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Since [diabetes mellitus](#) ("sugar" diabetes) also occurs in people, many dog guardians may be somewhat familiar with the [disease](#) (symptoms, diagnosis, treatment, etc.). What you may not be aware of is that the disease occurs in approximately 1 out of every 200 canine patients, [according to IDEXX.com](#). It is particularly common in middle-aged and older [dogs](#).

What makes diabetes hard to spot?

Fortunately for people, the early signs of [diabetes](#) may be more readily recognized, but in our dogs signs like [subtle increases in water intake](#) and/or [urine output](#) may go undetected. Changes in activity levels and attitude may be overlooked as being normal aging changes in our older dogs. Unfortunately, untreated diabetes in dogs can also cause other serious diseases such as urinary tract [infections](#) and [cataract](#) formation. Diabetes screening should become a part of routine medical testing as dogs begin to [age](#).

How will my veterinarian test my dog for diabetes?

Since diabetes results in elevated blood glucose (sugar), an abnormally high blood glucose level on a routine blood test certainly raises the possibility that your dog has diabetes. BUT to be considered significant the abnormal reading should be reproduced on a second sample AND the blood should be drawn when your dog has been fasted (has not eaten) in order to rule out normal, post-prandial (after eating) temporary changes in blood glucose.

Because excess amounts of circulating glucose in your dog's [blood](#) stream are filtered out and excreted by the [kidneys](#), finding glucose in a [urine](#) sample also significantly increases the likelihood that diabetes is present. However, blood sugar levels can be elevated to twice normal before glucose is detected in the urine ([according to AAHA](#)) so this is not a particularly sensitive test and certainly should not be relied upon as a sole screening test for diabetes.

In addition, there can be a great deal of variation in blood sugar levels over the course of even one day, let alone over the course of many weeks. Since a diagnosis of diabetes requires the documentation of a persistent elevation of blood/urine glucose, it becomes important to get a clear picture of what your dog's blood glucose levels are over a longer period of time. It is important especially if your dog has already been diagnosed with diabetes and you are trying to control the disease with medical management.

Something called a glucose curve or serial blood glucose level can provide insight into what your dog's blood glucose levels are doing for a longer period of time. But this requires drawing blood on your pet frequently during the assessment period, e.g., every two hours. That means altering your dog's normal daily routine in addition to specifically adding stress to that equation. So while helpful, serial blood glucose levels still do not paint a picture that is truly representative of what your dog's levels are doing in his normal, everyday life.

Fructosamine testing and diabetes

There is, however, another test that measures fructosamine, a byproduct of glucose metabolism rather than glucose itself. The advantages of measuring fructosamine are that it:

- Provides your [veterinarian](#) with a way to evaluate your dog's average blood glucose levels from the last 2-3 weeks with just a single blood sampling
- May distinguish hyperglycemic, non-diabetic animals from diabetics with chronic hyperglycemia
- Is not influenced by transient [stress](#) hyperglycemia
- Is of value in confirming the diagnosis of diabetes and monitoring the response to treatment

Diabetes can present real challenges in the initial diagnosis and management, but luckily you and your veterinarian have options available to more accurately assess your dog's [condition](#).

Next, learn more about diabetes:

- [Diabetes Complications in Dogs and Cats: Diabetes Ketoacidosis \(DKA\)](#)
- [5 Reasons to Test Your Dog for Diabetes](#)
- [Dr. Ruth's Diabetes 101](#)

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.

