



SOUTH CAROLINA
**VETERINARY
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Insulin Handling and Use

How should insulin be stored and handled?

Insulin is sensitive to handling and can degrade if not handled properly. Insulin should always be stored in the refrigerator. Certain pharmacists will tell you that insulin can be kept at room temperature. Because of the small dosages that are used in animals, however, a bottle of insulin last much longer than with a human. Refrigeration will ensure that the insulin remains effective. Regardless of refrigeration, a bottle of insulin should be discarded and replaced after six months.

Insulin needs to be mixed prior to injection. Insulin should never be shaken, however. To mix the insulin, gently roll it between your hands.

Does the type of syringe matter?

Only insulin syringes should be used to give insulin. Insulin is made in two concentrations: 40 units per milliliter (U-40) and 100 units per milliliter (U-100). You will need to use an insulin syringe made specifically for the insulin you are using (U-40 or U-100 syringes). These syringes can not be interchanged (*See figure 1*).



Figure 1: 40 u/ml insulin and U-40 syringe

How do I draw up the insulin?

- ② Gently mix the insulin by rolling it between your hands; never shake the insulin (*see figure 2*)
- ② Hold the bottle with the top down
- ② Remove the cap from the syringe and place the needle in the bottle



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- ① Slowly draw back the desired amount of insulin (*see figure 3*)
- ② Make sure there are no bubbles present; if there are bubbles present, you can tap the syringe to get the bubbles to the top and then inject the bubbles and excess insulin back into the bottle
- ③ Repeat as necessary until you have the desired amount of insulin with no bubbles
- ④ Remove the needle from the bottle (*see figure 4*)



Figure 2: Rolling insulin to mix



Figure 3: Drawing insulin into syringe



Figure 4: Insulin in syringe



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How is the injection given?

- ④ Gently hold a tent of skin where the injection will be given; although the skin between the shoulder blades is the easiest, any area can be used (*see figure 5*)
- ④ Place the needle under the skin
- ④ Draw back the plunger to make sure that you are under the skin and not in a blood vessel; if you get blood or air in the syringe, simply remove it and start again in a different location; you do not need to draw up new insulin if you get blood in the syringe
- ④ After you are certain you are under the skin and not in a blood vessel, inject the insulin (*See figure 6*)
- ④ Remove the needle and dispose of the syringe



Figure 5: Tenting skin for injection



Figure 6: Giving insulin injection

What do I do with the syringe after the injection?

Do not dispose of the needles in your garbage. Save the needles in a can or plastic bottle and bring them to a veterinary hospital for disposal.

Will the injection hurt my pet?

Insulin injections tend to bother owners more than the pet! While it can take a little time for everyone involved to get used to the injections, both pet and owner will be pros in no time.

What do I do if my pet is sick or not eating?

Do not give insulin if your pet is not eating. Consult a veterinarian regarding insulin dosing.