What is involved in treating diabetes

In the majority of dogs the first stage of treatment involves hospitalisation for a few days to stabilise the diabetes. If your dog responds well to this he or she is then sent home on a program of once or twice daily insulin injections and very specific feeding instructions. Regular follow ups are important. Insulin will usually be required for the rest of your dog's life.

doyalson animal hospital
423 Scenic Drive
Doyalson NSW 2262

Phone: 43 992129
Web: www.doyalsonvet.com.au

diabetes in dogs

doyalson animal hospital

Phone: 43992129

diabetes in dogs

What is diabetes mellitus?
There are two forms of diabetes in dogs; *diabetes insipidus* (drinking diabetes) and *diabetes mellitus* (sugar diabetes). Diabetes insipidus is a very rare disorder that results in failure to regulate body water content. The more common type of diabetes in dogs is diabetes mellitus. Diabetes mellitus is a disease of the pancreas most often seen in dogs over 5 years of age. The pancreas is important for making digestive enzymes and also producing a hormone called insulin. Diabetes mellitus is a failure of the pancreas to regulate blood sugar.

Some people with diabetes have to have daily injections of insulin and others take oral medication. Is this true for dogs?
In humans, two types of diabetes mellitus have been discovered. Type 1, or Insulin Dependent Diabetes Mellitus, results from destruction of the beta cells of the pancreas. This is the only type of diabetes known in dogs. Dogs with this type of diabetes require injections to stabilize blood sugar. Type 2, or Non-insulin Dependent Diabetes Mellitus, is different because some insulin producing cells remain. People with this form may be treated with oral medication. Because Type 2 diabetes is rare in dogs, generally oral medications are not appropriate.

Why is insulin so important?
Insulin is like a gatekeeper. It stands at the surface of body cells and opens the door, allowing glucose to leave the bloodstream and pass inside the cells. Glucose is a vital substance that provides much of the energy needed for life. Without an adequate amount of insulin, glucose is unable to get into the cells and they become starved of energy. In response to this, the body breaks down stores of fat and protein to use as alternative energy sources. As a consequence, the dog eats more. So the dog will have weight loss and a ravenous appetite. The body tries to eliminate the extra glucose by excreting it in the urine. However, the excess sugar attracts water, and this results in the production of a large amount of very dilute urine. To avoid dehydration, the dog drinks more and more water. Thus we have the four classic signs of diabetes:

Weight loss
Ravenous appetite
Increased water consumption
Increased urination

How is diabetes mellitus diagnosed?
The diagnosis of diabetes mellitus is based on three criteria: the four classic clinical signs, the presence of a persistently high blood glucose and the presence of glucose in the urine. The normal level of glucose in the blood is 4.4-6.6 mmol/l. Diabetes is the only common disease that will causes blood glucose levels over 22 mmol/l. Because of the excessive amounts of glucose in the blood, it will also be present in the urine.

What are the implications for my dog?
For the diabetic dog, one reality exists: blood glucose cannot be normalised without treatment. Treatment almost always requires administration of insulin and some modification of the diet.
For the owner, there are two implications: financial commitment and personal commitment. When your dog is well regulated, the maintenance costs are less, but vary depending on the size of the dog. The special diet, insulin, and syringes can be expensive. However, the financial commitment is significant during the initial regulation process and if complications arise.

What is the first stage of diabetic treatment ?
Initially, your dog may be hospitalized for a few days to deal with the immediate crisis and to begin the regulation process.

The immediate crisis is great if the dog is so sick that is has stopped eating and drinking. Dogs in this state, called ketoacidosis, may require a week or more of hospitalization with a number of laboratory tests. Otherwise, the initial hospitalization may be only for a day or two in order to start stabilization. At that point, your dog goes home for you to administer medication. At first, return visits are required frequently to monitor progress. It may take a month or more to achieve good regulation. The financial commitment may again be significant if complications arise. We will work with you to try and achieve consistent regulation, but a few dogs are difficult to keep regulated. It is important that you pay close attention to our instructions related to administration of medication, diet, and home monitoring.

One complication that can arise is hypoglycaemia, or low blood sugar. If severe, this can be fatal. This may occur due to inconsistencies in treatment.

Your personal commitment to treating your dog is very important in maintaining regulation & preventing crises. Most diabetic dogs require insulin injections once or twice daily. They must be fed the same food in the same amount on the same schedule every day.

What is involved in treatment?

Consistency is vital to proper management of the diabetic dog. Your dog needs consistent administration of medication, consistent feeding, and a stable, stress-free lifestyle. The first step in treatment is to review your dog's diet. The preferred diets are on prescription but will be supplied by the veterinary surgeon. If your dog is overweight, a special weight reducing diet may be prescribed. Your dog's feeding routine is also important. The best way to feed a diabetic dog is to feed twice daily—but this depends on the vet's recommendation.

The foundation for regulating blood glucose is the administration of insulin by injection. Many people are initially afraid of giving insulin injections. If this is your initial reaction, consider these points:

- Insulin does not cause pain when it is injected
- The injections are made with very tiny needles that your dog hardly feels. The injected volumes are minute
- The injections are given just under the skin in areas in which it is almost impossible to cause damage to any vital organ.

Please do not decide whether to treat your dog with insulin until we have demonstrated the injection technique. You will be pleasantly surprised at how easy it is.

About insulin.

Insulin comes in an airtight bottle that is labeled with the insulin type & concentration. The bottle should be gently inverted to mix the contents. Some types of insulin used in dogs have a strong tendency to settle out of suspension. If it is not mixed properly, dosing will not be accurate.

Insulin will lose its effectiveness if exposed to direct sunlight or high temperatures. It should be kept in the refrigerator (not frozen). It is not ruined if left out of the refrigerator for a few hours, although this is not advisable. Insulin is safe as long as it is used as directed, but should be kept out of reach of children.

Drawing up the insulin.

Have the syringe and needle, insulin bottle, and dog ready. Then follow these steps:

- Remove the guard from the needle & draw back the plunger to the appropriate dose level.
- Carefully insert the needle into the insulin bottle.
- Inject air into the bottle, this prevents a vacuum from forming within the bottle.
- Withdraw the correct amount of insulin into the syringe.
- If any bubbles are present, draw more insulin and gently tap the syringe so the bubbles go to the top. Then push the additional amount, including the air, back into the bottle, so you have the correct amount of insulin in the syringe.