**Type 1 Diabetes**

Type 1 Diabetes used to be referred to as Juvenile Diabetes. Most of the time the disease usually starts in people under the age of 20 but it may occur at any age. It occurs when a person’s immune system destroys the insulin-producing cells or beta cells of the pancreas. Although diabetes can have a genetic predisposition it can also be the result of an attack by a virus or bacteria that affects the pancreas and destroys the insulin hormone.

Insulin is normally secreted by the pancreas. When you eat a meal it breaks down into sugars. This process then stimulates the pancreas to release the insulin. The job of the insulin then is to open the body’s cells to help transport the sugar, and other nutrients, into the body’s tissues. This allows the sugars to function as a source of energy for the organs and muscles. When there is a lack of insulin being produced the sugar cannot get into the cells and stays in the blood causing a high blood sugar or hyperglycemia.

Beta Cells are also secreted in the pancreas. When the insulin transports the sugar from the blood to the organs and the blood levels decrease then the beta cells activate to lower the amount of insulin so one does not develop too low of a blood sugar called hypoglycemia.

When a virus or bacteria affect the pancreas and destroys the production of insulin and beta cells the whole function of blood sugar management is compromised and Type 1 diabetes is a result.

In people with type 1 Diabetes, sugar is not moved into the cells because of the lack of insulin. When the sugar builds up in the blood instead of going into the cells the body’s cells starve for nutrients and the body systems are not able to function effectively. As a result high blood sugar can cause:

**Dehydration**- the build up of sugar can cause an increase in urination to try to clear the sugar from the body. When the kidneys excrete the extra sugar out of the body there is also a loss of a large amount of water causing dehydration.

**Weight loss**- the loss of sugar in the urine means a loss of calories, which provide energy, and therefore many people with high blood sugars lose weight.

**Diabetic Ketoacidosis (DKA)** – when the cells are starved of energy the body breaks down fat cells. Products of this fat breakdown include acidic chemicals called ketones that can be used for energy. Levels of these ketones begin to buildup in the blood causing an increase in acidity. The liver continues to release the sugar it stores to help out but since there is no insulin more sugars pile up in the blood stream. The combination of high excess sugars, dehydration, and acid build up is known as “ketoacidosis” and can be life-threatening if not treated immediately.

**Damage to the body**- over time, the high sugar levels in the blood may damage the nerves and small blood vessels of the eyes, kidneys, and heart.

Symptoms of type 1 Diabetes are often subtle, but they can become severe. They include:

Increased thirst

Increased hunger

Dry mouth

Nausea and occasionally vomiting

Abdominal pain

Frequent urination

Unexplained weight loss

Fatigue

Blurred vision

Heavy, labored breathing

Frequent infections of the skin, urinary tract, or vagina

Signs of an emergency with type 1 diabetes include:

Shaking and confusion

Rapid breathing

Fruity smell to the breath

Abdominal pain

Loss of consciousness (rare)

Many people with type 1 Diabetes live long, healthy lives. The key to good health is keeping your blood sugar levels under control, which can be done with healthy eating, exercise, monitoring blood glucose levels, and providing the body with the needed insulin.

When it is not controlled a number of serious life-threatening problems may develop including:

**Retinopathy** -damage to the eyes or loss of vision

**Kidney damage** -kidney failure

**Poor Circulation and Nerve damage** –decreased sensation and poor circulation to the extremities can result in a significant risk of amputation especially in feet and legs, open sores on the skin that have a decreased ability to heal, or damaged nerves may also lead to digestive problems.

On Saturday April 20th the Juvenile Diabetes Research Foundation or JDRF will be hosting their Diabetes walk as a fundraiser for research. We at Bluestem will have a team represented there. If you wish to join us, or help us raise monetary donations for the organization our team would be appreciate it. You can either call or email us at school or get online (see links below) to make a donation. Our team name is “Lion up.”

Thank you,

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http://walk.kdrf.org/wichitawalk

or

http://www2.jdrf.org/site/TR/Walk-KS/Chapter-KansasCity4227?fr\_id=2139&pg=entry