

Department of Diabetes and Endocrinology/Pharmacy

Humulin R U500 insulin (500units/ml)

Why Humulin R U500 insulin is prescribed - instructions for initiation

Your doctor has suggested that you should switch to a higher concentration of insulin. The regular concentration of insulin is 100 units per ml (U100). The higher concentration insulin is 500 units per ml (Humulin R U500), and is used in patients requiring higher doses of insulin. Therefore, it is really important that you are aware that **Humulin R U500 insulin is five times the strength of regular insulin.**

Administering the insulin

Since the strength of your Humulin R U500 insulin (500 units/ml) is different to regular insulin (100units/ml), the delivery devices do not cater for U500 insulin. It is therefore necessary to use a **0.5-1ml insulin syringe** and **describe the doses in 'marks'** as in the marks on the syringe. **Each measured 'mark' of Humulin R U500 insulin is equivalent in strength to five units of regular insulin.**

This will be explained and demonstrated clearly by the diabetes specialist team at the time of initiation of U500 insulin. The insulin is given subcutaneously (into tissue just beneath the skin), as with regular insulin. It must not be given intravenously due to risk of overdose.

Due to the high concentration of Humulin R U500 insulin, it can result in delayed absorption times. Each dose is generally active for eight hours, although it can last for 24 hours. The onset of action is usually around 30 minutes, peaking around one to three hours later. It is usually prescribed in two to three daily meal time injections. Due to the duration of insulin activity, background (long acting) insulin is not usually required.

When switching from regular insulin to Humulin R U500 insulin your total daily dose may be reduced by 20%. You will be advised of the new doses during the consultation. Doses must not be adjusted without the advice of your diabetes team.

Injection technique and sites remain the same. Rotation of sites remains very important in order to avoid **'lumpy'** sites.

Monitoring the effect of the insulin

Regular blood glucose testing is required, before each meal and before bed, to observe for improvements or deterioration in diabetes control so doses can be adjusted accordingly. Management of hypoglycaemia remains the same. If you are unsure, liaise with the hospital diabetes specialist team.

Storage of insulin

Storage of U500 insulin is the same as regular insulin, store it in the fridge. But once out of the fridge it should be discarded after 30 days. So make a note of the date it is taken out of the fridge.

Advice on hospital admission

During an admission to hospital, in order to avoid medication error, it is vital that the staff are made aware of the type of insulin that you are on and that it is five times the strength of regular insulin. It will be necessary to keep an alert on your medical notes to raise awareness throughout your admission. Your insulin must be stored in the medication lockers adjacent to your bedside and must not be stored in the ward fridge.

Other information

It is important that you are aware that Humulin R U500 insulin is not currently licensed or manufactured in the UK but is imported from the USA.

Contact details

Diabetes Specialist Nurse _____

Diabetes Specialist Dietician _____



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Help with this leaflet:



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patient.information@addenbrookes.nhs.uk



Document history

Authors	Pharmacy Department
Department	Cambridge University Hospitals NHS Foundation Trust, Hills Road, Cambridge, CB2 0QQ www.cuh.org.uk
Contact number	01223 411979
Publish/Review date	July 2012/July 2015
File name	Humulin_r_u500_insulin_(500units/ml)
Version number/Ref	1/PIN3270