Lifestyle and diabetes

Diabetes is a disease that afflicts millions of people worldwide each and every year. For many, diabetes has been with them for their entire lives, others however develop diabetes as they grow older. According to the World Health Organization, (WHO, 2011) 346 million people worldwide have diabetes. Approximately 3. 4 million people died from consequences of high blood sugar in 2004 of which more than 80% of diabetes occur in low- and middle-income countries. It was also projected that the number of deaths as a result of diabetes will double between 2005 and 2030. Currently, diabetes imposes a large economic burden on the national healthcare system. Healthcare expenditures on diabetes account for 11. 6% of the total healthcare expenditure in the world in 2010. Diabetes Mellitus Deaths in Antigua and Barbuda reached 11. 68% of total deaths.

This ranks Antigua and Barbuda at #20 in the world (WHO, 2011). Diabetes Mellitus is the second highest cause of death in the country with 7. 08% of the population with this disease. Given the increasing prevalence of sedentary lifestyle and obesity and their correlation with diabetes, it is likely that the number of individuals with diabetes mellitus will continue to increase, and that this will be place a significant burden on the nation. With both the use of electronic sources, this paper will attempt to substantiate the claim that lifestyle changes such as healthy diet, regular physical activity, maintaining a normal body weight and avoiding tobacco use can prevent or delay the onset of type 2 diabetes. It is not intended to outline treatment diabetes but preventative measures of type 2 diabetes.

Signs According to the Merriam-Webster Dictionary, lifestyle is the typical way of life of an individual, group, or culture. Diabetes is a chronic disease

that arises by the high level of sugar (glucose) in the blood. Glucose is a source of fuel for the body. Diabetes can result when the pancreas does not produce enough insulin, or when the body cannot effectively use the insulin it produces. Insulin is a hormone made by the pancreas that enables cells to take in glucose from the blood and use it for energy.

This is associated with long-term damage to the body and failure of various organs and tissues. Three main types of diabetes that occur in human beings are Type 1- which is childhood diabetes, Type 2- which is adult onset diabetes, and Type 3 -which is Gestational diabetes which occurs during pregnancies. Type 1 diabetes is sometimes called insulin-dependent or juvenile diabetes. It is caused from the body’s failure to produce insulin, thus, allowing glucose to enter and fuel them.

Type 2 diabetes is the most common type of diabetes and accounts for approximately 90% of all cases of diabetes. It occurs when either the body does not produce enough insulin or the cells ignore the insulin. Gestational diabetes (GDM) is a state of hyperglycemia which develops during pregnancy and is associated with complications in the period immediately before and after birth.

Symptoms of Diabetes Many of the signs of Type 1 and Type 2 diabetes are similar. The symptoms associated with type 1 diabetes are usually sudden and dramatic while that of type 2 diabetes are often mild or absent making it hard to detect. Individuals can experience different warning signs, and sometimes there may be no obvious warning. Some of the signs of diabetes commonly experienced are:

■ Polydipsia- Unquenchable thirst: High blood sugar levels overload the kidney’s ability to reabsorb the sugar as the blood is filtered to make urine. Excessive urine is made as the kidney spills the excess sugar. The body tries to counteract this by sending a signal to the brain to dilute the blood, which translates into thirst. The body encourages more water consumption to dilute the high blood sugar back to normal levels and to compensate for the water lost by excessive urination.

■ Polyuria- Frequent urination: When glucose level is high, the body tries to get rid the extra sugar in the blood by excreting it in the urine. This can lead to dehydration because a large amount of water is necessary to excrete the sugar. Polyphagia- Increased hunger: In order to compensate for the loss of energy caused by the lack of sugar, the body leads the person to eat more than normal.

■ Weight loss: In diabetes, the body is inefficient and sometimes unable to use glucose for fuel. When the muscles do not received enough glucose to generate growth and energy, the body tries to obtain it from fats. This result in possible weight loss in the uncontrolled diabetic.

■ Fatigue and Tiredness: The body metabolizes fa as a fuel source, it requires the use of more energy. The end result is feeling fatigued or constantly tired.

■ A tingling sensation or numbness in the hands or feet: Excessive amount of sugar in the bold may damage th nerves, causing a tingling sensation and loss of sensitivity in the hands and feet.

■ Blurred vision: The excessive amount of sugar in the body causes the supply of liquid in the crystalline to shrink. This in turn impaired the eyes ability to focus. When the blood sugar lowers, the crystalline liquid returns and vision improves as the lens readjusts itself.

■ Slow-healing wounds; High blood sugar levels prevent white blood cells, which are important in defending the body against bacteria and also in cleaning up dead tissue and cells, from functioning normally. As a result, wounds take longer to heal and become infected more frequently. Frequent infections: Frequent yeast infections, skin infections, and frequent urinary tract infections, may result from suppression of the immune system by diabetes and by the presence of glucose in the tissues, which allow bacteria to grow. Risk Factors

Diabetes may be cause from non-modifiable factors such as: Genetic Susceptibility: Genetics may increase the risk for developing diabetes. Having close family member with diabetes increases the risks for developing the condition.

Environmental factors- Environmental factors may play a role in the developing diabetes. Research shows that diabetes occurs more frequently during the winter when viral infections are more common. Scientists suggested that the” viruses may damage or destroy beta cells or possibly trigger an autoimmune response in susceptible people”. Ethnicity: Diabetes occurs more frequently in African Americans, Native Americans, Hispanic Americans, and Japanese Americans than non-Hispanic whites. The risk of

developing type 2 diabetes mellitus is doubled for blacks or people living in the United States. Type 1 diabetes is more frequent among whites.

Age; The risk of suffering from diabetes mellitus increases with age (from about 45 years). This is because when people get older they tends to be less active, losing muscle mass and increase the portion of fat tissue. Sedimentary lifestyle has been associated with diabetes mellitus and includes:

■ Overweight & Obesity: Excessive weight is high risk factor in diabetes. When a person is overweight or obese, especially with excess abdominal fat, the cells in the body become less sensitive to the insulin that is released from the pancreas and glucose remains circulating in the blood instead of being taken in to the cells to be used as energy. The greater the amount of fat, the higher the degree of insulin resistance.

Physical Inactivity The more inactive we are, the greater the risk of suffering from diabetes. Physical exercise lessens the risk of developing diabetes mellitus up to 50 percent. It also increase muscle mass. Diet: An abundance of sugar, refined flour, fats, meat, sweetened drinks such as soda, alcoholic beverages, and the scarcity of fruits, vegetables and whole grain cereals in the diet increase the risk of developing diabetes mellitus.

■Smoking: Smoking is an independent risk factor for type 2 diabetes. A meta-analysis found that current smokers had a 45% increased risk of developing diabetes compared with nonsmokers Preventative

Simple lifestyle measures are effective in preventing or delaying diabetes. To help prevent diabetes and its complications, people should: 1. achieve and maintain healthy body weight; 2. be physically active – at least 30 minutes of regular, moderate-intensity activity on most days. More activity is required for weight control; 3. eat a healthy diet of between three and five servings of fruit and vegetables a day and reduce sugar and saturated fats intake; 4. avoid tobacco use – smoking increases the risk of cardiovascular diseases.

Physical Exercise Physical exercise is one of the most fundamental procedures in the prevention and therapy of diabetes. Aerobic is recommended as it involves large muscle groups at a moderate level of intensity. Exercise helps control diabetes by: Exercise help to control weight, use sugar as energy source, make the cells more susceptible to insulin, increases blood flow and improve circulation. •Burning excess body fat, thereby, decrease and control weight (decreased body fat results in improved insulin sensitivity) •Improving your body’s use of insulin.