

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 ask to see the specialist diabetes team.

GP/Practice Nurse

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Useful Contacts

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Local Diabetes Helpline

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NHS Diabetes: www.diabetes.nhs.uk

Diabetes UK website: www.diabetes.org.uk

Produced in cooperation with:

- ABCD - Association of British Clinical Diabetologists
- Community Diabetes Consultant Forum
- Diabetes Nurse Consultants Group
- Diabetes UK - www.diabetes.org.uk
- DESMOND Diabetes Education Programme
- DISN UK Group
- IDOP - Institute of Diabetes for Older People
- National Patient Safety Agency
- NHS Diabetes
- Primary Care Diabetes Society
- TREND UK
- University Hospitals of Leicester NHS Trust

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NHS

Diabetes

The safe use of insulin and you



- The **Right** insulin
- The **Right** dose
- The **Right** way
- The **Right** time
- Hypoglycaemia

Patient Information Booklet

Adapted from the National Patient Safety Agency, patient information booklet - Diabetes: Insulin, use it safely - in partnership with National Diabetes Working Groups

Insulin Safety

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

Make sure you carry an insulin ID Card 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 amount of units of insulin you are taking.**

There are 2 different designs of insulin cartridge so 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.**



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 into 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, 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.