

Insulin

Insulin is a hormone your body makes that regulates your blood sugar. In diabetes, the body doesn't make or use insulin the way it should. Taking the right amount of insulin, consistently, is an important step in managing diabetes. It can improve your health and make you feel better.

What is insulin?

Insulin is a hormone made by the pancreas. It is needed to move glucose from your blood to your cells to be used as energy. People with diabetes either don't make any insulin or don't make enough insulin; sometimes, people with diabetes also aren't able to use insulin effectively.

Who needs to take insulin?

- People who have type 1 diabetes have to take insulin, because their body doesn't make any.
- People who have type 2 diabetes may be able to control their diabetes with pills, but may also need to take insulin.

How do you take insulin?

Insulin can be taken by injection or pump.

When is it time to start taking insulin?

The decision to start insulin therapy and which type of insulin to use depends on a number of factors. You will work with your clinician to decide if insulin is right for you and when you should start taking it.

Insulin is very helpful in controlling type 2 diabetes. It can help manage blood sugar, make you feel better, and improve your long-term health.

What to know if you take insulin

- Take your insulin consistently.
- If your insulin needs to be mixed, such as NPH insulin or premixed insulins, roll it before use.
- Always check the appearance of your insulin before using it. Do not use it if it looks different than it usually does (if there are clumps in it, or if it looks cloudy when it should be clear).
- Keep your insulin in a cool, dry place (at room temperature, out of direct sunlight or in the refrigerator, not freezer).
- Discard insulin vials 1 month after opening, even if there is still insulin left in the vial.
- When traveling, keep your insulin with you in a carry-on container.
- Inject each insulin dose in a different spot (at least 2 inches from the site of the last dose).
- If you have any questions or concerns about your insulin, call your healthcare provider.
- Never skip your insulin unless instructed by your healthcare provider.

Your insulin schedule

Basal insulin (long-acting):

These insulins last 8-24 hours, or even longer. They may not need to be taken with a meal.

Name of Insulin	Number of units	When to take

Bolus insulin (short-acting):

These insulins start to work very quickly and are short-acting. They are usually taken with a meal to prevent a large rise in blood sugar. Ask your healthcare provider when you should take your bolus insulin.

Name of Insulin	Number of units	When to take

Checking the effect of insulin

You cannot manage your blood sugar without checking to see how your insulin is working and how your body is responding to your activities of the day. Talk with your healthcare provider about when you should check your blood sugar and what your blood sugar targets should be, and then fill in the chart below.

Target Blood Sugar Ranges (mg/dl)			
Time	Normal	Most people with diabetes	My target*
Average before meals	70-100	80-130 for most people*	
Average 2 hours after the start of meals	<140	<180	
Average at bed time	<120	110-150	
Hemoglobin A1c	<5.7%	<7% without hypoglycemia, sometimes higher targets are appropriate	

**Your goal is based on your age, how long you have had diabetes, and any other illnesses you have. Older patients may have a target of 100-150 mg/dl or higher before meals.*

Call your diabetes healthcare provider if:

- Your blood glucose becomes too low without a known reason (like skipping a meal or getting more activity than usual).
- Blood glucose levels are consistently above your target range for several days in a row.

Patient Care Advice (PCOI) documents are available under **Resources** on your Patient Gateway home page.

This document is not a substitute for your care team's medical advice and should not be relied upon for treatment for specific medical conditions.

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