

Type 2 diabetes changes: How and why

What happens in type 2 diabetes?

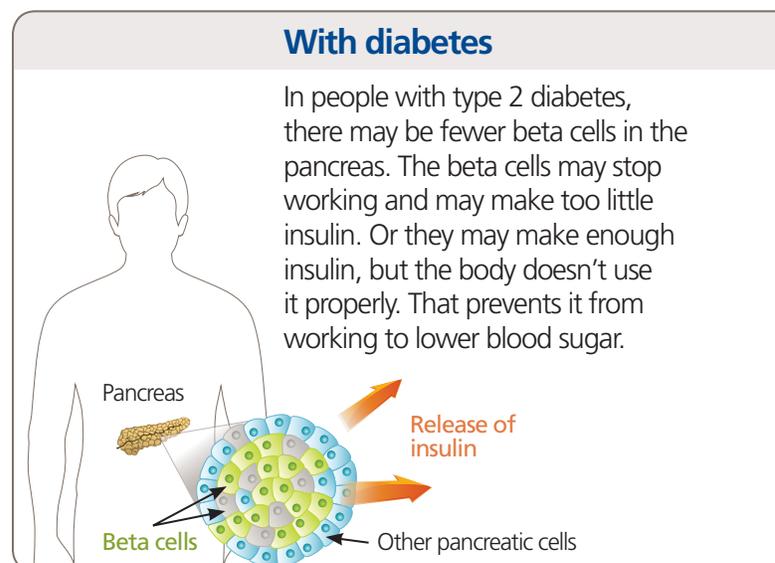
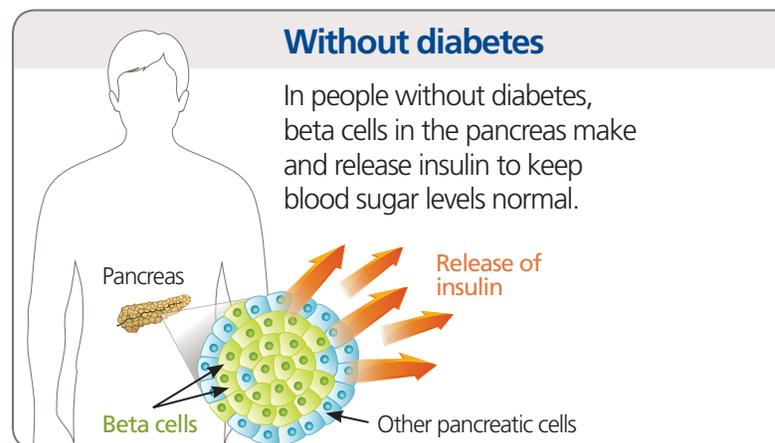
When you have type 2 diabetes, some or all of these things may happen:

1. The gut (made up of such organs as your stomach and intestines) doesn't release enough of a hormone called GLP-1. One of GLP-1's jobs is to slow down the release of food from your stomach, which slows down the movement of sugar into your blood. When there is not enough GLP-1, food moves quickly from the stomach, so blood sugar levels go up more quickly.
2. The beta cells in the pancreas don't produce enough insulin. This leads to too much sugar in the blood instead of in the muscles and other places in the body where sugar needs to go.
3. A hormone called glucagon doesn't work right, so the liver releases too much sugar, keeping blood sugar levels high after meals and overnight.
4. The liver normally slows down its release of sugar into the blood if blood sugar is high. But in people with type 2 diabetes, too much glucagon is released. This causes the liver to release more sugar into the blood.
5. Your muscles get their energy from sugar. But in people with type 2 diabetes, insulin has trouble moving sugar into muscle cells, so it stays in the blood. This is referred to as "insulin resistance."
6. There is not enough GLP-1 to signal your brain to help your body reduce food intake.
7. Fat cells are insulin resistant too, which can lead to higher blood sugar levels.
8. The kidneys don't get rid of extra sugar when blood sugar levels are high, so it goes back into the blood.

Understanding type 2 diabetes

What happens when you eat

When you eat, some of your food is broken down into sugar (also called glucose). Sugar travels in your blood to all your body's cells. Insulin helps sugar move from your blood into your cells. Insulin is a hormone that is made by the beta cells in your pancreas. The image below shows, in a simple way, what happens when we eat.



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Why does diabetes change over time?

Diabetes changes over time because of changes that take place in the way the body responds to what you eat and drink. In people with type 2 diabetes:

- The ability of the pancreas to make more insulin to make up for insulin resistance changes over time
- Beta cells are reduced in both number and function. In fact, research suggests that many people with type 2 diabetes may already have lost about 50% to 80% of their beta cell function by the time their diabetes is diagnosed. As the beta cells decrease even more in both number and function, the pancreas makes less and less insulin

Several other things may also happen over time:

- The body's cells change and become more resistant to insulin
- The other events listed on page 1 happen as well

Because of these changes, your blood sugar can stay too high. This can increase your risk for other health problems. **But by following your diabetes care plan, you can do a lot to prevent these problems or slow them down.**

What can you do?

As type 2 diabetes changes over time, following your meal plan and staying active often may not be enough to keep your blood sugar in check.

- Medicine is usually necessary
- The good news is that there are effective medicines to treat all stages of type 2 diabetes
- Talk with your diabetes care team about the best treatment for you
- Do your best to keep your weight close to a normal range



For more information about diabetes, visit Cornerstones4Care.com

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