# **INSULIN IS COOL**

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### **Recent Scientific Article: Insulin Shots** (Erica and Austin)

One additional injection of insulin three hours after eating has been shown to protect people with type 1 diabetes from cardiovascular disease. It allows people with type 1 diabetes to better regular their blood sugar levels. It also reduces fat and inflammatory markers in the blood that can damage blood vessels and heart disease. Typically people inject insulin throughout the day, however, the dose after mealtimes is usually calculated from the amount of carbohydrate in the meal without consideration of how much fat is in the food (which is broken down at a slower rate). In conclusion, they suggest that after a high-fat meal, an extra dose of insulin provides a simple way of regulating blood sugar levels.

Leeds Beckett University. "Simple step to protect people with type 1 diabetes against heart disease." ScienceDaily. ScienceDaily, 5 June 2017.

<<u>www.sciencedaily.com/releases/2017/06/170605101003.htm</u> >.

# The Importance of Insulin - Malcolm and Olivia

Insulin is important because it is the protein that helps create vital energy. Made in the pancreas, it takes the glucose from carbohydrates which the body can then use for energy. Additionally, the insulin can help store that energy from the glucose for future use.

Another important use of insulin is keeping the body's blood sugar levels at appropriate levels. Blood sugar level is the concentration of glucose in the blood. When the level gets too high (for a prolonged amount of time), type two diabetes can develop.

Insulin also plays a large role in the brain. This protein has an effect on one's metabolism, warmth and memory. People with

low "insulin receptors" do not get the massage to stop eating, resulting in obesity. Additionally, if the brain does not pick up on these signals, the body does not stay warm, again, resulting in a slow metabolism. Though studies are still in progress, low Insulin levels in the body seem to result in low insulin levels in the brain. This causes less of those metabolic signals to be transmitted, thus an increase of body fat. When signals from insulin are not picked up or "resisted," a person could be subject to memory loss. When the brain does not pick up on these signals, it lowers the cholesterol. Lower cholesterol levels can cause Alzheimer's Disease. In fact, giving such patience insulin through a tube through ones nose (to the brain) reduces symptoms.

https://www.endocrineweb.com/conditions/type-1diabetes/what-insulin https://paleoleap.com/insulin-and-brain/ https://www.news-medical.net/health/Insulins-role-in-thehuman-body.aspx

#### Where Insulin is Found -Olivia

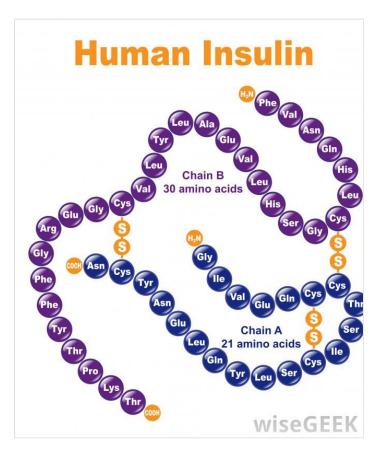
Insulin in produced by the pancreas, a organ located behind the stomach. Beta Cells (insulin creating cells) then release this protein into the bloodstream. Insulin is also found in the brain, however, studies are still unclear as to where these levels are specifically produced.

http://www.yourhormones.info/hormones/insulin/

#### What Does Insulin Do? - Daniel

- It causes the cells in the liver, muscle, and fat tissue to take glucose from blood and convert it to glycogen that can be stored in the liver and muscles
- In absence of insulin or when insulin is low glucose is not taken from blood, and the body begins to use fat as an energy source
- Insulin also controls other body systems and regulates the amino acid uptake by body cells

# Insulin Diagram



## Insulin

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