to your veterinarian regarding the best treatment protocol for your pet.

## What symptoms can present as the disease progresses?

### EARLY STAGES:

- Increased drinking and urination
- Increased appetite
- Weight loss
- Sticky, sweet-smelling urine
- Bladder infections
- Dental problems
- Lethargy

### LATE STAGES:

- Persistent early stages
- Severe weight loss
- Cataracts/blindness – dogs
- Organ failure
- Dehydration
- Neuropathies in cats
- Unable to stand

### CRISIS:

- Immediate veterinary assistance needed regardless of the disease*
- Difficulty breathing
  - Prolonged seizures
  - Uncontrollable vomiting/diarrhea
  - Sudden collapse
  - Profuse bleeding – internal or external
  - Crying/whining from pain\*

*\*If your pet vocalizes due to pain or anxiety, please consult with your tending veterinarian immediately.*