



Animal Diabetes Australia

Supporting diabetic companion animals and their families

General information – managing diabetes in dogs

How is diabetes treated in dogs?

Treatment of diabetes in dogs requires daily administration of insulin injections and appropriate nutrition, and must be specifically tailored for each individual. The goal is to control the signs of diabetes (weight loss despite a good appetite; excessive thirst and urination) and to avoid low blood sugar (hypoglycaemia) due to insulin over-dose. The best outcome tends to be achieved when the owner of the diabetic dog and their veterinarian work together as a team.

A consistent insulin dosing and feeding regimen is strongly recommended. Step-wise adjustment of the insulin dose and feeding is typically required over several weeks or months before optimal diabetic control is achieved; however, most dogs will progressively improve during this process.

It is important that a practical system is established to monitor your dog's response to insulin treatment at home to inform treatment decisions. Basic monitoring entails keeping records of body weight, water intake, general demeanour, and undertaking urine testing. The results will be considered together and will inform treatment decisions. Monitoring signs related to diabetic control can provide guidance on the success of diabetic treatment. Negative urine glucose results can alert us to the potential for hypoglycaemia (low blood sugar). Diabetic dogs will often need a bit of gentle encouragement to become accustomed to their owner approaching them when they are urinating. However, most will come to readily accept urine collection, especially if this is done while they are walked on a lead.

Insulin administration

It is very important that insulin injections are given exactly 12 hours apart. **If it is not possible to administer an insulin injection on time, then the best approach is to miss that injection and resume insulin administration at the next injection time.** Missing a single injection will have negligible consequences in most cases. In contrast, late administration of insulin can lead to increased insulin action (and therefore over-dose) if the following insulin injection is administered on time. The usual meal can be fed whenever an insulin injection is missed.

Insulin dosing pens

Using an insulin dosing pen provides a more accurate and precise means of administering insulin than needles and syringes, and this option is recommended. Injections using an insulin dosing pen are also likely to be less painful for the dog.

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To book a consultation:

- at Melbourne Eye Vet in Mulgrave - Phone 03 9545 0103 or 1800 393 838
- at Centre for Animal Referral and Emergency (CARE) in Collingwood – Phone 03 9417 6417 before 4.30pm M-F and ask for Kelley

Mobile: 0401 039 711 messages will be checked by 10 am M-F

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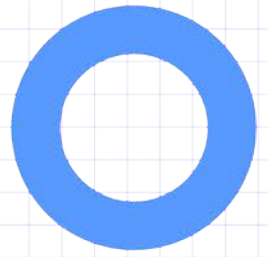
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After hours care is available at CARE (9417 6417) and Boronia Veterinary Clinic (9762 3145) for all clients of Animal Diabetes Australia



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Instructions for using an insulin dosing pen:

- Please refer to the instructions provided with the insulin dosing pen.
- It is important that the pen be kept at room temperature below 28C away from heat and light.
- Always gently mix Humulin 30/70 insulin before injection by rolling the pen 10 times and then inverting the pen 10 times. Mix Caninsulin by vigorously shaking the VetPen.
- Before every injection, insulin dosing pens need to be primed. This may seem wasteful to those not familiar with the protocol but is necessary. Holding the pen vertically, attach the needle to pen, dial to 2 units (HumaPen) or 1 unit (VetPen), and push release button. Watch carefully, if a stream of insulin appears – the pen is primed. If a stream is not seen, prime again. Priming moves the screw into contact with the cartridge plunger and removes air from the cartridge.
- Once primed, dial the dose required on the insulin pen, insert the needle under the skin, push and hold the injection button. After removing the needle from the injection site, it is normal for a drop of insulin to be seen on the needle tip.

Insulin overdose

If signs of insulin overdose (weakness, altered behaviour, collapse, seizure) occur, then the best approach is to feed a meal of the dog's usual food. If your pet is unable or unwilling to eat, then honey or glucose syrup should be applied liberally to the mouth, which will result in improvement within a few minutes. Once there is recovery, a meal of the dog's usual food should be fed. No more insulin injections should then be given until veterinary advice has been received.

Feeding

A key to successful management of diabetes in dogs is the feeding of consistent meals at the time of insulin injections that always contain exactly the same ingredients and quantities of those ingredients. This is because the insulin dose needs to be matched with the dog's meals. It is important that meals are fed at the time of insulin injections and that all food must be consumed within 4 hours. No extra food should be fed to the dog 4 or more hours after an insulin injection.

Different flavours of the same brand of dog food may be associated with different insulin requirements, therefore it is important to choose a flavour that is always available.

Lack of appetite typically indicates illness in a diabetic dog and prompt veterinary examination is recommended.

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Collecting important information about your diabetic dog

Home monitoring and recording of signs related to diabetic control provides important information to inform decisions regarding your dog's treatment and so achieve good diabetic control. Basic monitoring entails recording of appetite, general demeanour, daily water intake, changes in body weight, and the presence or absence of glucose and ketones in the urine.

1. **Appetite, general demeanour and behaviour.** These should be recorded every day.
2. **Insulin dose and meal composition.** These should be recorded twice each day.
3. **Water intake.** This should be measured every day. The key is to determine how many millilitres of water your dog drinks over a known number of hours. For example, a measured volume of water can be provided in a bowl and access to other water sources prevented. The volume of water remaining in the bowl can then be measured after 24 hours. If it is not possible to measure the water intake for the diabetic dog alone, then recording the volume drunk by all animals in the household is a suitable alternative. It is assumed that the non-diabetic animals will have a fairly constant water intake, and that any changes in water consumption are due to the diabetic dog.
4. **Urine glucose and ketones.** This should be measured at least once each week. The urine can be tested with test strips called **Keto-Diastix** and a record kept of the results. **If the urine is consistently testing negative for glucose, we will need to adjust the insulin dose to avoid insulin overdose.**
5. **Body weight.** Ideally, body weight should be recorded once each week. It is preferable to use the same scales each time. Scales designed for weighing adult people are not sensitive enough for detecting weight changes in small dogs. Scales designed for weighing babies are suitable for small dogs.

If some aspects of basic home monitoring are too difficult or if additional information is required, alternative options include regular testing of blood glucose at home, flash glucose monitoring, and/or laboratory measurement of blood fructosamine.

Diabetic cataracts

Diabetic cataracts are an expected complication of diabetes in dogs. They cause loss of vision and inflammation of the eyes. Vision can be restored by surgical removal of the cataract by a veterinary eye specialist. Inflammation must be treated with eye drops. Animal Diabetes Australia is co-located with Melbourne Eye Vet (phone 03 9545 0103 or 1800 393 838), a veterinary eye specialist practice where cataract surgery can be performed.

Please don't hesitate to call or email us if you have any questions or concerns.

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