

The Safe Use of Insulin and You

Insulin treatment improves quality of life in many people and saves the lives of others. It is used to lower blood glucose levels. However, insulin management and prescribing errors are very common and can lead to patient harm. These are often as a result of not having:

“The **Right** insulin, in the **Right** dose, in the **Right** way and at the **Right** time”

To keep safe you need to “think” about:

The Right Insulin

There are over 20 different types of insulin. Your Healthcare Professional will have discussed with you which insulin may best suit your needs. The packaging of insulin is often very similar and so are insulin names. This table shows some insulin names that are often confused.

Humalog	Confused With	Humalog Mix 25 or Humalog Mix 50
Humulin S	Confused With	Humulin I or Humulin M3
Humalog	Confused With	Humulin I or Humulin S or Humulin M3
NovoRapid	Confused With	NovoMix 30
Levemir	Confused With	Lantus
Hypurin Porcine Neutral	Confused With	Hypurin Procine 30/70 Mix

Make sure you carry an insulin ID Card or “Insulin Passport” showing the correct name of your insulin.

The Right Dose

Insulin comes in vials for use with insulin syringes and pumps, in cartridges for insulin pens or pre-filled pens. Each should be clearly labelled with the name of the insulin.

You should keep a record of the amounts of units of insulin you are taking.

There are 2 different designs of insulin cartridge, not all cartridges can be used in all insulin pens. If you use cartridges you need to know which pen is right and safe for you to use.

Pre-filled pens should contain your prescribed insulin; check the name of the insulin is correct with your Pharmacist before you leave the pharmacy.

If insulin is prescribed using the letter “U” after the dose needed instead of writing the word “units” in full, the “U” can be mistaken for an “0”. This can lead to a risk of you having an overdose of insulin, for example 40 units instead of 4. If someone else gives your insulin always ask to check the dose, where feasible.

Originator: Quality and Governance Service

Continued overleaf...

The Right Way

- Insulin should be injected at a 90° angle
- You can use the upper outer thighs, buttocks and abdomen as injection sites
- Vary the places you inject to avoid the development of fatty lumps (lipohypertrophy) which will delay insulin absorption
- Change your insulin pen needle every time you inject.

The Right Time

Some people need to take insulin with or just after food; others up to 40 minutes before food, and some at bedtime. **Please ask your healthcare professional to explain when you should take yours.**

If you are admitted to hospital and are well enough, ask to keep your insulin with you, so you can self manage your diabetes – this is really important if an insulin pump is used. If you can't give or keep your own insulin, don't be afraid to ask staff when you need it.

Storage and Disposal

- Store unopened supplies of insulin in a refrigerator – it must not freeze.
- Insulin in use can be kept at room temperature, but avoid direct sunlight and heat e.g. near radiators, fires or window sills.
- Always dispose of needles into a "sharps" bin – these are available on prescription
- Make sure that you have enough supplies of insulin – especially when you are going on holiday.

Hypoglycaemia (Hypos)

Hypoglycaemia is the main side effect of insulin treatment. This can happen if your blood glucose levels drop below 4 mmol/l. Early symptoms of hypos are:

- Sweating heavily
- Anxiety
- Trembling and shaking
- Tingling of the lips
- Hunger
- Going pale
- Palpitations
- Dizziness.

How to avoid hypos

- Eat regularly
- Keep to recommended alcohol limits and do not drink on an empty stomach
- Take your insulin at recommended doses and times
- Test before driving and do not drive if your blood glucose is less than 5 mmol/l
- Always carry glucose, snacks and your meter
- You may need to reduce insulin doses before and after exercise.

If you have a lot of hypos see your Practice Nurse or Doctor for advice.

Leaflet adapted from Merseyside Diabetes Network Insulin Safety Leaflet.