



Diabetes Education Forum

- **How to Mix Insulin**
- **How To Inject Insulin**
- **Sites for Insulin Injection**

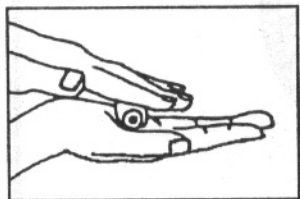
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Diabetologist

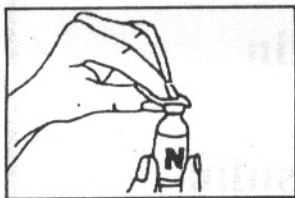
1) MIXING INSULINS



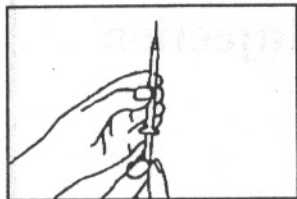
1. Thoroughly wash your hands, cleanliness is important and helps prevent infections;



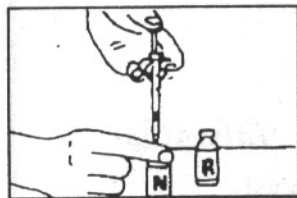
2. Slowly roll the bottle of cloudy insulin [Huminsulin N\L, Monotard, Insulatard ect] between your hands (do not shake). Make sure that the cloudy insulin is mixed completely and that there are no insulin crystals at the bottom of the bottle.



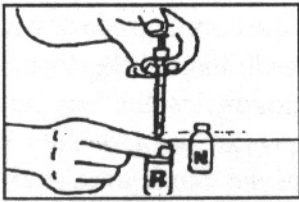
3. Clean the rubber stopper of each bottle with spirit swab. For example, we are going to draw a total of 30 units of insulin; 20 units of cloudy insulin and 10 units of Regular. (Crystalline/plain), insulin. (e.g. Huminsulin R, Actrapid)



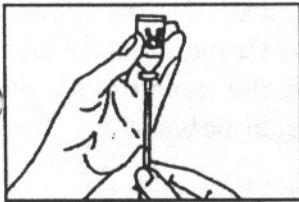
4. First, draw air into the syringe to the dose of cloudy insulin. In our example, it is 20 units....



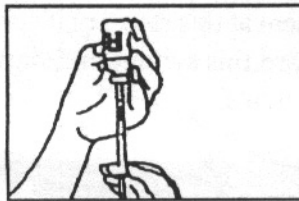
5. Insert the needle through the stopper of the bottle of cloudy insulin and push the 20 units of air into the bottle. **Keep the bottle upright and remove the syringe. Do not draw any of the cloudy insulin yet.**



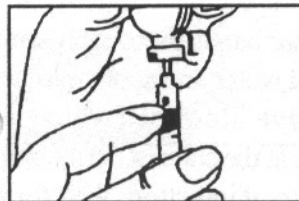
6. Now fill the syringe with air equal to the number of units of clear insulin. For example, 10 units. Insert the needle through the stopper of the regular insulin, and push the air into the bottle by pushing on the plunger.



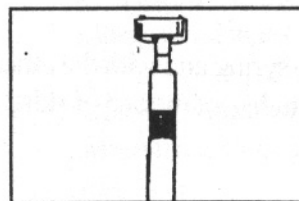
7. Leave the needle in the bottle. Turn the bottle upside down. Pull down on the plunger to draw about 15 units of clear insulin, more than the 10 units we're using for our example.



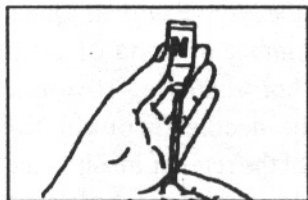
8. With the needle still in the bottle, hold it up to the light and check it for air bubbles. If there are no air bubbles in your syringe, push the plunger to the 10 unit mark. Although this air is not dangerous if injected, you should remove the bubbles from the syringe so that your insulin dose is accurate.



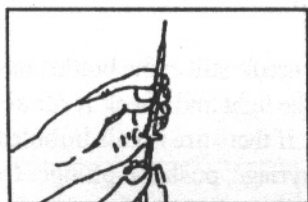
9. To remove any air bubbles in the syringe, flick or tap the syringe at the site of the bubbles. This will push the bubbles to the top of the syringe. Push up on the plunger to force the bubbles back into the bottle, and pull down on the plunger to draw the 10 unit of clear insulin again.



10. No air bubbles should appear. If they do, repeat the flicking and pushing step until you draw units of clear insulin without air bubbles. Remove the needle from the bottle, with 10 units of clear insulin in the syringe.



11. Holding the bottle upside down, put the needle through the stopper of the cloudy insulin. For this example, we are using 20 units of cloudy insulin. Since you already have 10 units of clear insulin in the syringe, you will pull the plunger out to the mark showing 30 units, the total of the two types of insulin. Remove the needle with the syringe from the bottle.



12. Check again for bubbles. It is rare to see them at this step, but if you do, discard this syringe and start again at step 1.

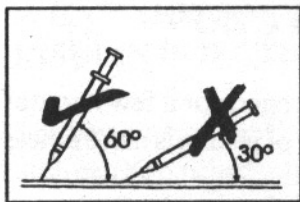
C) Correct Injection Technique (For Self Injection)



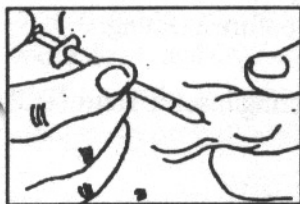
1. Wash your hands thoroughly with soap and water and apply spirit or isopropyl alcohol (which is available at the chemist) to the skin at the site of injection. Wait for a minute for the spirit/alcohol to dry up.



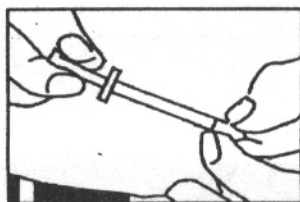
2. Grip the syringe and with the other hand, pinch up a mound of skin.



3. Hold the syringe at an angle of 60° to the skin.



4. Press the skin gently with the needle so that it 'dimple'.



5. Insert the needle to its full length.



6. Let go the skin and grasp the lower end of the syringe.

7. With the other hand, gently raise the plunger a little way. If blood appears in the syringe, withdraw the needle and start again about 1" away. If no blood appears, place your thumb on top of the plunger and inject insulin.

8. Quickly withdraw the needle and press firmly over the injection site with a clean dry cotton swab for a few seconds. Do not rub!

TIPS FOR PAINLESS INSULIN INJECTION

- Remove insulin vial / pen from refrigerator a few minutes before injection so that temperature of insulin is more or less same as the room temperature.
- Wait for 2 minutes after applying spirit or alcohol and then inject insulin. Let alcohol evaporate before injecting.
- Use specific No. 31 needle for injecting insulin. Better still, use insulin pens for injecting insulin.

WHAT ARE THE BEST PARTS OF THE BODY FOR INSULIN INJECTION?

The best parts of the body for injection are those where loose folds of flesh can be pinched up. If you are using thigh all the time you should vary the injection site each day, moving about 1 inch up to or down and across. This is because an unsightly lump due to lipodystrophy develops if you use the same spot repeatedly and because insulin is absorbed more slowly and unpredictably from such an area. Of course with gradual shift towards us highly purified porcine and subsequently human insulin lipodystrophy is very uncommon now a days.

The injection site and your hands, should be clean following figures depict the best parts for Insulin Inject (circled areas).

