



## **Daisy Hill Animal Hospital, Ltd.**

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### **Insulin Administration in Pets**

Insulin is the injectable medication you use to control your diabetic pet's blood sugar (glucose). When insulin therapy is started, the optimal dose is unknown and will have to be determined by trial and error. Most pets will need insulin injections twice a day, though rarely a single once-a-day long acting dose works out. A dose will be selected based on what research has shown to be a good starting point, and after a couple of weeks your pet will return for a glucose curve where blood sugar levels will be mapped out over the course of the day. The curve will show if the insulin is lasting long enough and if the dose should be adjusted.

There are different types of insulin; we will choose a type that we hope is best suited for your pet. Sometimes if a good response is not achieved after an appropriate amount of time then the type of insulin may need to be changed.

**BE SURE YOU UNDERSTAND HOW MUCH INSULIN YOU ARE TO GIVE YOUR PET.**

*and*

**DO NOT ADJUST YOUR PET'S INSULIN DOSE WITHOUT VETERINARY GUIDANCE.**

#### ***Storing Insulin***

Do not use insulin that is past its expiration date.

Most insulin requires refrigeration – follow the label instructions.

Do not use insulin that has been frozen. Insulin is not normally frozen but accidents happen, especially in smaller refrigerators.

Do not expose insulin to direct light or heat.

#### ***The Syringes***

Different insulins are made at different concentrations and thus each requires its own type of syringes for proper dosing. Insulin syringes are extremely small in diameter so that injection will not be painful. It is a rare patient that objects to insulin shots per se, but some pets resent being held still. It is crucial that the injection goes through the skin rather than just into the fur - let your veterinarian know if you would like a small spot of fur shaved to facilitate the injection.

Always be sure you have the correct syringes for your insulin.

Used syringes should be placed inside a thick plastic container, such as a liquid laundry detergent bottle, or a container designed just for syringes. If the needle is enclosed in such a container, the entire container can be closed up and disposed of in the regular trash at home. Specific containers can be purchased for needle disposal or the used syringes can be returned to the veterinary hospital for disposal if you prefer.

## ***How to Give the Injections***

First, feed your pet. The blood sugar of your pet that has not eaten a normal meal but receives insulin may drop to a dangerously low level. If your pet is not eating, this could indicate a need for a checkup with your veterinarian. After your pet eats, you are ready to give the injection.

Before drawing up the insulin in a syringe, roll the bottle back and forth in your palms so that the white material in the bottom is mixed in to the rest of the solution. Do not shake the bottle as the insulin molecule can be damaged.

When drawing up the insulin, always hold the bottle vertically to avoid unnecessary bubbles in the syringe.

Since insulin is being given under the skin, bubbles are not an enormous problem as it would be with an intravenous injection, but we still want to minimize bubbles. If you get bubbles in the syringe, flick the syringe with your fingers until the bubbles rise to the top and then simply push the air out of the syringe with the plunger.

After you have the insulin dose ready in the syringe, it is time to get your pet. Be sure you can trust them to hold reasonably still for the shot. Most pets do not require a second person to hold them still, but some may require a helper. If you have such a pet but no helper, please ask us for advice.

Lift up a fold of skin along the top or side of the body. This will create a small space for the needle. Insert the needle into this space and inject the insulin. Withdraw the syringe and needle when you are finished. Safely dispose of the syringe – only use once.

## ***If the Blood Sugar Gets Too Low (Hypoglycemia)***

The blood sugar (glucose) can get low from either accidentally giving too much insulin, or more commonly not eating well or missing a meal. When blood glucose falls, you may see:

Lethargy; weakness, including wobbliness when walking; restlessness or shivering; stupor or even convulsions.

**Important:** If your pet is not eating, then do not give an insulin dose at that time.

**Mild hypoglycemia** – If only showing some mild signs, you can often treat it with immediately feeding some of the regular food. If your pet refuses its regular food, try offering a food it really enjoys, or some treats. Then observe for several hours.

**Moderate hypoglycemia** – You can give some sugar at home to help boost it. This is most commonly done with a corn syrup, or Karo syrup. Pancake syrup, honey, or table sugar dissolved in some water will also work. Corn syrup should be given, either alone or combined with food. The syrup will help bring the blood glucose up quickly, and the food will help keep it elevated. Small pets should be given about 1 – 2 tablespoons. You need to observe for several hours to make sure the hypoglycemia does not happen again.

**Severe hypoglycemia** – If your pet is severely hypoglycemic, especially if it is having seizures or unconscious, you must give corn syrup immediately. Carefully rub small amounts of syrup on the cheeks and gums. Do not put a lot of liquid in the pet's mouth, and be sure the pet does not choke. Do not stick your fingers inside the teeth of a seizing pet - you may get bitten. Then, call your veterinarian. If you can not contact your vet, call any vet - and get additional instructions. Your pet may require hospitalization.

**Key point** - If your pet is acting strangely, you should assume it is hypoglycemia and treat it. If your pet is not hypoglycemic you will raise the glucose for a few hours – but better to be safe than sorry.