THE CURE FOR DIABETES

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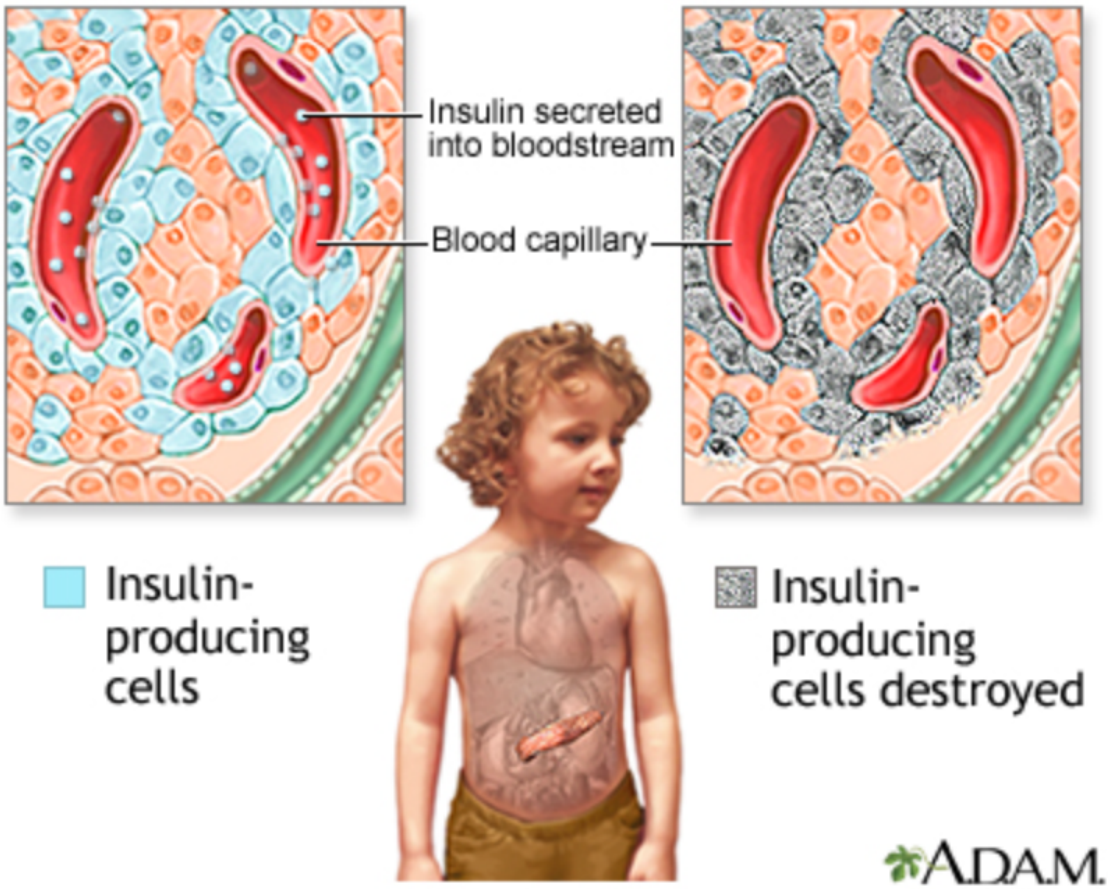
Unit # 3 Project
English 1101

A question we all have been asking for a while now, are we any closer to finding a cure for diabetes? To be completely honest with you, we haven't found a cure that will help prevent or even help reduce thIs disease for the time being, however we have some very promising trails on way to cure this disease once and for all.

Before we start I want to give you all a basic introduction to what diabetes is and how it affects our body. There are two types of diabetes, Type 1 and Type 2. Type 1 diabetes is a chronic condition in which the pancreas produces little or no insulin, and Type 2 diabetes is a chronic condition that affects the way the body processes blood sugar (glucose). You might have noticed that I used the word chronic with both types of diabetes, what does that word actually mean. It means that this disease will stay with you as long as you are alive or until is cured. Any condition which is chronic is long-lasting in its effects and its a disease that comes with time.

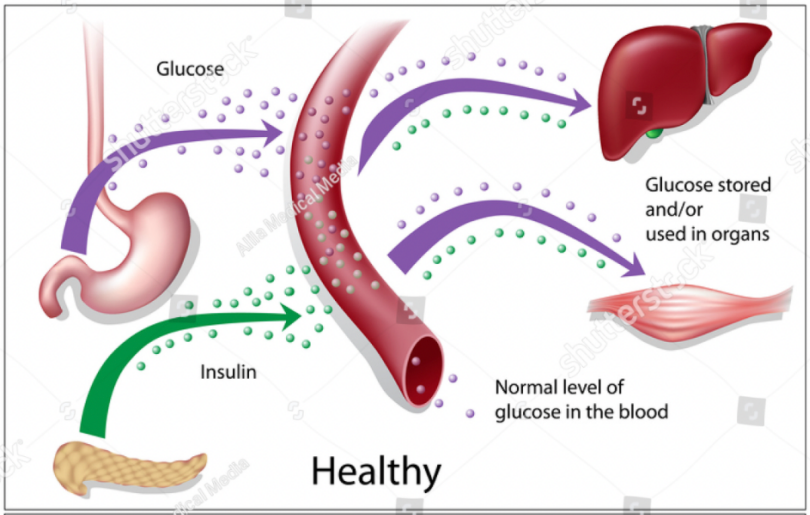
TYPE 1 DIABETES

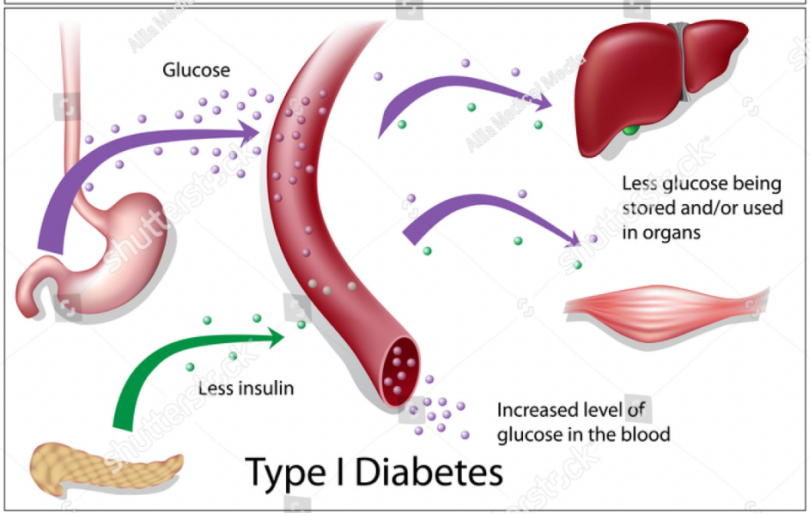


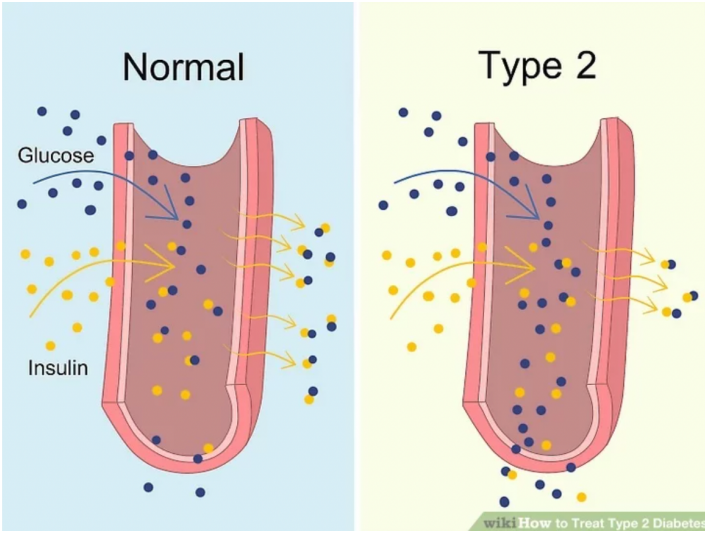
Now that you have a basic knowledge of what diabetes is and how it affects our body, let's now get more into Type 1 diabetes. As said before Type 1 diabetes is a chronic condition which affects the pancreas, making it so the pancreas produces little to no insulin in the body. In recent years scientists have many made discoveries that could lead to genetic therapies which will allow the body's own cells to combat and even rid itself of this disease. Researchers are learning to take out gut cells and turn them into insulin producing cells. And cell therapy is one of the biggest hopes towards developing a cure for diabetes, especially for type 1 diabetes. Replacing the missing insulin cells could possibly help the other insulin cells recover and cure the patient.

However, early attempts to transplant cells have mostly failed, due to immune reactions that reject and destroy the implanted cells. The lack of donors is also a big limitation with the cell therapy. With these issues, the Diabetes Research Institute in the US has found alternatives solutions. They have bioengineered a mini-organ where insulin-producing cells are encapsulated within a protective barrier. Than this mini-organ is implemented into the omentum, which is a part of the abdominal lining. This phase I/II trial is still ongoing, however, the DRI (Diabetes Research Institute) announced its first successful results in 2016. Revealing that the first patient in Euro that was treated with this approach, no longer needs insulin therapy.

Type 1 and Type 2 diabetes are mostly similar, the biggest differences between the two is that, Type 1 is mostly a genetic disorder and comes early on in your life. Type 2 however, is largely a diet-related disorder and it comes with time.







TYPE 2 DIABETES

With Type 2 diabetes, your body still is producing a small amount of insulin, but it isn't effective enough. The pancreas isn't able to keep up with the high blood sugar levels resulting from poor diet and lack of exercise. Some people who are living with Type 2 diabetes have something called insulin resistance, which just mean that the pancreas produces insulin but the body does not recognize it. This is different from Type 1 because the immune system isn't attacking the insulin producing cells, the body just doesn't recognize that its still producing some insulin cells. Some factors that risk you developing Type 2 diabetes are, a diet which is high in carbs and fat but low in fiber, not being very physically active and/or if you have a history of high blood pressure. High alcohol consumption along with age are also risk factors for Type 2. Although your genes have some likelihood of causing Type 2 diabetes, it can very well be prevented with the right lifestyle choices. Unlike Type 1 diabetes.

In contrast to Type 1, patients with Type 2 diabetes often need to take insulin, because their bodies ares still producing insulin, but a very small amount .

Though there are medications like "Metformin" available to assist in lowering blood sugar, the primary ways to treat type 2 diabetes are; a balanced diet, exercise, weight loss, blood glucose monitoring, and etc.

Researchers have found that beta cells do not burn out and die as previously thought in Type 2 diabetics, but they instead revert to more primitive cells or ones with altered function. This lead scientists to believe that if they can prevent this dedifferentiation or somehow push dedifferentiated cells to turn back into beta cells, they could prevent or cure type 2.

SO, ARE WE CLOSE TO FINDING A CURE FOR DIABETES?

Let's get straight to the point, we are no where near finding cure for diabetes. We still don't even fully understand the disease never mind being able to cure it.

Sure we have many promising trail under way, but they are still trails. We are trying to find a cure for this disease by using trail and error. we now where to start and what to look for but we can't move any further than that. we haven't really made any discoveries or treatments for diabetes besides the ones found centuries ago. We need to spread awareness for this disease and help find a cure or at least a better treatment for these patients.

According to the CDC diabetes is the 7th leading cause to death in the U.S., if we don't make more of an effort to cure this disease, we will see it rise to the top 3 within a few years.