

Diabetes

Diabetes is a chronic condition where your blood sugar (glucose) levels are too elevated because your body is incapable of making enough insulin. This leads to sugar being unable to enter your cells for energy. Because of diabetes, the sugar will then remain in the blood which can lead to long term consequences such as nerve and blood vessel damage. This is an important topic to be educated on because with assessing this early, you can significantly reduce these risks to avoid long term damages.

There are 3 types of diabetes. Type 1 diabetes is an autoimmune attack where the immune system mistakenly treats the beta cells in your pancreas that create insulin as foreign invaders and destroy them. This is caused by genetic predisposition and environmental factors. Type 2 diabetes is a chronic condition where the body cannot use insulin correctly and sugar builds up in the blood. This is linked to obesity, family history, and your activity level. This condition can be managed by exercise and diet. Lastly, type 3 diabetes is known as gestational diabetes which occurs in pregnant women. This is often temporal, and shifts the blood sugar back to normal after childbirth.

Diabetes can overtime lead to health problems such as heart disease, nerve damage, and eye issues. Some body systems affected would be the nervous system because it can cause a loss of feeling in your fingers and toes. Furthermore, your immune system can become weakened leading you to become more susceptible to diseases and making it hard to fight internal and external infections. However, with early detection, managing diabetes by increasing exercise, managing your diet and taking medication can delay the serious complications.

Symptoms for diabetes include feeling more thirsty than usual, excessive thirst, extreme hunger, blurred vision, presence of ketones in the urine, fatigue, and blurry vision. In type 1 diabetes, symptoms appear suddenly, while type 2 diabetes, symptoms occur slowly and can go unnoticed for years. This is why early detection is important to avoid health implications in the future.

Current treatment for diabetes include lifestyle changes such as switching to a healthy and more balanced diet, incorporating exercises into your routine, and taking medications to keep your blood sugar stable. Furthermore, losing weight can improve insulin sensitivity. For type 1 diabetes, injections or pumps inserted into your skin delivers a rapid response of insulin entering your body. For type 2 diabetes, it's common to take pills at first to help transition the shift of needing insulin in the future.

Future challenges into the topic of diabetes revolve around reducing health disparities and improving population access to treatments. Specifically, research done on stem cell therapy and artificial pancreas technology is a big step to improving access for communities to get the treatments they need. Lastly, research done into creating personalized medicines and early detection methods can help combat the spread of this disease and improve the quality of life for individuals affected with diabetes.

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