Diabetes Mellitus: General Information

Type 2 diabetes mellitus (T2DM) is a common and rapidly growing disease and a leading public health concern worldwide. A large number of complications are T2DM-related. The creation of awareness and offering of patient education is one of the chief methods applied in treatments of individuals affected with T2DM. Patient education must go together with lifestyle adjustments and pharmacotherapy. The pharmacological approaches involved mainly focus on glucose level control, patient characteristics, and costs. Lifestyle interventions prove to be effective but usually continue for the short term. In this project, I have briefly done a summary of the association of diabetes type 2 with current nutrition issues.

Type 2 diabetes mellitus (T2DM) is a disease that is much influenced by the body's metabolic activities. Typically, this disorder develops as a result of excessive calorie intake over the energy required by the body. T2DM is characterized by a growing insulin secretory defect as a result of the resistance of insulin. Due to the body's insulin resistance, the demand for insulin increases for it to hold glucose homeostasis. There is gradual blood glucose elevation when pancreatic beta cells fail to secrete enough insulin that is needed to compensate for the increasing demand for insulin. Chronic hyperglycemia, a condition that stands even in fasting situations, is majorly caused by diabetes mellitus. This condition is associated with other conditions such as dysfunction, chronic damages, and failure of different organs of the body. The conditions mentioned above result in increased morbidity and mortality levels. Type 2 diabetes associated with poor lifestyle is a key factor that leads to changes in dietary habits and reduced progressive physical activity.

Consequently, there is likeliness in the growth of the number of overweight and obese individuals in the population. T2DM falls among the list of worldwide major chronic diseases. It belongs to the group of health challenges that affect the public in the 21st century. The growth of the T2DM epidemic is so rapid and is evident in the USA and the other parts of the world. It is projected that 20 million or more of the USA population is likely to get T2DM. A larger percentage of patients with diabetes suffer from Type 2 Diabetes Mellitus.

Typical symptoms of type 2 diabetes include thirstiness, frequent urination (particularly at night), a feeling of tiredness, and weight loss. Adult-onset diabetes is a progressive disorder that gets worsens as time goes by if left untreated. It is, therefore, very important to diagnose soonest possible. There are various ways of diagnosing T2DM. The most common technique among the available ones is the glycated hemoglobin (A1C) test, which is a test done on blood sample to indicate the average figure of the body's blood sugar level for the past 2-3months. Figures measured at below 5.7% are considered to be normal. Individuals are said to be prediabetes if the figures lie between 5.7-6.4%. When two separate tests produce a result of 6.5% or higher, it means you have diabetes. Doctors usually recommend the other tests if the A1C is unavailable or if one has certain conditions. One of the conditions that may lead to the recommendation of other test techniques is the possession of a strange hemoglobin form in the blood, commonly referred to as a variant of hemoglobin

Random blood sugar test is another example of the techniques applied. In this case, the levels of blood sugar are measured in millimoles per liter or milligrams per deciliter. No matter what

time you had your last meal, any result equivalent to 200mg/dL and above confirms the presence of diabetes. Existing signs and symptoms confirms the results. Another technique is the fasting blood sugar test. Practical procedures involved are taking a blood sample after an overnight fast and taking measurement. Individuals are considered to be normal when the reading is less than 100mg/dL (5.6mmol/L). Anything between 100 to 125mg/dL is prediabetes. If the result from two separate tests indicates a level of 126mg/dL (7mmol/L), then the patient is considered diabetic.

Lastly, another certified approach is the testing of oral glucose tolerance. It is the least used technique among all, except during pregnancy. One has to go without food overnight before visiting the doctor. During the test period, the individual has to take a sugary drink and then be tested. Any result showing figures less than 140mg/dL is considered normal. Figures that fall between 140-199mg/dL shows prediabetes. If the readings are 200mg/dL or above after two hours of the test, then the patient is confirmed to be diabetic. In the USA, it is a recommended routine to go for screening for type 2 diabetes from age 45 onwards (more so for the overweight individuals), according to the study report by the American Diabetes Association. In cases where the results are normal, an individual should undergo multiple numbers of tests every three years. Borderline results provide an urge to revisit the doctor. It is also recommendable for screening for individuals under the age of 45 and overweight. It is even more advisable if there is the presence of any sign of progressive risk factors of diabetes or other diseases of the heart, such as a historical occurrence of T2DM in the family, a sedentary lifestyle, a sedentary lifestyle, a personal gestational history or blood pressure levels of above 140/90mmHg. The doctors may have to conduct other tests after the diagnosis of diabetes to distinguish between the two major types of diabetes. There exists importance to conduct additional tests provided the fact that it helps in identifying the specific type of diabetes because the two types require different treatments.

After the diagnosis, there should be a check-up of A1C levels between 2-4 times a year. Patients have to discuss the AIC goal with the doctors considered that it might vary with age alongside other components. The American Diabetes Association supports and approves an A1C level lower than seven percent for most people. There may need for change in medication, level of activity, and meal plan in cases of an elevated A1C level. On top of the A1C test, the doctor will conduct a measurement on your blood pressure. The doctor uses samples from the patient's blood and urine sometimes to monitor and assess levels of cholesterol, liver, kidney, and thyroid activities. Also important are feet and regular eye examination.