Type ii diabetes essay

Many Americans die from it every day, but people still scratch their heads when asked about it.

What exactly is diabetes, how serious is it, what are its effects and symptoms, but most importantly how do we control it. Diabetes if the fourth leading cause of death by disease in the United States. Diabetes mellitus prevents the body's cells from using food properly. Humans are equipped with the ability to change what they eat into sugar.

The more common name for that sugar is glucose. Glucose gives us energy and growth. Instead of using this essential sugar, a person with diabetes passes it out of the body in their urine. The words, diabetes mellitus, have roots from other languages. The word diabetes comes from the Greek word meaning " to cross over or pass through.

" Mellitus comes from the Latin word meaning " honey". There are two kinds of diabetes mellitus: Type Type II and I. Type I diabetes is also called insulin – dependent diabetes. It usually occurs in children or young adults. Type I is the form of diabetes caused by the insufficient production of insulin.

In the past, this malformation was known as juvenile diabetes or juvenile-onset diabetes. Most people with Type I aren't diagnosed when they are children or young adults.

Diabetes can occur at any and all ages, so, the term juvenile diabetes isn't really correct. Type II diabetes occurs for more frequently than Type I. It generally affects people who are 40 and older. Another name is adult-onset diabetes.

Unlike Type I patients, most people with Type II don’t have to take insulin injections daily to control the disease. However, a majority of Type 2 diabetics do have to take medication such as Glucophage to control their insulin from going to low or too high. What Type II people suffer from is an inability to use insulin effectively. What is insulin? Insulin is a hormone. Hormones are chemicals that bring messages throughout the body.

Messages are like commands. They tell the body what to do. Humans produce many hormones. The organ that produces insulin is the pancreas. The pancreas is a long, funny shaped organ that lies just behind the stomach.

The function of insulin is to let our bodies use what we consume.

Without insulin we would die. Insulin is like a key, while body cells are like a lock. Insulin allows letting the body cells take in sugar. Lack of insulin means the sugar will build up in a person’s blood stream of entering the cells. When this happens essential body organs do not get fed such as the heart, and the brain.

Too much sugar in the blood is dangerous. More than 13 million Americans have Type II diabetes. What is so stunning is about half of this number don’t know they have the disease. Doctors are still trying to find out what causes Type II diabetes.

Scientists have come to the conclusion that it isn’t an autoimmune disease, but they haven’t linked it to any one virus. The immune system is supposed to attack harmful germs in the body. When someone has an autoimmune

disease, the signals get mixed up. Through scientific research the disease diabetes has been linked back to thousands of years ago.

The ancient Egyptians and Greeks could tell that people had diabetes because they were thirsty and had to urinate frequently. A writer of the time described the disease as “ a melting down of the flesh and limbs into urine.” Others found out that the urine of diabetes tasted sugary. (Taylor) Those with Type II often died of the problems it caused. When it was observed that diabetes was linked to a person’s use of food, doctors concluded that certain diets would help out. At the beginning of the twentieth century, diabetes practiced fad diets composed of oat cure, the milk diet, and the rice cure and potato therapy.

It would sound outrageous today, but a successful practice in prolonging a patients life was the “ starvation diet “ believe it or not. We now know that diabetes starts in our pancreas, but that wasn’t the case about 130 years ago. In 1569, Paul Langerhans, a German medical student, made microscopic observations of tissue from the pancreas. He observed a clumping of the pancreas cells.

Their clumps of cells were later named the islets of Langerhans in honor of his discovery. But when he later identified them no one had yet isolated the hormone insulin or even guessed at the role of these cells producing it. The linkage between diabetes and the pancreas was proven in 1889 by Oscar Minkowski and Joseph Strasburg in France. Von Mering was studying how the body observed fat. He suggested that if the pancreas wasn’t working right some fat being used poorly.

Von Mering attempted to test his hypothesis by operating on a dog and tying off all the ducts leading from its pancreas. What he found out was pancreatic fluids still leaked out. Minkowski, offered to totally remove the dog’s pancreas. The two doctors when testing on the dog had no idea this had something to do with diabetes.

Surgery was performed on the dog. The two doctors went away, while Von Merings assistant was to train the dog to urinate and defecate at specific times and locations.

When Minkowski returned, he found that the animal was urinating all over the place. The assistant couldn’t explain why this was so. Minkowski collected some of the dog’s urine and tested for glucose.

The results for glucose came back in high amounts. The experiment was put on several dogs, and the same thing happened. Minkowski and Von Mering realized they had a breaking discovery; there was evidence that diabetes was related to disturbances of the pancreas. The role of insulin with diabetes wasn’t discovered until about 30 years later. The breakthrough came in 1921, with the discovery of insulin.

Dr. Frederick Banting, a Canadian doctor and Charles Best, a medical student, set out to find out a substance in the pancreas that would lower blood sugar. For a whole summer they worked. They started to identify a substance from the islets of Langerhans. They called it isletin, which was later changed to insulin.

Banting and Best injected a dog diagnosed with diabetes. Very quickly, the dog’s blood sugar level dropped. Repeats were done and the same results surfaced. Some symptoms that these diabetic dogs had were also found in humans as well. The constant need to urinate along with being thirsty were just a few.

Other symptoms that were common in people were hunger, headaches, drowsiness and many diabetics were often over weight. As said before, diets are recommended by doctors to help control a patient’s diabetes. A diet composed of low carbohydrates, low sugar and a low fat diet is recommended. Doctors state that if you are overweight and then lose it, this can help to prevent diabetes.

However, if diabetes runs in your family, you are a likely candidate for developing it. Besides being a disease in itself, diabetes can also cause other types of diseases as well. Various skin lesions such as abscesses, ulcers, eczema and bullous lesions can occur.

These things can occur due to lack of insulin or too much insulin. So it’s very important for the body to maintain its insulin. Besides skin diseases, diabetes can also affect other parts of the body such as the eyes.

Here, diabetes can cause blindness due to glaucoma and retina atrophy. Also, insulin dependent diabetics should often rotate injection sites for if not, the injections can cause indentations, excessive fat and a thickened skin build up. Diabetics can also develop hypoglycemia which is low blood sugar. With Hypoglycemia, there is an overproduction of insulin. This can occur

when a diabetic person has injected too much insulin, eaten too little food, or exercised without extra food.

Any and every insulin-treated patient is at risk for hypoglycemia. Symptoms of hypoglycemia include shakiness, nervousness, hunger, weakness, lethargy, sweaty, dizzy or lightheaded and seizure. Seizures will only occur in those who have sever hypoglycemia.

The opposite of hypoglycemia is hyperglycemia. This is high blood sugar and also a sign that your diabetes is out of control. It can occur if the body does not have enough insulin or cannot use the insulin it has to turn glucose into energy.

Signs of hyperglycemia include; great thirst, dry mouth and a need to urinate often. For insulin-dependent diabetes this can lead to diabetic ketoacidosis, which can cause nausea, vomiting and eventually lead to a coma. Hyperglycemia damages arteries, which can cause heart disease. It also damages tissues, which promotes organ failure especially in the kidneys. So far, we've talked about both Type 1 diabetes and Type 2 diabetes.

We have yet to explore Gestational diabetes. Gestational diabetes occurs only in pregnant women. It's caused by a blockage from hormones made in the placenta, which supplies the fetus with nutrients from the mother. This happens usually about midway through the pregnancy.

Many women who develop Gestational diabetes are more likely to develop diabetes later in life.

Gestational diabetes generally does not cause birth defects. The most common side affect is that a baby born to a mother with Gestational diabetes is usually larger. This is known as macrosomia. Occasionally, the baby grows too large to be delivered through the vagina and a cesarean has to be performed. Children born to women with Gestational diabetes have a higher risk of being obese at adolescence, which in contrast puts them at risk for Type 2 diabetes.

Good dental hygiene is very important for people with diabetes. Controlling your blood glucose is the most important step you can take to prevent tooth and gum problems. Diabetics with poorly controlled blood glucose levels are more likely to get gum infections than nondiabetics. This can also make it more difficult to control your diabetes. Plus, in a diabetic, it takes longer for infections to heal. Make sure you inform your dentist that you have diabetes so he or she will demonstrate proper procedures to help you maintain healthy teeth and gums.

(Diabetes Sourcebook 263) Testing your blood sugar is very important for someone with diabetes.

Some helpful tips are to keep records so your doctor can see how medicines, physical activity, diet, colds, and stress affect your blood sugar each day. There are two major ways to test your blood sugar. Both ways involve taking a small drop of blood from your finger and putting it on the end of a plastic strip. The strip changes color depending on how much sugar is in your blood. With the first method, you compare the color on the strip to one on a chart to get a rough estimate of your level.

The second method consists of taking the strip and inserting it into a meter, which reads the strip. The second method is more accurate. Both methods are more accurate than testing your urine. These methods are common in insulin-dependent diabetes. (Type 1) Type 2 diabetics don’t have to do these methods unless they have difficulty controlling their diabetes with diet, exercise or the proper medications.

(Diabetes Sourcebook 166) Both types of diabetes are unfortunate.

However, Type 2 is easier to control with diet, exercise and medications. Type 1 is more difficult. Treatment includes; insulin shots, controlled diet and carefully controlled glucose testing. Eating the right foods at the right time is very important for treatment.

Type 1 diabetics need to time meals with insulin doses to keep blood glucose levels from getting too high or too low. (Hyperglycemia or Hypoglycemia) Long-term complications become more important as you get older. Diabetes can damage organs through its effects on blood vessels. The organs affected are kidneys, heart, and eye and nerve disease. Kidney disease is the greatest threat to adults with Type 1 diabetes.

The kidney’s small blood vessels filter impurities in the blood for excretion in urine. Diabetes damages these vessels so they cannot perform their filtration duties. Because there is no specific cure for diabetes II, or I the most important aspects of controlling the disease are exercise and diet. The main focus of a diabetic diet is planning, balance, and consistency.

It helps to be consistent when eating so the body can more easily adapt to your diet.

For non-insulin dependent diabetics the most important aspect of the diet is weight management and weight control. 80-90% of diabetics are overweight. Doctors recommend a calorie controlled meal plan and physical activity is a must for type II diabetics. The idea of less fat more protein is a general idea of where to start your diet. There are many foods you should stay away from and some you should eat more frequently.

Skinless poultry, fish, and lean meats are good to eat. Things you should avoid are nuts, butter, margarine, lunchmeat, bacon, sausage, gravy, salad dressing, mayonnaise, hydrated shortening, and it is important to reduce cheese intake. The foods previously listed are just are few of the things to eat and avoid. Each person is different and should use things like the Exchange List provided by the American Diabetes Association to plan their individual diet. The Exchange List groups foods into categories with approximately equal nutrition for each food listed in a group.

This system allows a wide variety of meals so you don’t get bored with your diet, and feel the need to stray from it. The diet you choose as a diabetic should be one you feel comfortable in and one you can eat for the rest of your life. Diabetes doesn’t have a cure yet, but it is up to the diabetic to maintain control. In the following booklet I have listed a few ideas for recipes that diabetes can not only enjoy, but also add to their regular diet. Many Americans die from it every day, but people still scratch their heads when

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