

Good to Know

Information from the American Diabetes Association for people with diabetes

Using U-500 Insulin

Starting this stronger kind of insulin for the first time? Here's a guide to the basics.

What is it?

Humulin R U-500 is a kind of insulin that is much stronger than the more common U-100 insulin. It is used by people with diabetes who need large doses of insulin, usually because they are "insulin resistant." That means their bodies can't use insulin well, so they need large doses to keep their blood glucose (sugar) under control.

If this is your dose of Humulin R U-500	Fill a U-100 insulin syringe up to this marking	Fill a tuberculin syringe up to this marking
25	5	0.05
50	10	0.1
75	15	0.15
100	20	0.2
125	25	0.25
150	30	0.3
175	35	0.35
200	40	0.4
225	45	0.45
250	50	0.5
275	55	0.55
300	60	0.6
325	65	0.65
350	70	0.7
375	75	0.75
400	80	0.8
425	85	0.85
450	90	0.9
475	95	0.95
500	100	1.0

How is it used?

U-500 is 5 times more concentrated than U-100 insulin. This means that every 1 unit of U-500 is the same as 5 units of your usual insulin. This makes it a more powerful medicine.

→ It also means that you need to be careful about giving yourself the right amount of U-500. If you are using a regular insulin syringe like the kind used for U-100 insulin, the markings each correspond to one-fifth of a U-500 unit. So, if you are taking 100 units of U-500 in an insulin syringe, you would draw insulin from the vial up to the 20 mark ($100 \div 5 = 20$). Your health care provider might want you to use a different kind of syringe, called a "tuberculin syringe." This kind of syringe is marked in milliliters (ml). If you are taking 100 units of U-500 in a tuberculin syringe, you would draw insulin from the vial up to the 0.2-ml mark. (See chart at left.)

→ Check your insulin before you leave the pharmacy to be sure you have the right kind. U-500 insulin comes in 20-ml vials (twice as big as U-100 insulin vials) and has orange stripes on the box and label. Make sure you are also using the correct syringes. Your health care provider will tell you whether to use the usual insulin syringes or to switch to tuberculin syringes.

→ Don't hesitate to ask your prescriber or pharmacist any questions you may have about U-500. It can be confusing at first to make the switch, but your health care team is there to help you.

Preventing lows

Insulin helps you keep your blood glucose in a healthy range. But it also puts you at risk for low blood glucose, also known as hypoglycemia. Be sure you know the warning signs of low blood glucose, test your blood glucose regularly as directed by your health care provider, and keep a source of fast-acting carbohydrate with you at all times, in case of a low. Good sources include:

- 4 ounces of juice or soda (regular, not diet)
- 8 ounces of skim milk
- 5–6 Life Savers candies
- glucose tablets or gel (see package for dosage)

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