



Pancreas Partner

When we are born, there are lots of alpha and beta cells on the pancreas.

Hold up the side of the pancreas with more cells:

1. The pancreas has a glucose sensor, that can tell when blood sugars are outside of range.
2. The beta cells' job is to make and secrete insulin when we eat food or if our blood sugars are elevated.
3. If blood sugars are elevated, the pancreas releases insulin into the bloodstream.
4. If blood sugars are too low, the pancreas directs the alpha cells to make glucagon, which raises blood sugar.
5. You could consider the pancreas a glucose thermostat that is always trying to keep blood sugar levels on target.

Turn the pancreas to the other side with fewer cells.

1. Unfortunately, some people lose some or all of their beta cells due to a combination of genetics, environment, and aging.
2. This is no one's fault. With prediabetes, there is about half the usual amount of beta cells remaining. With type 2 diabetes, there is only about 20% of the usual beta cell count. With type 1 diabetes, most or all of the beta cells are destroyed by an autoimmune process.
3. Without adequate beta cells and insulin secretion, blood sugars increase. However, people with diabetes can help their pancreas by eating healthy, keeping active, and taking medications as needed to keep blood sugars in a healthy range.



Our Teaching Tools make learning fun!



Explaining the pathophysiology of diabetes is no easy task. These fun and effective educational tools help you explain normal fuel metabolism and the defects associated with type 2 diabetes.

Scan the QR Code



for more information, an instructional video, & how to buy these vibrant teaching tools

Visit our website www.DiabetesEd.net

DiaCell

Hold up the DiaCell:

1. Imagine this sphere is a muscle cell
2. When eating carbs, they are broken down and enter your bloodstream as glucose (hold up one of the wood shapes)
3. In response, your pancreas releases insulin. Here is the insulin (hold up the other wood shapes).
4. When insulin binds to the cell, (push the block into the closed cell)
5. The cell opens up (open cell)
6. And glucose gets in (put other wood block inside cell and pretend to gobble up)
7. With diabetes type 2, the insulin binds but the cell doesn't open
8. With type 1, there is no insulin made, so cells can't open to glucose.
9. How do people with type 2 diabetes open their cells?
 - a. Exercise increase insulin sensitivity for 24-48 hours
 - b. Healthy Eating
 - c. Meds/injectables/insulin

