

Patient Education

Diabetes Care Center



U-500 Insulin

Basic information

Your health care provider may prescribe U-500 insulin if your current dose of U-100 insulin is very high. This handout gives basic information about U-500 insulin.

What is U-500 Insulin?

U-500 insulin is a stronger form of insulin. It is used by people who need high doses of insulin.



U-500 insulin package

How does U-500 insulin compare to U-100 insulin?

U-500 insulin:

- Is 5 times stronger than U-100 insulin (R-insulin).
- Lasts at least 8 to 10 hours, which is longer than U-100 insulin lasts. Since it lasts longer, most people will give 2 to 4 injections a day. U-500 insulin can act as a person's background insulin and mealtime insulin.
- Starts working within 30 minutes to 1 hour.
- Has a peak effect (is strongest) between 2 to 4 hours after injecting it. This is similar to U-100 insulin.

Why would someone need to be on U-500 insulin?

U-500 insulin can provide better blood glucose control for someone who needs large amounts of insulin. Most patients who use U-500 insulin need more than 200 units a day of regular U-100 insulin before they switch to U-500. Because it is stronger, you inject less fluid when you use U-500 insulin. This can improve how your body uses insulin.

If my provider prescribes U-500 insulin for me, what do I need to know?

To avoid confusion, your provider might have you use a different kind of syringe. With this new syringe, your dose might be given in **milliliters** instead of units.

But, if you use a regular insulin syringe for your U-500 insulin:

- Keep in mind that syringes for U-500 and U-100 insulin look the same, and this can be confusing.

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Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns. UWMC clinic staff are also available to help.

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- Review the difference between U-500 and U-100 insulin with your provider. Make sure you understand how many units of U-500 you should take. It will be much less than your U-100 dose was.
- Be aware that taking the wrong dose may be life-threatening because U-500 is 5 times stronger than U-100. Remember, you will be injecting less fluid with U-500 insulin.

Like all insulins, U-500 can cause weight gain. Diet and exercise can help decrease your insulin dose, and a lower dose can lead to less weight gain.

You are still at risk of hypoglycemia if you use U-500. Treat hypoglycemia the way you usually would, and then recheck your blood glucose after 15 minutes.

This table compares U-100 and U-500 doses in milliliters (mL) and units. Do **not** use this conversion table if you are using U-500 in an insulin pump. Only use U-500 insulin in an insulin pump if your health care provider has recommended this and you are working closely with your provider to manage your diabetes.

Volume (mL)	U-500 (units)	U-100 (units)
0.01	1	5
0.02	2	10
0.05	5	25
0.10	10	50
0.20	20	100
0.50	50	250

How should I store U-500 insulin?

- Store unopened vials of U-500 in the refrigerator.
- Keep the vial you are using at room temperature.
- U-500 insulin expires 28 days after opening. After 28 days, throw it away and start using a new vial, even if there is still insulin in the vial you have been using.



An insulin syringe

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