



Insulin for Diabetes: How It Keeps You Healthy

When you have diabetes, your body has a harder time turning sugar from the food you eat into energy. That means more of the sugar stays in your blood.

Your body uses insulin, a natural hormone, to help get sugar out of the blood and into your cells where it's used as energy.

With type 2 diabetes, your body doesn't use insulin properly. Over time, you can't produce enough insulin to keep blood sugar at a healthy level.

Oral diabetes medications can:

- Help you produce more insulin.
- Make the insulin your body produces work better.

However, because diabetes is a progressive disease, most oral medications become less effective over time.

How does insulin help with diabetes?

You may need insulin injections in addition to oral medications to prevent complications and stay healthy.

Without enough insulin, you'll:

- Have higher blood sugar.
- Be at risk for serious health problems.

What are the kinds of insulin?

There are 2 main kinds of insulin:

- **Long-acting insulin**, such as NPH insulin, insulin glargine (Lantus), and insulin detemir (Levemir). Many people with type 2 diabetes can get to a healthy blood sugar level with a single daily injection of long-acting insulin at bedtime.
- **Rapid-acting insulin**, including regular insulin, insulin lispro (Humalog), and insulin aspart (Novolog).

Some people with type 2 diabetes add rapid-acting insulin at mealtime, in addition to taking the long-acting insulin.

How do I inject insulin?

1. Wash your hands and roll (don't shake) the bottle between your hands until it's cloudy.
2. Wipe the bottle top with alcohol.
3. Pull the plunger to let in the same number of units of air as the insulin you'll be injecting.
4. Push the air into the bottle (leave needle in the bottle).
5. Turn the bottle and syringe upside down, making sure the needle is in the insulin.
6. Pull the plunger to get needed units of insulin.
7. Make sure there aren't any air bubbles in the syringe; if there are, push insulin back and pull plunger again to correct units.
8. Pull the needle from bottle when you have the right number of units and no air in the syringe.
9. Clean the lower stomach with alcohol swab and let dry.
10. Pinch the clean area of skin and hold the syringe like you're holding a pencil above the skin.
11. Push the needle into the pinched area at a 90-degree angle; push the plunger to inject.
12. Release the pinch and pull the needle out.
13. Press a finger against the skin for a few seconds, if there's blood.
14. Dispose of the used syringe in approved sharps container.

How do I store insulin?

- Store unopened vials of insulin in the fridge until expiration date on the package.
- Store opened vials of insulin in the fridge or at room temperature.
- Throw away opened vials after 28 to 31 days.
- Never freeze insulin or leave in temperatures over 85°F.
- Avoid exposing insulin to direct sunlight.

How do I dispose of my used sharps?

- Store used lancets, needles, and pen caps in approved sharps containers.
- Drop them off at any Kaiser Permanente medical center.

How will I know if the medication is working?

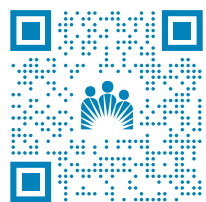
- Test your blood sugar at home regularly.
- Ask your doctor or care team how often to test your blood sugar at home.
- Write down your results. This can help you see what eating, activity, or medicine changes may be needed to keep your blood sugar in a healthy range.
- Get an A1C blood test done at least every 6 months. The A1C test comes with an estimated average glucose (eAG) result. Both the A1C and eAG results measure your average blood sugar over the previous 2 to 3 months.

We're here to help

Learn more about diabetes management.



Live Well With Diabetes:
kpdoc.org/diabetes



Health Education:
kpdoc.org/healtheducation



This information is not intended to diagnose health problems or to take the place of medical advice or care you receive from your physician or other health care professional. If you have persistent health problems, or if you have additional questions, please consult with your doctor. If you have questions or need more information about your medication, please speak to your pharmacist. Kaiser Permanente does not endorse the medications or products mentioned. Any trade names listed are for easy identification only.

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011061-186 (Revised 06/23) RL 6.7