IU SOUTHEAST
HONORS PROGRAM

Type 1 Diabetes:
What You Should Know

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Abstract

How would your daily life change with Type 1 Diabetes? This project will examine the daily struggle of having Type 1 Diabetes and a malfunctioning pancreas. There are three types of diabetes that will be discussed in this project. Through an analysis of scholarly literature, this project will show the long-term effects of Type 1 Diabetes on other vital organs such as the heart, kidney, never damage, and the eye. There will be an analysis of new stem cell research that can be the future of diabetes treatment and is giving hope to people with Type 1 Diabetes.

Methodology

My findings and information was collected from many databases. These include the JDRF website, EBSCO, and the MAYO clinic webpage.

Contact Information

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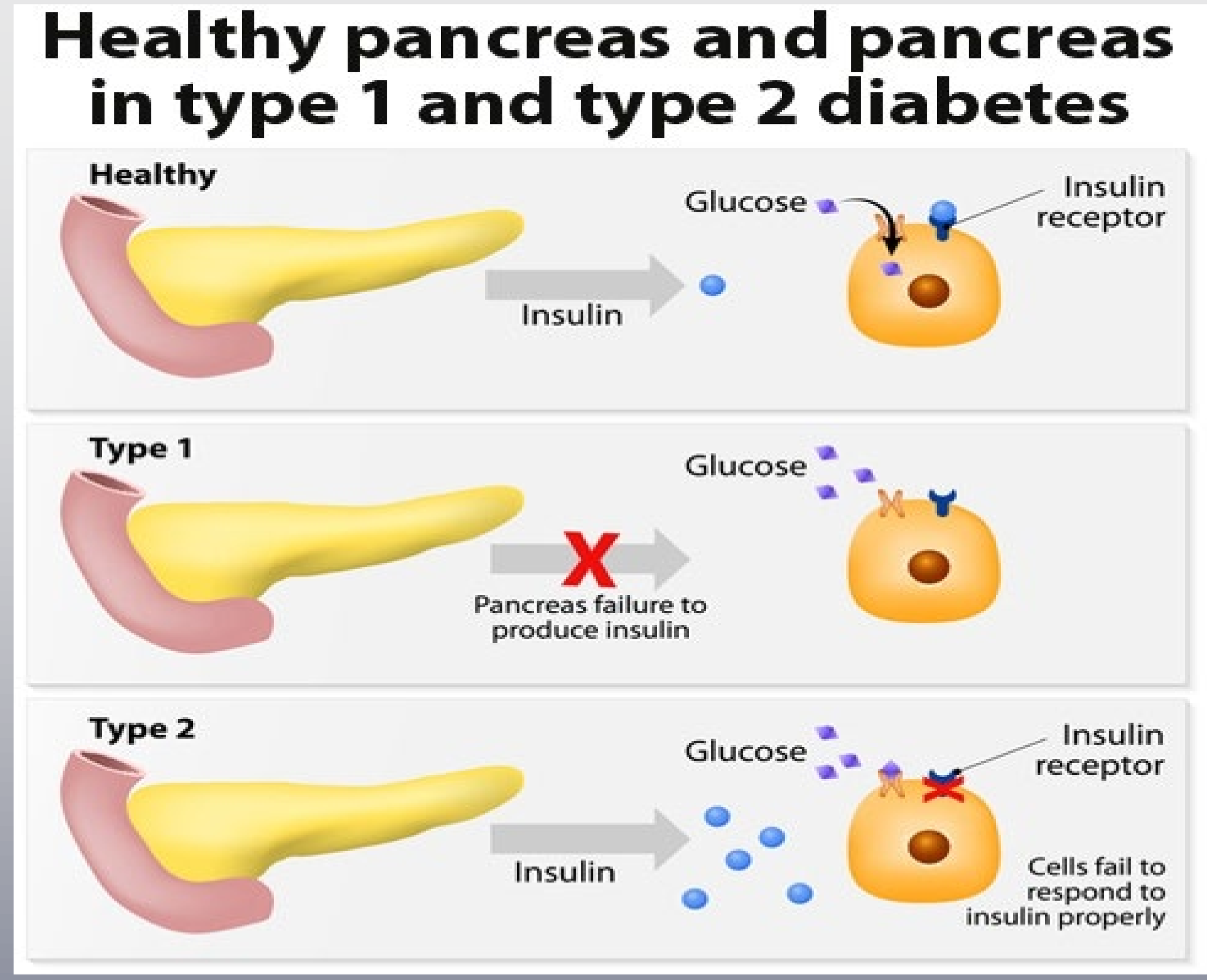
Type 1 Diabetes

Type 1 Diabetes, which has been referred to as juvenile diabetes or insulin-dependent diabetes, is a chronic illness where the pancreas will produce little to no insulin at all. There is not a way to prevent Type 1 Diabetes. Type 1 Diabetes is normally found in children or preteens. Type 1 Diabetes can be caused by some viruses but in most cases, it is genetics. The body's own immune system thinks that it is attacking harmful bacteria but ends up attacking and killing islet cells which are used in producing insulin. This information is from the mayo clinic page.



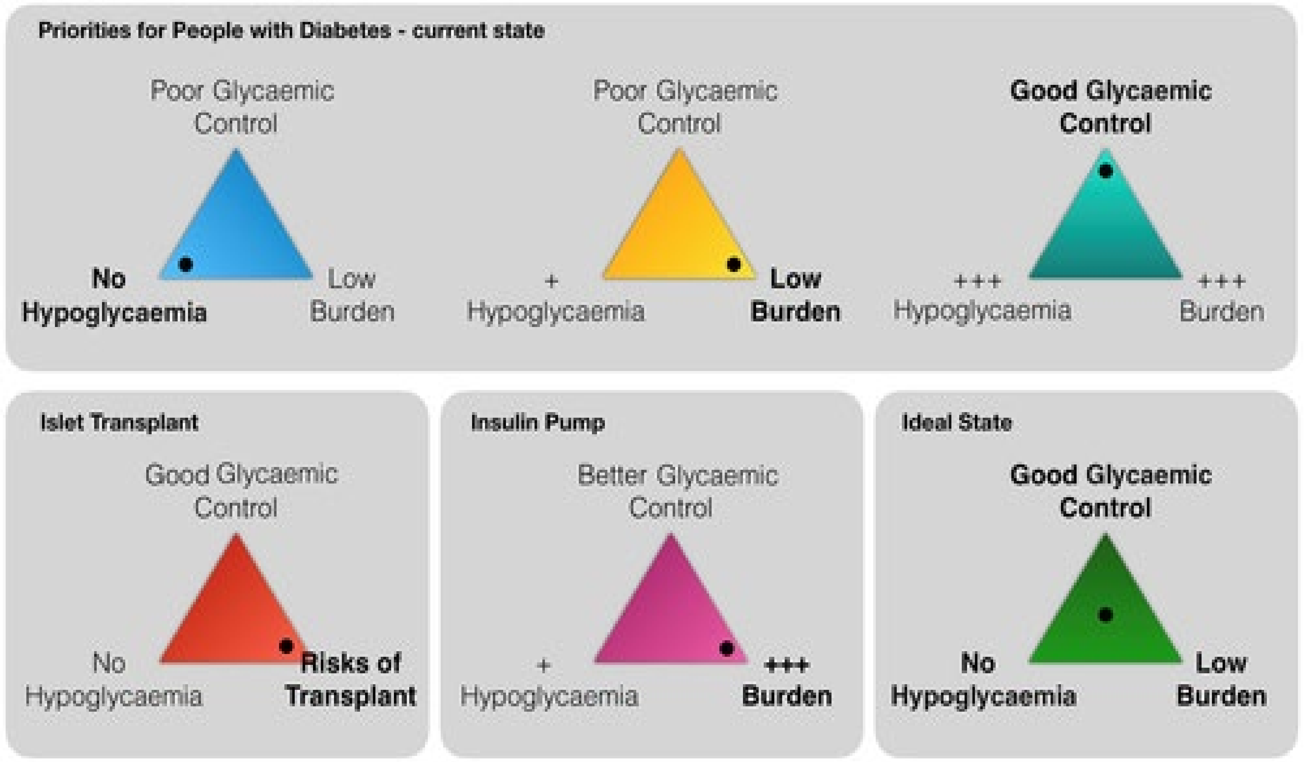
https://afcurgentcareportland.com/blog/understanding-diabetes

Long Term Effects

- Heart
- Never Damage
- Kidney
- Eye

Stem Cell Research

Research is being done to use stem cells in a cure for Type 1 Diabetes. The problems that I found many researchers struggle with is that fact that Type 1 Diabetes can shrink your vascular tubes in your heart and that taking transplant drugs can be worse on your body. St. Jude has the most recent study stating that, "The pool of beta cell-specific CD8 T cells in Type 1 Diabetes sustains an autoreactive potential despite having access to a constant source of antigen. To investigate the long-lived nature of these cells, we established DNA methylation-based T cell 'multipotency index' and found that beta cell-specific CD8 T cells retained a stem-like epigenetic multipotency score." This means that their research is starting to work.



https://doi-org.proxyse.uits.iu.edu/10.1111/dme.13846

Works Cited

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