

Insulin: How it helps keep you healthy



"If you have type 2 diabetes, it is very important to keep your blood sugar levels in a healthy range. Insulin can help."

If you have type 2 diabetes, it is very important to keep your blood sugar (glucose) levels in a healthy range. Here are answers to questions people often ask about taking insulin.

How does insulin help with diabetes?

Insulin is an important hormone. Your body needs it in order to get sugar out of the blood and into your cells to be used as energy. When you have type 2 diabetes, your pancreas may no longer make enough insulin. Without enough insulin, you will have high amounts of sugar in your blood. Over time, high blood sugar levels can cause serious health problems. Most medicines that control high blood sugars help the body make more insulin or help the insulin work well. Unfortunately, these medicines don't always keep the blood sugar under control. This is why many people with type 2 diabetes choose to add insulin injections to keep their blood sugar levels in the healthy range.

What kinds of insulin are there?

There are two main kinds of insulin:

Background insulins – such as NPH insulin - work for a long time to control blood sugar levels. Most people with type 2 diabetes can get to goal with a single injection of background insulin daily.

Mealtime insulins – such as Regular insulin - help lower blood sugar after meals. Some people with type 2 diabetes add mealtime insulin to the background insulin.

Your health care team may suggest that you use background and mealtime insulin together. These are called combined or pre-mixed insulins. You can mix most kinds of insulin in one syringe. Check with your healthcare team about which types of insulins can be mixed together in one syringe.

When should I take insulin?

Background insulin works for about 12 to 24 hours. If you use this kind of insulin, you will usually inject it at night before bed. Mealtime insulin is taken before meals.

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How do I take insulins?

Small amounts of insulin are injected under the skin using syringes and needles. Your abdomen (lower stomach area) is the best place to inject insulin. The needles are very small and thin. They are much smaller than the lancets you use to prick your finger when you test your blood sugar. Most people find they barely feel insulin injections.

Insulin doses are measured in units. There is no maximum dose of insulin but it is important to make changes carefully to avoid high or low blood sugars. Most people with type 2 diabetes start at a low dose of NPH insulin at bedtime. Working with their diabetes care team they add more insulin every few days until they reach their blood sugar goal.

What problems could I have taking insulin?

Since insulin is a natural hormone, allergic reactions are very rare. You may sometimes feel a little stinging or burning at the injection site.

Sometimes your blood sugar can get too low. Low blood sugar, also called hypoglycemia, is when the blood sugar level is less than 70 mg/dL. Low blood sugars can happen if you skip a meal, if you are more active than usual, or if you take too much diabetes medicine. Low blood sugars can be serious and need to be treated right away.

The best way to avoid low blood sugar is to:

- Know the symptoms of low blood sugar and be prepared to treat it. Work with your health care team to develop a low blood sugar treatment plan.
- Test your blood sugars as recommended by your health-care team.
- Take your medicines as prescribed.

How will I know if the medication is working?

Regular home blood sugar testing is the easiest way to see how your medicine is working.

- Ask your health 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 you may need to make to keep your blood sugar in a healthy range.

- In addition to home testing, get an A1C blood test done at least every six 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 past two to three months.

Other resources

Web sites

- Visit kp.org/mydoctor and watch our online videos about how to inject insulin. You can also use kp.org to view your lab results.
- Go to kp.org/diabetes where you'll find more information about diabetes and can try a personalized online diabetes program called HealthMedia® Care™ for Diabetes.
- Contact your facility's Health Education Department for books, videos, classes, and additional resources.

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