



## DIABETES AND INSULIN

Diabetes is a disease of the pancreas that results in decreased insulin production. Insulin is a hormone that allows glucose to move from the blood into the cells. The body cannot function without glucose getting into the cells. If an animal does not produce enough insulin (is diabetic) his or her blood glucose level will be very high, yet there will be no glucose in the cells. High blood glucose causes animals to drink a lot and urinate a lot, predisposes animals to cataracts and changes the way fat is broken down. Low glucose in the cells makes animals tired, weak and prone to seizures or passing out. This can be fatal.

Treatment of diabetes in animals involves a combination of diet changes & injections of insulin. The oral diabetes pills that people take are not effective with most pets. Insulin is generally best given twice daily. This is because insulin does not last a long time after it is injected, and once an injection wears off, the blood glucose level starts to climb again. Usually we start patients on a given dose of insulin twice a day and then monitor blood glucose levels, general well-being and water intake to help us adjust the dose. We may find that we have to slowly increase the dose per injection or even change types of insulin. It is critical that owners follow directions for insulin use explicitly, communicate well with the doctor, and never change insulin dose or frequency without contacting the veterinarian first.

Insulin dose requirements are dependent upon the severity of the diabetes, the size of a patient, exercise level and most importantly - diet. There are special diets that we use just for diabetics. These can only be used in animals that do not have other disease problems at the same time. It is important that diabetics who are getting insulin injections eat regularly. If your pet has been put on a special diet and refuses to eat it, call us before giving insulin.

Insulin is a very fragile molecule that needs to be handled carefully. Follow the attached instructions. Failure to be careful with insulin can inactivate it, which means your injections will be ineffective and your pet will continue to be diabetic. This is a common cause of frustration in getting an animal controlled. Insulin is too expensive and your pet's life and comfort are too important to take this lightly!

162 Cross Street

San Luis Obispo, CA 93401  
[www.animalcareclinicslo.com](http://www.animalcareclinicslo.com)

(805) 545-8212



This guide is designed to serve to reminder only. You must receive training from our staff on how to handle insulin before beginning your injections unless you are medically trained.

## **INSULIN CARE AND INJECTION**

Insulin must be kept refrigerated but not frozen. When you pick up your insulin at the pharmacy or ACC, be sure to take it immediately home or carry a small ice chest & ice packs with you so it does not get warm in the car. It is fine for insulin to sit on the counter for 10-15 minutes, but the bottle should always stay cool to the touch. If a bottle is left out of the refrigerator to the point of being warm, it is best to throw it away and get a new one.

There are various types of insulin that act in different ways. Each time you purchase insulin, check to be sure it is exactly the same as the last bottle. The word Humulin is not specific - you need to check for letters like NPH, PZI, etc.

**NEVER SHAKE INSULIN!** Insulin will break! It is important that your insulin is thoroughly mixed, however. In order to accomplish this, gently roll the bottle (or syringe) between your hands until you no longer see a white precipitate in the bottom or on the sides. Then it is okay to draw up the needed amount of insulin.

## **DRAWING UP INSULIN**

Insulin and syringes come in two "sizes" – U-40 and U-100. It is **ESSENTIAL** that your syringes and insulin match – otherwise you will be giving the wrong dose. Always check your syringe and insulin bottle to be sure they match before drawing up a dose.

Once you become comfortable with handling a syringe, needle and cap, pulling up the insulin will become very easy. Remove the needle cap. Pull a small amount of air into the syringe - about the same amount of air as you expect to draw of insulin. Insert the needle into the bottle and inject the air. Turn the bottle over so it is above the syringe and needle. Be sure the needle tip is covered by insulin. Then pull the plunger back and draw more insulin than you need into the syringe. Gently tap the syringe to get all air bubbles to the top. Then inject the air and extra insulin back into the bottle. You should now have the proper dose of insulin in your syringe. Do not worry that air bubbles will hurt your pet – they only interfere with drawing up the proper dose.

## **INJECTING INSULIN**

While your pet is eating or resting comfortably, pull up on the skin over the shoulder blades to make a small triangle of loose skin. Insert the needle through the skin, pointing towards the head rather than side to side. Inject the full amount quickly and remove the syringe/needle from the skin. Your pet will appreciate your moving quickly!

**162 Cross Street**

**San Luis Obispo, CA 93401**

**(805) 545-8212**

**[www.animalcareclinicslo.com](http://www.animalcareclinicslo.com)**