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MSDS 697

Practicum II

Research: Diabetes

Introduction

More than 30% of Americans suffer from diabetes and worldwide more than 422 million people have diabetes.

What is Diabetes?

It is a condition where one's body produces more or cannot effectively use insulin that is produced. This is when the blood sugar level is higher than normal. Insulin is a hormone made by special cells in the pancreases called Islets. Insulin allows your cells to absorb the sugar from food into the blood.

Types of Diabetes

There are three major types of diabetes. Which are type 1 diabetes, type 2 diabetes and gestational diabetes.

Type 1 diabetes

This was previously called juvenile diabetes because it usually develops in children and teenager, but it can affect anyone. Those who suffer from type 1 diabetes cannot produce insulin. Carbohydrates are broken down into blood sugar that is used as energy in the body. Insulin is a hormone that the body needs to make glucose from the blood into the cells.

Type 2 Diabetes

This type of diabetes affects the body by making it unable to properly use insulin and it is called insulin resistance. It is a life-long disease that mostly affects middle-aged and the elderly. However, it can affect kids and teens because of obesity.

Gestational diabetes

This is a type of diabetes that develops during pregnancy. It is when the blood sugar is too high. The hormones caused from the pregnancy may cause insulin resistance, thereby making it so that the duties of the insulin are inhibited. Insulin helps to take out sugar from the blood and use it as energy for the body. However, in this disease the problem is not whether insulin is produced it is that the hormones made from the pregnancy blocks the insulin. This condition usually develops during the second or third trimester of a pregnancy. It is dangerous for the expectant mom and the baby but through proper diet and exercise it can be controlled. This is not a lifelong disease as the blood sugar levels return to normal after childbirth.

How is gestational diabetes diagnosed?

An oral glucose tolerance test (OGTT) is done between 24 and 28 weeks of a pregnancy. The patient gets to fast for 8 hours after which the blood sugar check begins. The expectant mom is checked after 1 hour or more, then the healthcare provider pays attention to how the blood glucose level increases from the first check

There are several things that can increase the risk of developing gestational diabetics. For example, lack of exercise, glycosuria (sugar in urine), polycystic ovary syndrome, being overweight or obese, previous delivery of a large baby, history of high blood pressure, high blood sugar, high cholesterol etc.

Some of the signs and symptoms of gestational diabetics are frequent urination, blurred vision, unusual thirst or hunger, recurrent vaginal infections, nausea or vomiting, unusual weight gain etc.

How is gestational diabetics controlled?

First and foremost, following a meal plan as directed by a dietician is key to controlling gestational diabetes. Normally 3 meals and 3 snacks a day. Patient are advised to wait at least 2 hours between each meal or snack. Also, that they are to limit intake of carbohydrate like fruits, cereals and more in 1 meal or snack because it can cause a significant increase in blood glucose level which can in turn harm mother and baby. Foods high in fiber such as vegetables, legumes and more are great to consume.

Exercising regularly is one of the other ways to control this condition. Exercising for at least 30 minutes a day is important to maintaining a healthy pregnancy despite the underlying condition. Less aggressive kinds of exercise like swimming, walking and more are safe ways to stay fit.

When a patient can maintain a healthy weight, it reduces the chances of high blood pressure or premature labor. Th recommended weight gain for women who are overweight is 15 to 25 pound and for those that are obese it is 10 to 20 pounds.

Lastly, some women may need insulin if nutrition and exercise cannot control it. Insulin is safe for mother and baby.

References

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