

Nutrition therapy for diabetes essay examples

[Health & Medicine](#), [Diabetes](#)



Diabetes is a major disease that has significant side effects and complications. The worldwide incidence of diabetes is high and every year there are more people who are diagnosed with diabetes. People who have diabetes have a shorter lifespan than people in the normal population. However, clinical studies have shown that nutritional therapy can reduce the risk of diabetes and its complications. Therefore, a management plan for diabetes should also include a diet plan for the control of diabetes and its symptoms.

Nutrition Therapy for Diabetes

According to the Centers for Disease Control (CDC), 25.8 million people, or 8.3% of the population, in the United States had diabetes in 2011 (CDC, 2011). Of these cases, 18.8 million people included patients who had been diagnosed with diabetes and were receiving treatment; however, the other 7 million people had not been diagnosed and did not know they had diabetes and were not on medication.

Causes, Rate, and Risk Factors of Diabetes

When people eat, the food they digest is broken down into a simple sugar called glucose that is used by the body for energy (A. D. A. M.). The sugar is taken away from the blood by insulin, a substance that is made by the pancreas, which means that insulin is responsible for controlling the levels of sugar in the blood. Insulin carries the sugar out of the blood and into the various types of cells, and the cells use the sugar to produce and store energy (A. D. A. M.). People who have diabetes have too much sugar in their blood, either because the pancreas cannot produce enough insulin to be able

to remove sugar from the blood or because the cells are not able to use the insulin (A. D. A. M.; CDC, 2011). People who have high levels of sugar in the blood can develop serious medical conditions if they do not take any medications (CDC, 2011).

Diabetes has been classified into three main types depending on what causes it and according to its risk factors. The major types of diabetes are type 1, type 2, and gestational diabetes (A. D. A. M.). Type 1 diabetes, or diabetes mellitus, used to be called child onset diabetes because most of the patients that were diagnosed with this type of diabetes were young people although people can develop type 1 diabetes at any age (A. D. A. M.). Type 1 diabetes is a chronic condition where the pancreas cannot make enough insulin so that sugar cannot be removed from the blood and sugar levels in the blood rise and stay high. There is no cure for type 1 diabetes and it is not known what causes it but type 1 diabetes can be managed with diet and medication (CDC, 2011).

There are many more people with Type 2 than with any other type of diabetes. People can have type 2 diabetes for many years without knowing it until the disease has advanced far and caused significant damage (A. D. A. M.). Type 2 diabetes used to be known as adult onset diabetes because most of the patients who were diagnosed with type 2 diabetes were adult patients. However, the rate of obesity is increasing in the young population and this is causing type 2 diabetes to increase as well because obesity has been shown to be associated with type 2 diabetes. In type 2 diabetes, either the cells lose the ability to use insulin or the pancreas is not able to produce enough insulin (A. D. A. M.).

Gestational diabetes occurs during pregnancy in women with no prior history of diabetes (A. D. A. M.). Like type 1 and type 2 diabetes, women with gestational diabetes have high sugar levels in the blood because there is not enough insulin to remove the sugar from the blood. However, in gestational diabetes, insulin levels are not low because the pancreas cannot produce enough insulin. Insulin levels are low during some pregnancies because the placenta produces a variety of hormones and some of these hormones block the effect of insulin (A. D. A. M.; CDC, 2011).

Symptoms, Signs and Diagnostic Tests

People who have high levels of sugar in the blood feel thirsty and hungry all the time, get tired easily, lose weight, need to urinate often, and their vision becomes blurry (A. D. A. M.; CDC, 2011). People with type 1 diabetes develop these symptoms rather suddenly; however, people with type 2 diabetes could have diabetes for many years and yet not experience any of these symptoms. These patients go without treatment until they develop a serious illness that needs medical attention and it is then discovered that the illness is associated with diabetes(A. D. A. M.).

When a doctor suspects that a patient has diabetes, the first test the doctor orders to diagnose diabetes is a urine test; but diabetes cannot be diagnosed based only on this one test. If the urinalysis test shows that the sugar levels in the blood are over 200 mg/dL, then the doctor orders other tests to confirm that the patient has diabetes (A. D. A. M.; CDC, 2011). These tests include blood tests and oral glucose tolerance tests. A doctor is able to confirm that the patient has diabetes if the patient has fasting blood sugar levels that are over 126 mg/dL. People who have blood sugar levels that

range from 100 mg/dL to 126 mg/dL are diagnosed as being pre-diabetic and are considered to be at high risk of developing type 2 diabetes. Another blood test is the hemoglobin A1c test, and if this test shows levels higher than 6.5%, that means that the patient has diabetes. The oral glucose tolerance test is mainly used for the diagnosis of type 2 diabetes, when sugar levels are over 200 mg/dL after 2 hours that means that the patient has diabetes (A. D. A. M.). Because people can have type 2 without knowing it, people at high risk should be screened for type 2 diabetes. People at high risk include overweight children and adults with BMI that are greater than 25 (A. D. A. M.).

Prevention, Treatment and Prognosis

It is possible to prevent type 2 diabetes by eating the proper foods and by exercising regularly, but there is no way to prevent or cure type 1 diabetes (A. D. A. M., CDC, 2011). However, there is scientific evidence that people with diabetes who are careful in monitoring their blood sugar levels, keeping their cholesterol levels down, and making sure that their blood pressure stays low can reduce the risk of many diseases that have been associated with diabetes including diseases of the kidney, various cardiovascular and neurological diseases, eye problems, and stroke (A. D. A. M.). Thus, regardless of the type of diabetes, people with diabetes can all benefit from a diet that helps control blood sugar levels.

Nutrition Therapy that Targets Diabetes

Clinical practice guidelines recommend that doctors should help their patients understand that nutrition plays an important role in the control of

type 2 and pre-diabetes (A. D. A. M.). Primary care physicians should also help patients develop a healthy diet plan that matches the patient's lifestyle and culture. It is important to try and keep the diet simple to make it easier for the patient to follow the new diet because it is difficult for some people to change their eating habits. It is also a good idea to include a registered dietician in the healthcare team (A. D. A. M.). The American Diabetes Association (ADA) general nutritional guidelines for the management of diabetes recommend that patients adopt a diet that is low enough in calories that it helps overweight or obese patients to lose 5%-10% of their weight, and very obese patients to lose 15 of their weight (A. D. A. M.). A diet should also be balanced. Carbohydrates should make up 45%-65% of the daily nutritional intake, and consist of at least 130 grams per day. People with diabetes should try to eat carbohydrates that have a low glycemic index. Proteins should make up 15%-20%; dietary fat, less than 30%; and saturated fat, more than 7% of the daily dietary intake. Cholesterol intake should be kept below 200 mg per day, and fiber at around 25-50 g per day. There is also a relationship between BMI values and waist circumference and the risk of getting diabetes; thus, a person with diabetes should try to reduce their BMI and monitor their waist size (A. D. A. M.).

Studies have shown that even though there are no specific foods that help control blood sugar levels, people from different cultures should be taught to recognize the types of food that help people with diabetes control the disease by keeping the blood sugar levels down. Patients should also learn the types of foods that are to be avoided.

In addition, clinical studies have shown that special dietary supplements

designated for people with diabetes can help lower blood sugar levels and reduce disease complications (A. D. A. M). Patients who have low BMIs can benefit from the extra calories and nutrients provided by these supplements, while patients with normal or high BMI values may use these formulas to cut the number of calories in their diet but still get enough nutrients to control blood sugar levels. Thus, nutritional therapy can be of great value in the management and control of diabetes and of the various symptoms that are associated with the disease.

References

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