



INSULIN

What is insulin?

Insulin is a hormone made by special cells, called beta cells, in the pancreas. When we eat, insulin is released into the blood stream where it helps to move glucose from the food we have eaten into cells to be used as energy. Insulin also helps store excess glucose in the liver.

When do I need insulin?

- Insulin injections are needed by all people diagnosed with type 1 diabetes
- People diagnosed with type 2 diabetes may also require insulin if tablets, together with healthy eating and regular exercise, are not enough to control their blood glucose levels

Why must it be injected?

- Insulin cannot be given in tablet form as it is destroyed by the stomach juices

What if I have to go on to insulin?

- There are many injection devices and tiny needles available today make injecting insulin much easier than most people imagine.

In fact many say that they can feel the finger prick for monitoring blood glucose more than they can feel the needle used to inject insulin.

When starting on insulin, your doctor and diabetes educator will help you adjust to the new routine.

How is insulin given?

Using insulin delivery devices, or in some cases syringes are used.

- Devices are available in different shapes and sizes. An insulin cartridge fits into the device. When finished, a new cartridge is inserted. Some pen devices, however, are pre-filled with insulin and the whole device is disposable. Your doctor or diabetes educator will advise the one that's right for your needs and lifestyle.

Where is insulin injected?

- Insulin is injected under the skin into the tummy, thighs, upper arms or buttocks
- It is important to inject insulin in a slightly different spot within the same site each day to avoid causing lumps underneath your skin,
- Don't inject insulin immediately after taking it out of the fridge. Allow it time to reach room temperature, or roll it between your hands until it warms up
- It is important to test your device before each injection to make sure it works properly, your diabetes educator will show you how.



What affects the way insulin is absorbed?

Absorption is accelerated by:

- Injecting into an exercised area such as the thigh
- High temperatures (e.g. shower, bath, hot water bottle, spa, sauna)
- Massaging the area around the injection site
- Injecting into muscle (the deeper the injection into muscle, the faster the insulin will be absorbed)

Absorption can be delayed by:

- Smoking
- Scarring or lumps due to over-use of the same injection site, which causes the flesh to become hard and leads to erratic absorption of insulin
- Cold insulin (e.g. injecting immediately after taking from the fridge)
- Variation in insulin absorption (either accelerated or delayed) can cause fluctuations in blood glucose levels
- Not mixing an insulin that requires reconstituting before injecting

How do I store insulin?

- Keep your unopened insulin or 'pen' cartridges on their side in the fridge. Do not allow to freeze.
- Once opened, most insulin may be kept at room temperature (less than 30 degrees) for 4 weeks and then thrown away. Check with your diabetic educator or pharmacist how long you can keep your open insulin for.
- Insulin can be safely carried in your handbag or pocket.
- Insulin may be damaged by extreme temperatures. It must not be left where temperatures are over 30 degrees (remember it can get hot in the glove box of your car) or in direct sunlight.

Do not use insulin if:

- The clear insulin has turned cloudy
- The insulin has expired (check date on insulin)
- The insulin has been frozen or exposed to high temperatures
- Lumps or flakes are seen in the insulin or the insulin solution had thickened or changes colour
- Deposits in the insulin cannot be dissolved by gently rotating the vial
- The vials, cartridges or pre filled insulin pens has been open for longer than what they should (usually 3 to 4 weeks)



Test your blood glucose

Your diabetes educator will give you instructions on checking your blood glucose and prevent hypoglycaemia *(low blood glucose). Low blood glucose is when your blood glucose is below 4 mmol. Your diabetes educator will provide you with this information. A different hand out will be given to you on the symptoms and treatment of low blood glucose.

What's the best way to dispose of used syringes?

Used syringes, pen needles and lancets must be disposed of in an Australian Safety Standards-approved sharps container which is puncture-proof and has a secure lid. These are usually yellow in colour and are available through pharmacies and some diabetes centres. Outside Community Health centres there is a sharp disposal unit. Its yellow box for disposing your used syringes, needles and lancets

If you are registered with the National Diabetes Service Scheme (NDSS) you can get free needles and syringes as well as discounted testing strips. Your diabetes educator will be able to apply for a card for you.

A free and confidential interpreter service, including Auslan, is available 24 hours, 7 days a week.
Ask staff to arrange an interpreter for you.

Carers provide care and unpaid assistance to others. They may be family members, friends or neighbours.
Please tell staff if you have a carer.

All our health facilities and grounds are 100% smoke free. Fines apply.
Contact Quitline: 137 848 or www.icanquit.com.au

Parking is available on the hospital campus for a fee.

We welcome further feedback on this brochure as a way of continually improving our service.
Send your feedback to:

WSLHD-Get_Involved@health.nsw.gov.au