**Case Study on Type 1 Diabetes**

**BBH411W Short Paper 1**

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**Abstract:** The goal of this assignment was to learn about a specific disease, symptoms and risk factors of the disease, how the disease is prognosed, and lastly how and if there is treatment for it. Type 1 diabetes is a big problem around the world for many people. Doctors are still not quite sure what the cause of it is, but they think it could have to do with a person’s genes, which is why much more research needs to be done to help figure out why people get type 1 diabetes.

“The purpose of the writing is to fulfill course requirements for BBH 411W and to stand as a personal writing sample, but the findings should not be treated as generalizable research.”

Each year about 78,000 young teens and adults are diagnosed with a biological disease called type 1 diabetes (also known as insulin-dependent or juvenile diabetes). This is a disease where the body’s pancreas cannot produce insulin, a hormone that is required in the body to convert sugars into energy. Due to this, glucose stays in the body’s blood and causes a person’s blood sugar level to be very high (Type 1 Diabetes: What Is It?, 2012). People cannot recognize this disease right away because it takes time to develop; however, it can come on slowly or all of a sudden (Type 1 Diabetes). Some symptoms people have due to type 1 diabetes include peeing a lot, drinking a lot, losing weight, having blurred vision, and feeling tired all the time (Type 1 Diabetes: What Is It?, 2012).

Doctors and researchers are not quite sure what causes diabetes, but they think it is related to a person’s genes. They think genes are what cause the body’s immune system to accidently destroy the insulin-producing beta cells in the pancreas (Type 1 Diabetes Causes). Also, some statistics have shown that geography is risk factor as well, with the highest incidence of type 1 diabetes in places near the equator. Lastly, it tends to show up in kids and younger teens more than adults (Mayo Clinic Staff).

There once was a 12-year old girl named Katie who went on a cruise with her family and friends in the Caribbean. Midway through the trip she kept feeling tired and exhausted and could not keep up with the other kids. Recently she had lost a lot of weight for no reason at all. So, finally her family and friends told her she should visit the cruise ship doctor because it was not like her to be sitting and tired all of the time. The doctor performed a glucose tolerance test, which showed that she had high levels that were in the diabetic range. Her diabetes was most likely caused by her genes because her grandma had it as well. The doctors told her that she would have to regularly exercise, watch what she eats, prick herself to test her blood levels, and lastly inject or have a pump of insulin to keep her blood levels under control. After a few months, she got the hang of regulating her blood sugar, dieting, and exercising regularly. However, after a few years she started to see the negative health effects that come along with the disease. She started having a lot of blurred vision and having to use the bathroom all of the time. These were some of the first problems that showed from prolonged hypoglycemia.

There are two additional kinds of tests that can be done to diagnose diabetes other than the glucose tolerance test, which are the A1C and the fasting plasma glucose test. If and when people first get diagnosed with type 1 diabetes, they sometimes they feel angry, depressed, or helpless (Diagnosis of Diabetes and Prediabetes, 2014). One study showed that children and young teens with type 1 diabetes have a higher risk for psychiatric disorders due to psychiatric diseases in the family history (Butwicka et. Al, 2015). Type 1 diabetes is livable through adjustments people can make. It is a lifelong challenge and fight that people have to go through. Doctors strive to help these people answer questions they may have and also provide support to them as well. These things include having regular check-ups, getting regular exercise, testing their blood numerous times a day, and lastly injecting themselves with insulin or using an insulin pump (Type 1 Diabetes: What Is It?).

People with type 1 diabetes have an increased risk for other health issues in their life. Some of these health issues include getting an increased chance for nerve damage, kidney damage, foot damage, skin conditions, and more (Diabetes Complications). One study showed that hypoglycemia from diabetes increases the chance for cardiovascular disease and earlier mortality compared to individuals without diabetes (Khunti et. Al, 2014). Another study showed that diabetic retinopathy (damage to blood vessels in the eye due to diabetes; the leading cause of blindness in America) is higher in males than in females, so this gender difference could have more of an affect on males with the disease (Ozawa et. Al, 2014). The better care and treatment people give to their diabetes the less risk they will have for having more problems and premature mortality (Type 1 Diabetes Linked to Lower Life Expectancy in Study, 2015). Although this disease is livable, it is permanent and not yet curable. One big organization called JDRF One Walk aims to raise money for the cure for diabetes. They are currently supporting over 560 million dollars in type 1 diabetes research projects, so hopefully one day they can find the cure so that people do have a better quality of life (JDRF Walk).

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