

Diabetes: insulin injections

The proper injection of insulin is very important to allow your body, which lacks natural insulin, to function as normally as possible. You should be very strict about the way you manage your insulin injections and have your technique down to a fine art.

Common mistakes

- Poor mixing technique when mixing insulin.
- Wrong doses (because of poor eyesight).
- Poor injection technique—into the skin or muscle rather than the soft, fatty layer.
- Not taking insulin when you feel ill.

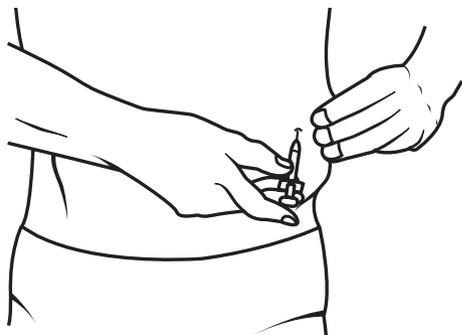
When to inject insulin

Develop a set routine including eating your meals on time and giving the injections about 30 minutes before your meal.

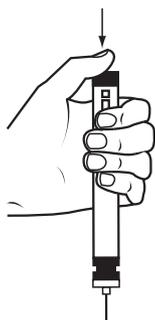
Where to inject insulin

The injection should go into the fatty (*subcutaneous*) tissue between the skin and muscle. The best place is the abdomen below the navel. Other suitable areas are the buttocks and thighs. These areas have a good layer of fat under the skin and are free of large blood vessels and nerves. It is advisable to stick to one area, and the abdomen is recommended. Avoid giving injections into your arms, near joints, the navel and the groin.

Do not inject too often into the same small area (it can damage the tissue). Give the injection at a different place each time. Keep a distance of 3 cm (1½ inches) or more from the last injection.



Insulin syringe method



An injection pen

How to inject insulin

This depends on the insulin injection device; those in common use are insulin syringes and insulin delivery pens. The techniques should be explained to you.

Insulin syringe method

- Lift up or pinch a large area of skin on your abdomen between your thumb and fingers.
- Hold the syringe in your other (dominant) hand between your thumb and middle finger: this leaves the index finger free to push the plunger. Breathe in and out.
- Insert the needle straight in (like a dart) at right angles to the skin (push the needle well in but not into the muscle).
- Push the plunger all the way down.
- Quickly withdraw the needle.
- Press down firmly (do not rub or massage) over the injection site for up to 60 seconds.

Drawing up the insulin

Make sure your technique is checked by an expert.

You may be using either a *single insulin* or a *mixed insulin*. A mixed insulin is a combination of shorter- and longer-acting insulin and is cloudy.

Rules for mixing

- Always draw up clear insulin first.
- Do *not* permit any of the *cloudy* insulin to get into the *clear* insulin bottle.
- Do *not* push any of the *clear* insulin into the *cloudy* insulin bottle.

Drawing up rules

- Wash and dry your hands beforehand.
- Gently roll the insulin bottle between your hands to mix—do not shake it.
- Always draw up air equal to the dose of insulin into the syringe.
- Always expel air bubbles and ensure that you do not inject air.

Insulin delivery pen

Follow the instructions in the manual and according to your educator:

- Screw a new needle tightly onto the cap.
- Perform an 'air shot' to expel bubbles of air.
- Dial the correct number of units.
- Insert the needle at 90° to the skin of the abdomen (or thigh or arm).
- Push the button down fully to inject insulin into subcutaneous tissue.
- Count slowly to 6 and withdraw.
- Remove the needle and discard it.

Golden rules

- Take your insulin every day, even if you feel ill.
- Do not change your dose unless instructed.
- Carefully dispose of used syringes and pen needles.