



Diabetes advice sheet

Your pet suspected of having, or has been diagnosed with Diabetes Mellitus. Diabetes is normally a life long condition, although occasionally some cats can gradually recover. Having diabetes means that your pet is insulin deficient or resistant. Insulin is one of the hormones in the body that controls blood glucose (more commonly known as blood sugar). Insulin lowers blood glucose levels by helping the body's cells take up glucose from the blood. In diabetic animals, there is not enough insulin and so blood glucose levels tend to be high. Diabetes has to be managed with regular insulin injections, a controlled diet and exercise regime.

What happens now?

In general, your vet will suspect diabetes if your pet has a high blood sugar level, or is losing excessive glucose in the urine. Sometimes a more specific blood test is required which measures 'fructosamine' – a longer marker of blood sugar which is less affected by short-term variations such as the stress of a visit to the vets! Your vet may also suggest that your pet has some other tests to check for other possible conditions that may affect their response to treatment. These may include further blood tests (for general health and thyroid function), and urine tests (to check for possible infections).

How will my pet be treated?

Most pets will require twice daily injections of insulin. This may sound very daunting, but most patients tolerate injections very well, and most owners adapt very quickly to learning this new technique. We will support you every step of the way, with initial demonstrations given before you start to have a go yourself under the direct supervision and support of our veterinary nurses. You will start giving the injections at home only once you feel confident.

There are a few different insulin preparations available and your vet will decide which will be most appropriate for your pet. The different insulin preparations require different syringes to ensure that the correct dose is being given. Please make sure that you use the same syringes each time, if you are unsure please contact the practice. There is also an automatic loading pen that can be used instead of a needle and syringe. Your vet will discuss these different options with you.

Will my pet need any more tests?

Every pet is different in their insulin requirements and so it is likely that the starting dose chosen will need to be modified. This decision will be based on the results of a glucose curve. Your pet will need to stay with us for the day during which tiny blood samples will be



taken periodically to see how the levels fluctuate over the course of a day. This will help your vet to decide on whether any dosage adjustments will be needed.

When your pet is booked in for a blood glucose curve, please remember NOT to give their breakfast or insulin that morning, but bring these with you. A blood sample will be taken prior to food and insulin, and then we will administer the breakfast and insulin you have brought with you, before further samples are checked throughout the day. As a number of samples are required, your pet will need to stay with us until early in the evening.

Once your pet is stabilised on a dosage of insulin, it is still important for regular checks to take place, to make sure that requirements have not changed over time. For stable diabetics, we usually review cases every 3 months when a consultation and a blood test will take place. As pets get older, sometimes insulin requirements go up, or alternatively, in a few cases for cats only, requirements and possible recovery can occur, meaning insulin requirements reduce and eventually cease. With other disease states, insulin requirements also change, so if you see any other problems for instance excessive thirst, changes in appetite or weight loss, an earlier consultation should be arranged with your vet.

How do I give the insulin?

Your vet will advise you as to when it is best to administer this, generally we would advise to give the insulin at the same time of day each day. For dogs, we will often advise to give the insulin 1 hour before food. If your pet is unwell and has a reduced appetite, then it is best to speak to your vet for advice, often a half dose is required of insulin. If you forget to give an insulin injection and remember within a couple of hours you can give the insulin dose as normal. If more than a couple of hours have elapsed wait until the next insulin dose is due and continue as normal from there.

Insulin use

Insulin must be stored in the fridge at all times, it must not be allowed to freeze. Once opened, insulin has a shelf life of 28 days if stored correctly, therefore ideally a new bottle of insulin is required each month. For those patients receiving insulin via the vetpen, the cartridges must be kept refrigerated but once placed in the pen, do not require refrigerating.

Here are some tips for administration via the different techniques:

For the needle and syringe technique:

- * Just before use, rock the insulin bottle gently, do not shake.
- * Use a new syringe for each insulin injection.
- * Tip the insulin bottle upside down and take the cap off the needle. Insert the needle into the insulin bottle and draw up slightly more insulin than you need.

* Expel any air bubbles by tapping the syringe gently with your finger. Press the plunger whilst the needle is still in the bottle, to release excess insulin back into the bottle until the correct insulin dose remains in the syringe.

For the vetpen technique:

* Rock the cartridge to make sure the suspension is uniform. Pull off the vetpen cap and unscrew the vetpen body from the cartridge holder.

* Rotate the dial to the correct dosage.

* Check the internal plunger is fully retracted

* Load the insulin cartridge into the cartridge holder by inserting the metal cap in first

* Screw the cartridge holder and VetPen body firmly together

* Prime the VetPen – this must be repeated before each injection. Peel the protective film from a new vetPen needle and screw onto the cartridge holder. Remove the outer protective needle cap. Replace the pen cap and shake the VetPen.

* Dial one unit on the dose selector to prime the cartridge

* Hold the VetPen with the needle pointing up and tap the cartridge gently with your finger a few times to push any air bubbles to the top. Push and hold the release button towards the needle until the arrow on the pen body points to the starting line on the dose selector

* Repeat until the air bubble is gone and insulin drops out of the needle tip.

- For administration, make sure the arrow on the pen body points to the start line on the dose selector. Make sure the number guide shows there is enough insulin for your pet's dose.

Pull the skin of the scruff upward to make a tent like shape. Insert the needle at right angles gently through the skin. Gently draw back the plunger and if blood appears remove the needle and repeat the above in a different place. If no blood appears gently depress the plunger to expel all the contents of the syringe.

Dispose of the needle and syringe in a sealed container and bring to the practice for disposal. Don't throw needles away with household waste. Don't re-use a syringe and needle, always use a fresh one.

Monitoring and management at home.

It is important that your pet has a regular diet and exercise regime that doesn't change. This will ensure that her diabetes will be more easily controlled. Changing the diet or amount of exercise that your pet does will also change her insulin requirements and hence lead to poor control of her diabetes. Your pet must have the same amount of food at each meal and ideally must not snack in between. With dogs it is important that they go for the same length of walk each day. It is important not to go for a 20min walk around the block during the week and a 3 hour walk at the weekend as this will significantly affect their diabetic control.



Cats

The diet that we recommend for your cat is Royal Canin Diabetic food. This food has been specially designed for the diabetic cat. Your vet may recommend Royal Canin Obesity if your cat is overweight and diabetic. This food has been specially designed to help your pet reach its' ideal bodyweight and like the diabetic food provides a controlled glucose supply.

Dogs

The diet we recommend for your dog is Royal Canin weight control. This diet has been specially designed for diabetic dogs and provides a constant controlled glucose supply. Your vet may also recommend either Royal Canin Obesity or Satiety diet if appropriate.

Please talk to your vet if you are unsure about «Animal_Name»'s diet. It may be advisable not to change her diet due to other medical reasons.

Hypoglycaemia.

Hypoglycaemia is when the blood glucose level drops too low. The signs you may notice include

- Lethargy (tiredness)
- Weakness
- shivering/muscle twitching
- fits/seizures
- unconsciousness

If you notice any of these signs please rub either honey or a sugary solution onto your pet's gums and contact the practice for further advice. **Don't give any insulin.** Encourage your pet to eat if she is able to do so.

Hyperglycaemia/uncontrolled diabetes.

Hyperglycaemia occurs when the blood glucose level is too high. You will notice the signs similar to those prior to diabetes being diagnosed. These include

- drinking more
- urinating more
- eating more
- exercise intolerance
- recurrent infections
- cataracts developing.

If you notice any of these signs contact the practice as an adjustment to your pet's insulin dose may be required.

Key points.

- Use a fresh needle for each insulin injection.
- Keep the insulin in the fridge.
- If you think your pet is hypoglycaemic encourage them to eat or rub honey or a sugary solution on their gums-take care not to get bitten. Call the practice for advice.
- If you think your pet is hyperglycaemic call the practice to make an appointment for your pet to be checked, don't alter the insulin dose at home.