

Chapter 9

Drawing Up Insulin and Insulin Injections



The nurse-educator will teach the best way to draw up and give the insulin. Both are described below:

DRAWING UP INSULIN

A. Get everything you will need:

- a bottle of each insulin you will use
- syringe
- alcohol wipe for tops of bottles
- log book with current tests and insulin dose: please record each blood sugar result and insulin dose in log book

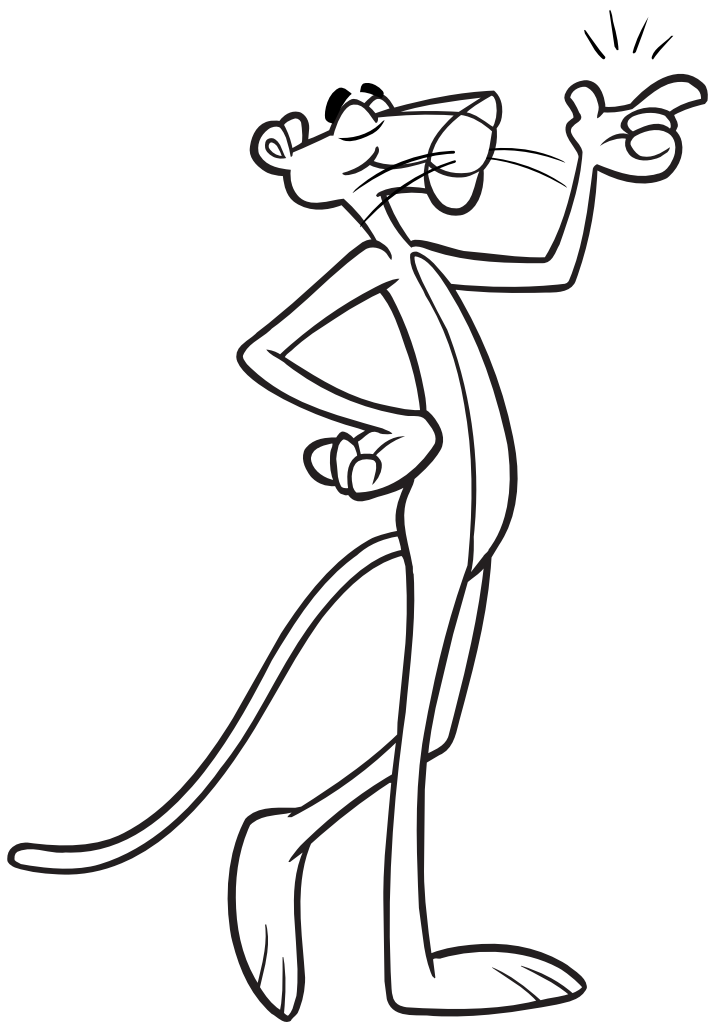
B. What to do:

- Know how much of each insulin you need to give (based on “thinking” scales if appropriate – see Chapter 12 in “*Understanding Diabetes*”).
- Wipe off the tops of insulin bottles with alcohol swab.

- Inject air into the intermediate-acting (cloudy) insulin bottle with the bottle sitting upright on the table and remove the needle.*
- Inject air in the clear (rapid-acting) insulin bottle and leave the needle in the bottle.*
- Turn the rapid-acting bottle with the needle in it upside down and get rid of any air bubbles. (See this chapter for specific steps that can be used to get rid of air bubbles.) Draw up the clear rapid-acting insulin you need and remove the needle from the bottle.
- Mix the cloudy (intermediate-acting) insulin by gently turning the bottle up and down 20 times; this mixes the insulin so that it will have a consistent strength.
- Turn the bottle upside down and put the needle into the bottle. Draw up the cloudy insulin into the syringe. *Make sure not to push any rapid-acting insulin already in the syringe back into this bottle.*

- If the insulin bottles have been in the refrigerator, you can warm up the insulin once it is mixed in the syringe by holding the syringe in the closed palm of your hand for a minute. It will be less likely to sting if the insulin is at room temperature.


*An option now used by some people is to not put air into the insulin bottles, but to just “vent” the bottles once a week to remove any vacuum. This is done by removing the plunger from the syringe and inserting the needle into the upright insulin bottle. Air will be sucked in through the needle removing the vacuum from the bottle. (The vacuum may otherwise pull insulin from the syringe into the insulin bottle. This is most important if two insulins are being mixed in the same syringe.)




GIVING THE INSULIN

- Choose the area of the body where you are going to give the shot. Use two or more areas and use different sites within the area.
- Make sure the area where you will be giving the shot is clean.
- Relax the chosen area.
- Pull up the skin with the finger and thumb (even with short needles).
- Touch the needle to the skin and “punch” it through the skin.

Short Needle

- a 90° angle for the 5/16 inch (short) needle: (these hurt less and are not as likely to go into muscle)
(a 90° angle looks like this: )

Long Needle

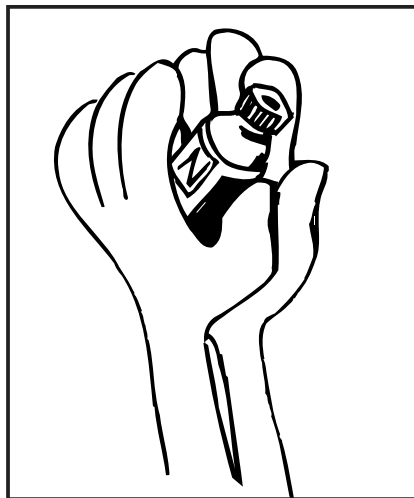
- use a 45° angle for the 5/8 inch needle (only)
(a 45° angle looks like this: )

- Push in the insulin slowly and steadily; wait five to 10 seconds to let the insulin spread out.
- Let go of the skin pulled up.
- Put a finger or dry cotton over the needle as it is pulled out; gently rub a few times to close the hole where the needle was inserted; press your finger or the cotton down on the area where you gave the shot if bruising or bleeding happens.
- Look to see if a drop of insulin comes back through the hole the needle made (“leak-back”); make a note in your log book if this happens.

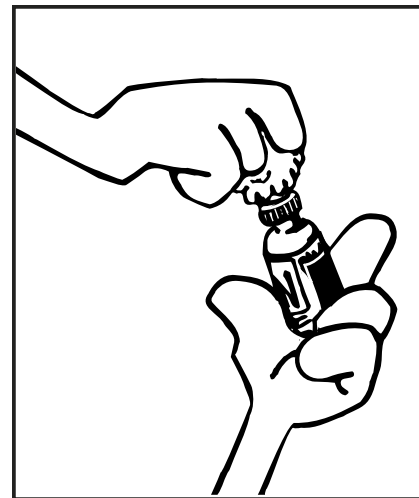
The nurse will teach the right way to give shots so that a drop of insulin does not leak-back. A drop can contain as much as five units of insulin.



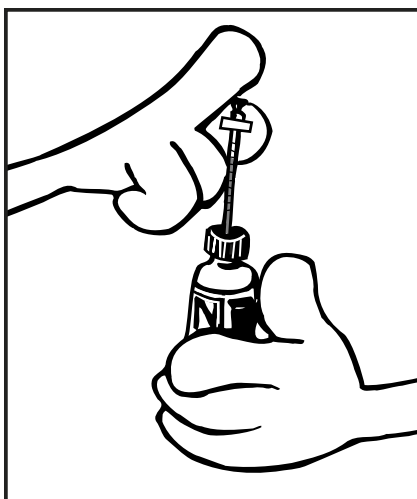
A. Wash hands



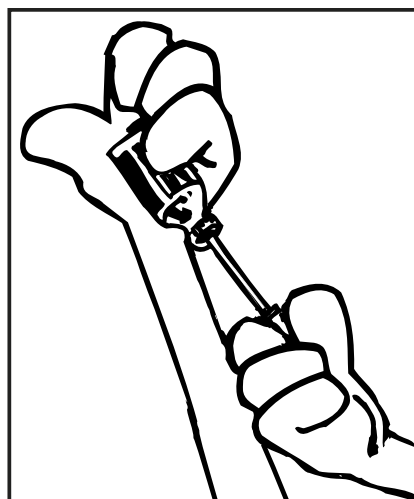
B. Warm and mix insulin



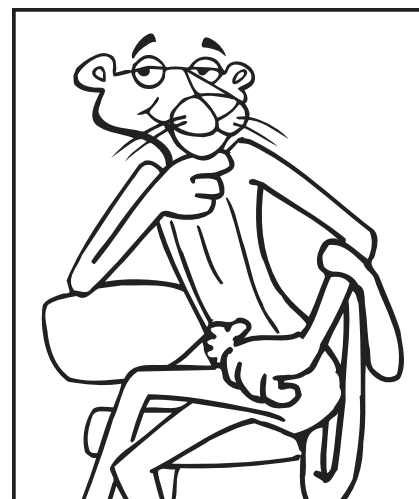
C. Wipe top of insulin bottle with alcohol



D. Air = insulin dose in units



E. Pull out dose of insulin



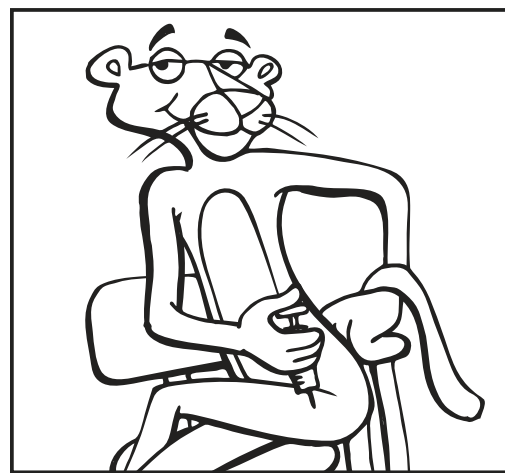
F. Make sure injection site is clean



G. Pinch up skin and fat tissue.

If using 5/8 inch needle, go in at angle.

If using the 5/16 inch (short) needle, can go straight in.



H. Basal insulins (Lantus, Levemir) are best given in the buttock.

CHILDREN AND INSULIN SHOTS

- A young child can help with choosing where the shot will be given and by holding still.
- Children usually begin to give some of their own shots around age 10.
- It is important that both mom and dad share in giving shots.
- Some age-related issues (see Chapter 18) are:

Toddlers:

- This age group can sometimes fight when having to get shots. The Inject-Ease® is a device that helps some families.
- Some toddlers are helped by the Insuflon® (see this chapter).
- Keep the area where the shot will be given as still as possible. Try to get the child's attention on something else (e.g., television, blowing bubbles, looking at a book, etc.). This will help the child to relax.
- The buttocks are often used first, and later the legs and arms and tummy.
- With the child's permission, the Lantus or Levemir insulin can be given when the child is asleep.
- The parent must remember when giving their child a shot they are giving them health.

School age:

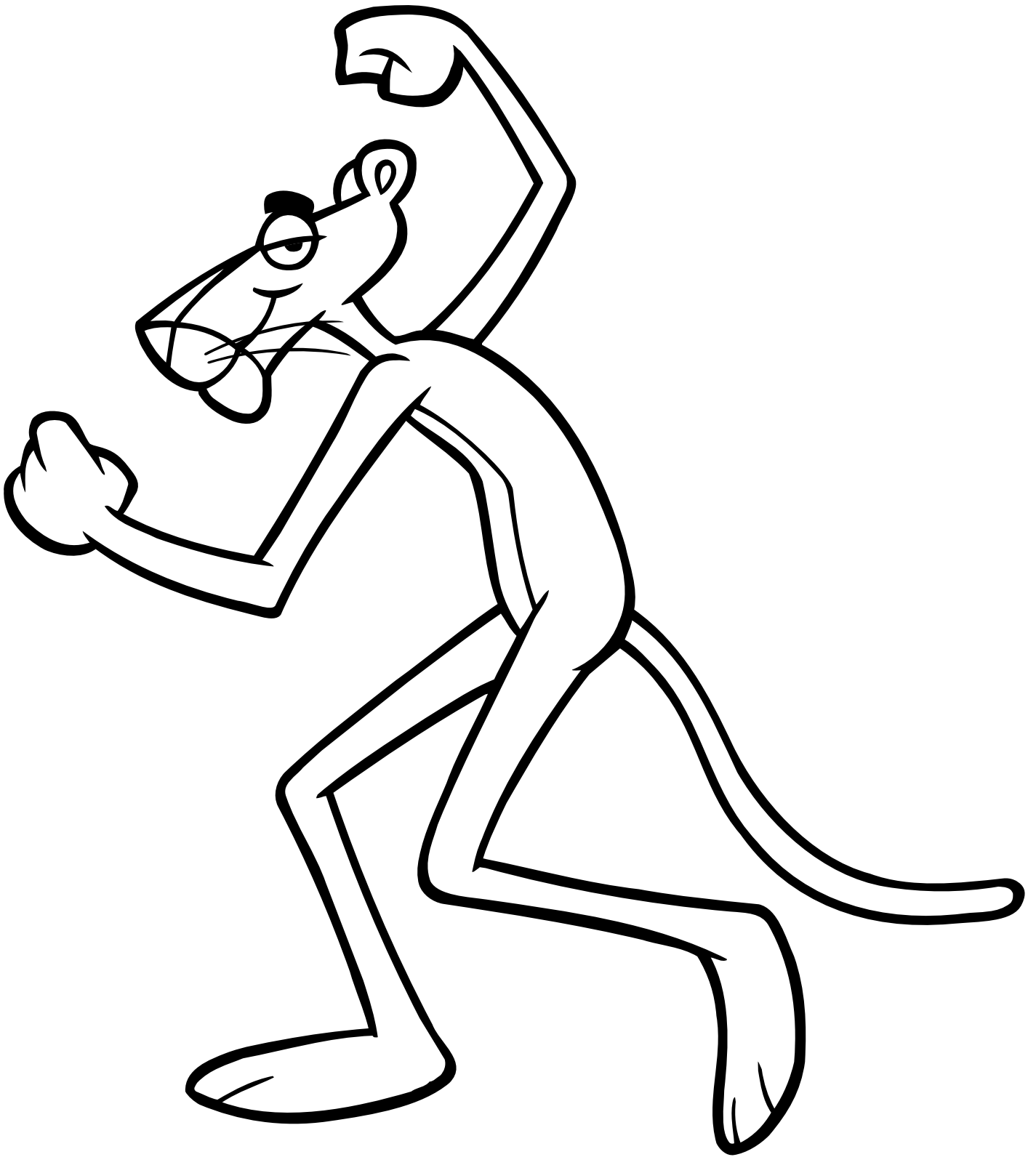
- The child may help in choosing the area on their body to give the shot.
- Change where the shots are given. Use two or more areas and use different sites within the area.

Teens:

- Many teens give their own shots and do not want help.
- It is still important to give the shots in a place (e.g., the kitchen) where parents can actually see the shot given.
- Parents can stay involved by helping to get the supplies out, and helping to keep records by writing down the blood sugars and insulin doses each day (in the log book).

INSUFLON

The Insuflon is a small plastic cannula that can be placed under the skin (using EMLA cream to reduce pain, if desired) for giving all insulin shots. It is much like the cannula for an insulin pump (Chapter 26) but instead has a port for injecting the insulin. Twisting the syringe (or pen) helps to get the needle in. Some families inject two units of saline before or after Lantus. Glucagon (e.g., at school) can also be given into the Insuflon. It can be left in for three to five days. It can be obtained from Liberty at 1-800-467-8546.



Stay in control. You can do it.



Anger, shock, and denial are common feelings when you first learn you have diabetes.