Needle Length - Consult your Healthcare Professional for a needle length that is most suitable for you.

Depending on your needle length (and build), you may use one of two methods to administer insulin.

**With Lifted Skin Fold Technique**

*Using needles longer than 4mm in children and 8mm in adults*

To form a lifted skin fold, pinch the skin using your thumb and index finger without including any blood vessels or muscle and inject at a 90° angle.

**Without Lifted Skin Fold Technique**

*Using shorter needles - mostly 4mm in children, and 4/5/6mm in adults depending on injection site*

Short needles are reported to give low-pain injections. If there is enough fatty tissue in relation to shorter needle length, a 90° angle can be used. If injecting into slim limbs/abdomen, even short needles may warrant a lifted skin fold.

**Bleeding at Injection Site**

It is not unusual for the needle to puncture a tiny blood vessel so some blood appears when injecting insulin. This can be stopped by putting light pressure on the injection site with a cotton ball, without rubbing to prevent bruising. If a bruise appears, do not use that injection site again until the bruise goes. If you bleed frequently, consult your healthcare professional on your injection technique and/or if you have another medical problem.

**Insulin Pen Blockage**

If it is hard to press the pen button or plunger down, clogging may be due to:

- Small amounts of insulin caught in the needle from previous use - use a new pen needle for each injection.
- Clump in the insulin - properly mix insulin before drawing it up.
- Prematurely drawing insulin before ready to inject, causing some to dry inside the needle - fill syringe closer to injection time.
- Dialling excess dosage than the amount of medication in the pen - start a new insulin pen.

**Insulin Leakage from the Pen or Skin After Needle Removal**

If this happens, you may not be leaving the needle under your skin long enough - try to count up to 10 slowly before withdrawing the needle. There may still be some leakage after withdrawing a needle anyway, but this should not affect your blood glucose control.

You should also check that if using the skinfold technique, release the pinch before you remove the needle from your skin. Also never carry an insulin pen with the needle already attached; this causes air to enter the cartridge and slow the insulin dosage time.

**Skin Problems at Injection Site**

These can sometimes occur at the injection site due to changes in the subcutaneous fat:

1. **Lipo hypertrophy** - appears as soft, grape-like lumps under the skin from insulin reaction or needle reuse. Rotate injection sites to prevent development.
2. **Lipo atrophy** - loss of fat under skin so it dips is a rare occurrence with impure insulins.

Although less painful, never inject into lumps because insulin does not absorb well there.

Do not forget your scheduled insulin injections as this can affect your glucose levels and overall health.


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**Tips When Using Insulin Pen Needles**

**Comfortable Injection**

If your insulin injections hurt, try the following:

- Let your doctor decide which pen needle size is best for you; consult them about using a different needle size/insulin pen/injection site.
- Never reuse your pen needle; this can cause bacterial growth on the needle and dull the tip, resulting in painful injection and risk of it breaking off / dislodging in your skin.
- Remove the outer and inner caps carefully so not to bend the needle.
- Inject insulin when at room temperature.
- Ensure correct injection technique (i.e. skin fold), penetrate your skin quickly and relax your muscles.
- Injections of smaller insulin doses hurt less; ask your doctor if you can split large doses.

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Insulin Pens

Always refer to the manufacturer’s instructions when preparing your insulin pen for use. Never share your insulin pen with anyone because of cross contamination risk.

An insulin pen is a convenient, almost painless and discreet way to inject insulin. Some pens use replaceable cartridges, and others use non-replaceable cartridges which must be disposed of after use.

Your healthcare team should help choose the most suitable needle length and insulin pen for you, i.e. depending on which insulin you are using, ease of pen operation, size of numbers on it, your build.

Store unused insulin pen cartridges and pre-filled pens in the fridge. Keep your insulin pen and pen needles separate until ready to inject. The insulin should not get warm or be exposed to direct sunlight. Warm to cold causes insulin compression; cold to warm causes insulin expansion.

Key Features

- Universal fit on all insulin pen devices
- Enhanced ease of injection
- Reduced injection time, without fragmentation.

Insulin Pens

This leaflet helps to explain how to use GlucoRx Insulin Pen Needles, available in sizes:
4mm, 4mm Ultra, 5mm, 6mm, 8mm, 10mm, 12mm.

Typical Insulin Pen Anatomy

Typical Insulin Pen Anatomy

Injection - Getting your injection technique right can make a big difference to your daily blood glucose control.

1. Load an insulin pen cartridge, if necessary. Remove the new pen needle seal and affix onto your pen using the outer protective cap.
2. Remove the outer, then inner protective cap.
3. Cloudy and premixed insulin should be gently rolled at least 10 times between your palms to mix the insulin thoroughly.
4. Prime your insulin pen to clear air bubbles/dead space and ensure insulin flows freely through the pen needle.
5. Dial in the exact dose required to deliver insulin to your body. Some insulin pens require gentle shaking before use.
6. Avoid injecting through your clothes, or where there are visible blood vessels. Make sure your hands and the injection site are clean beforehand - commonly the stomach, thighs and also buttocks.
7. Carefully replace outer protective cap (if self-injecting only).
8. Detach the pen needle and safely discard immediately in a ‘sharps’ container according to your local medical waste disposal rules.

Summary of Insulin Injection

- Sites showing signs of lipohypertrophy (lumpy skin due to swelling of fatty tissue), oedema, inflammation or infection should be avoided until the problem is resolved. Space successive injections at least 1 cm from each other to preserve your skin and help reduce lipohypertrophy.

- Insulin accidentally injected into muscle tissue will not be absorbed properly. It may be painful and cause high or low blood sugars.

- If the pen needle is taken out too fast, insulin may leak out affecting the dose delivered. It is not unusual for insulin to drip from the pen needle after removal from your skin. If bleeding occurs, press gently but do not rub to avoid bruising.