

Owner Manual

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Diabetes in Dogs



Caninsulin®

Simplifying small animal diabetes





What is Diabetes?

Glucose ('blood sugar') provides the cells in the body with the energy they need to live and function. Cells can only absorb glucose from the blood in the presence of insulin. Insulin is a hormone produced in an organ called the pancreas. Sometimes the pancreas becomes unable to produce enough insulin, or the cells in the body fail to respond to insulin properly, meaning that:

- i) the cells in the body cannot absorb enough glucose and
- ii) too much glucose remains in the blood.

This condition is called 'diabetes mellitus' (this is often shortened to just 'diabetes').

Diabetes is therefore basically caused by a lack of available insulin.

Diabetes mellitus is seen in dogs of all ages, sexes and breeds. However, it most typically occurs in older dogs, with bitches more commonly affected.

Can diabetes be cured?

Usually the underlying cause of the diabetes cannot be 'cured', but with the establishment of a regular routine and the use of an insulin preparation such as Caninsulin, your dog can lead a normal, happy life.

What are the signs of diabetes?

When the blood contains a high level of glucose, some of it is able to 'leak' through the kidneys and it begins to appear in the urine (in healthy dogs there should be no sugar in the urine). This then causes increased urine production. To replace this fluid loss, the affected dog must then drink extra water. Also, because an important energy source is being lost from the body, affected dogs tend to lose weight, even though they often eat more than usual. Finally, there may be more general signs such as lethargy and poor coat condition.

Diagnosis

The signs listed above suggest that diabetes could be present, but they can also be caused by a number of other diseases. Therefore, your vet will need to run some blood and urine tests to make a diagnosis. A persistently high level of glucose in the blood is the most reliable indicator that a pet is diabetic.



Treatment

The main aim of treatment is to restore a good quality of life, not just for your dog but for you as well. We can do this by stopping the signs of diabetes described earlier.

An additional benefit of treatment is that it helps to reduce diabetic complications. Although dogs tend to escape some of the more serious complications that we see in human diabetics, they will have a higher incidence of problems such as cataracts.

Just as in people, diabetes can be effectively controlled by the injection of insulin (such as Caninsulin from Intervet). In dogs, insulin is generally given at a fixed time once or twice a day. In bitches, control may be easier after she has been spayed.



A regular routine, including not only the insulin injections but also feeding, exercise and weight control is vital to the successful treatment of diabetic dogs. The veterinary nurses at your practice are often a great source of advice on these matters.

Starting Treatment

Each dog's requirement for insulin is different and your vet will need to tailor the dosage of insulin to your dog's needs. It can take several months to achieve full stabilisation, although improvements in your dog should be seen within a few weeks of starting treatment.

The starting dose of insulin may be worked out according to your dog's weight. Your vet may take further blood samples after the first injection to check that the dose is right for your animal. You will also be shown how to draw up the correct dose of Caninsulin using special syringes, and how to give the injection just under the skin (see illustration on page 8). It is surprising how easy this all becomes with a little practice.

Once insulin therapy has been adjusted to your dog's needs, he or she should improve rapidly. You will need to keep in close contact with your vet but the frequency of visits should reduce once the optimum routine is found. You should never change the dose of insulin you give to your pet without first consulting your vet.

You may be asked to test urine samples on a regular basis to check for glucose and ketones, using special test sticks supplied by your vet. These give an extra indication of how your pet is getting on. Small amounts of glucose in the urine may be acceptable, but the presence of ketones is usually an indicator of a problem. Always consult your vet if you are unsure what to do.

Low Blood Glucose ('HYPOGLYCAEMIA')

One potentially dangerous complication that you should be prepared for is 'hypoglycaemia'; this is when the blood sugar level falls too low. This may happen if too much insulin is given or if your dog refuses to eat. In this situation the brain, which is very dependent on a supply of glucose, cannot get enough energy.

The early signs include unrest or lethargy, weakness and shivering/muscle twitching, progressing to fits and unconsciousness. The condition is potentially life-threatening if not treated promptly.



What to do if you see signs of hypoglycaemia:

1. Give food immediately.
2. If your dog doesn't eat straight away, syringe a glucose solution into the mouth and/or rub glucose powder on the gums and under the tongue (*see below*). Take care not to get bitten.
3. Call your veterinary surgeon for advice.

Glucose powder and solution are available from your local pharmacist. Make sure you have some available at all times in case of emergency. When treating hypoglycaemia aim to give 1 gram of glucose per kilogram bodyweight. For example, a 20 kilogram dog would require approximately 5 level teaspoons of glucose/sugar.



Tips on looking after your insulin

Insulin is a very fragile substance. Incorrect storage and handling of insulin may mean that it doesn't have the proper effect when you give it to your dog. Follow these rules with Caninsulin:

› Always keep Caninsulin in the fridge - remove it only when you are drawing up an injection. If

Caninsulin remains at room temperature for extended periods it may be damaged.

- › Do not allow Caninsulin to freeze - freezing destroys the insulin. Remember that items kept at the back of the fridge may freeze if they come into contact with the cooling plate.
- › Always store Caninsulin in an upright position - insulin can be affected by substances in the rubber cap on the top of the vial. If stored on its side the activity of your insulin may be decreased.
- › Swirl, **don't shake** - shaking the bottle can break up the insulin molecules. However, it is important to mix your insulin before drawing up an injection, so swirl or gently rock the bottle to resuspend any material that has settled in the bottom since you last used it.

› Move on to a new bottle - Caninsulin comes in small vials specially designed for use in dogs. This means that you don't have to keep using the same vial month after month. Prolonged use of the same vial may lead to reduced insulin efficacy. A fresh vial is always best!

Summary

When you find out that your dog is a diabetic it can be a daunting experience - there is a lot to learn in the first few weeks. However, in time, many owners establish a routine that becomes second nature to both them and their dogs. Looking after a diabetic dog is a challenging, yet rewarding undertaking. It must be accepted that regular injections, a fixed routine and frequent visits to the vet will become a way of life. However, with the right care, dogs can enjoy a full and happy life after the diagnosis of diabetes.

METHOD OF INJECTION FOR DOGS ↘

A vet or veterinary nurse will show you how to inject your dog with Caninsulin.



1 Draw up into the syringe slightly more insulin than needed. Expel any air bubbles by tapping the upright syringe with your finger and then gently press the plunger until the correct dose remains.



2 Pull the skin of the scruff of the neck upwards and form a depression with your forefinger.



3 Insert the injection needle at right angles gently through the skin in the depression you have formed. Gently draw back the syringe plunger and if blood appears remove the needle from the skin and start again with a fresh syringe (this will very rarely happen). Release your hold on the skin. Slowly depress the plunger.

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Caninsulin is indicated for the treatment of diabetes mellitus in cats and dogs.

Caninsulin is an intermediate acting insulin product containing porcine insulin, which is structurally identical to canine insulin.

Contra-indications, warnings etc

1. Caninsulin is a medium duration insulin and is not intended for the treatment of animals with severe acute diabetes presenting in a ketoacidotic state.
2. The use of progestagens (oestrus inhibitors) in patients suffering from diabetes mellitus should be avoided. Ovariectomy may have to be considered.
3. Stress and irregular extra exercise must be avoided. Care must be taken with the use of corticosteroids.
4. It is important to establish a strict feeding schedule in consultation with the owner which will include a minimum of fluctuations and changes.
5. Administration of Caninsulin must be carried out by an adult responsible for the welfare of the animal.
6. Caninsulin must not be administered by the intravenous route.

Caninsulin is for animal treatment only and must be prescribed by your veterinary surgeon, whose advice should be sought. Keep out of reach of children.

Further information is available from

Intervet Ltd, 12 Shakespeare Ave, Upper Hutt.

For technical information phone: 0800 263 768 or visit www.intervet.co.nz

Caninsulin is registered pursuant to the ACVM Act 1997 No A7401.

Prescription Animal Remedy (P.A.R.) Class 1. For use only under the authority or prescription of a veterinarian.

Registered to Intervet Ltd, 12 Shakespeare Ave, Upper Hutt.



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