

How do I know if my dog is diabetic?

The signs of early diabetes are frequent urination, drinking lots of water, a large appetite, and unexplained loss of weight. If you have any suspicions of diabetes take a fresh urine sample to your vet (they can usually tell from a dip test for glucose if this is positive they will request a blood test) or set up an appointment with your vet to have your dog examined and a blood test done.

What is diabetes?

[Diabetes](#) mellitus, sometimes called sugar diabetes, is a common disease in [dogs](#). The average age of onset is 6 to 9 years.

Diabetes is a result of inadequate production of insulin by the islet cells in the pancreas. There may be a genetic predisposition for this in some dogs. Islet cell destruction also occurs in some cases of [pancreatitis](#). Insulin enables [glucose](#) to pass into cells, where it is metabolized to produce energy. Insulin deficiency results in hyperglycemia (high blood sugar) and glycosuria (high urine sugar). Glucose in the urine causes the diabetic animal to excrete large volumes of urine. In turn, this creates [dehydration](#) and the urge to drink large amounts of water.

Initially, dogs who do not metabolize enough sugar have an increase in appetite and a desire to consume more food. Later, with the effects of malnourishment, the appetite drops. Malnourishment is the result of the dog being unable to metabolize and process their food.

In summary, the signs of early diabetes are frequent urination, drinking lots of water, a large appetite, and unexplained loss of weight. The laboratory findings are high glucose levels in the blood and urine.

In more advanced cases there is lethargy, loss of appetite, [vomiting](#), dehydration, weakness, and coma. Cataracts are common in diabetic dogs. Ultimately, diabetes is a disease that affects all organs. Diabetic dogs will have enlarged livers, be susceptible to infections, and often develop neurological problems if not treated.

Diabetic ketoacidosis is a condition associated with severe hyperglycemia in which ketones (acids) build up in the blood. Ketones are byproducts of the metabolism of fat. In diabetic ketoacidosis, fats are metabolized for energy because sugar is unavailable. Diabetic ketoacidosis can be recognized by weakness, vomiting, rapid breathing, and the odor of acetone on the breath (it smells like nail polish remover). Diabetic ketoacidosis is a life-threatening emergency. If you suspect diabetic ketoacidosis, take your dog at once to the veterinarian.

Treating Diabetes

Dietary control and daily injections of insulin can regulate most diabetic dogs, allowing them to lead active, healthy lives. Oral [hypoglycemic](#) agents used for treating diabetes in people have not been effective in dogs, but research is continuing in this area.

Insulin requirements cannot be predicted solely on the basis of the dog's weight, because the degree of pancreatic failure is different in every dog. The daily insulin dose must be established for each individual dog by a vet. In the newly diagnosed diabetic, insulin therapy is started at home. After a week of treatment, the dog is brought back to the clinic and a blood glucose curve (a series of blood sugar tests drawn over 12 to 24 hours) is obtained to see when the blood glucose peaks and hits its lows. Refinements are then made in the dosage and timing of the injections. How to prepare and inject the insulin will be explained to you by your veterinarian. You may be asked to monitor urine glucose levels by collecting urine samples and using a test strip (a small piece of paper that indicates the glucose levels in urine).

Dietary Management

[Obesity](#) greatly reduces tissue responsiveness to insulin and makes diabetes difficult to control. Accordingly, an overweight diabetic dog should be put on a diet but this should be discussed with your vet.

Daily caloric requirements are determined by the weight and activity level of the dog. Once those are established, the amount to feed is determined by dividing the daily caloric requirement by the amount of calories per cup or can of food. It is important to keep the number of calories constant from day to day, because insulin requirements are computed on that basis.

It is equally important to maintain a strict schedule for insulin injections. To prevent severe hyperglycemia after eating, do not give all the day's calories at one sitting. Divide the ration into equal parts and feed two or three meals a day, or as directed by your vet. **Diabetic dogs do best on a very regimented schedule with feedings and insulin injections being given at the same times each day.** Ideally, your dog should have the same levels of exercise and activity.

Insulin.

[Dogs](#) with [diabetes](#) aren't able to make enough [insulin](#), a hormone that allows the body to store energy from [food](#) and move [glucose](#) into cells. Because this condition has serious and potentially fatal consequences, diabetic dogs are typically treated with insulin injections once or twice each day.

Because insulin is not a sturdy substance, it is important to handle it gently and avoid exposing it to extreme temperatures or excessive motion. Store unopened bottles of insulin in your refrigerator. After they have been opened, it is still advisable to keep insulin in the fridge. It can tolerate short periods of time at room temperature in an area where it's out of direct sunlight.

Steps for Giving Your Dog Insulin

1. Always use a new syringe and needle every time you give your dog an insulin injection. This will guarantee that your supplies are sterile and minimize risk of infection.
2. Unwrap the syringe and needle, but leave the needle itself capped until you are prepared to load the syringe with insulin.
3. Carefully roll the bottle of insulin in your hands to make sure the hormone is well mixed. **Do not shake it** – as this will make the insulin unstable.
4. Remove the needle cap. Then, use the pointer finger and thumb of one hand to hold the insulin syringe while drawing back on the plunger with the other hand. Continue to pull back, filling the plunger with air, until you reach the correct marker for the amount of insulin your dog will need.
5. Hold the bottle of insulin upside-down in your non-dominant hand. Insert the needle into the bottle through the middle of the rubber cap and depress the plunger, forcing the air into the bottle. This will prevent the formation of a vacuum when you fill the syringe with insulin.
6. Next, still holding the bottle upside-down, insert as much of the needle as you can into the bottle, keeping the needle tip covered by insulin. Pull back on the plunger until you have the correct amount of insulin in the syringe.
7. If you notice an air bubble inside the syringe, draw a little extra insulin into the tube. Then, remove the needle from the bottle and hold the syringe-needle apparatus with the needle pointing toward the ceiling. Tap or flick the insulin syringe until the air bubble rises, and then push the plunger to force the air out of the syringe and get rid of any extra insulin.
8. Gently pinch some of your dog's loose skin anywhere along his neck or back, using your non-dominant hand. Then insert the needle into the skin, parallel to the fold. Pointing the needle this way will minimize the likelihood that you will put the needle in one side and have it come out the other.
9. Draw back on the plunger. If it fills with air or blood, remove the needle and syringe and discard. Get a new needle and syringe and re-draw the insulin dose as before. Go ahead and reinsert the needle into your dog. If you do not get air or blood, depress the plunger to give your dog his insulin injection. Try to give the shot in a different spot every time you give your dog an injection (ideally rotate sides and locations every shot given).
10. If your dog gets away or you can't tell whether he received the full dose, **do not** try to give more insulin. Wait until the appropriate time to give the next injection of the prescribed dose.
11. Discard the dog insulin syringe and needle in the special container provided by your vet and follow recommended procedures for disposal.

Dog Insulin Injections: Making Them Easier on You and Your Dog

Injecting your dog with insulin may seem daunting at first, but there are ways to make it easier for you and your dog. Here are tips:

- Stay calm. The more relaxed you are, the more relaxed your dog will be. Take a few deep breaths to calm yourself before you give your dog insulin.
- Create positive associations. You might try giving your dog insulin while he's eating a meal or favorite snack.
- Teach basic commands. If your dog knows -- and obeys -- commands to sit and stay, it can make it much easier for you to give him an insulin injection quickly. And, of course, this makes the whole process easier for your dog, too.
- Ask for help. If giving your dog insulin isn't going well, consult with your veterinarian, who will be able to help you come up with a routine that minimizes discomfort and maximizes your pet's health.
- There is an excellent video on youtube. If you are unsure on how to handle the insulin and how to give the shot properly.
<http://www.youtube.com/watch?v=QkPNiWqLZHM>

Remember your dog can lead a full and active life as a diabetic.

