



Role of Nutrition in Diabetes

Diabetes: what is it?

- Diabetes: Disease whereby the amount of glucose in your bloodstream is dangerously high

Review of carbohydrate digestion

When carbohydrate foods are digested in small intestine:

The sugars glucose and fructose are freed from their bonds that linked them together

Carbohydrate Absorption

- The glucose moves through walls of small intestine and enters bloodstream
- This raises the amount of glucose in the bloodstream
- This alerts the pancreas to release the hormone insulin that removes the excess glucose out of the bloodstream

Glucose feeds body cells

- Insulin takes the excess glucose and feeds all cells in body
- Remember, the glucose is the energy source of our body

Diabetes: what is it?

- Diabetes: Disease whereby the amount of glucose in your bloodstream is dangerously high

Diabetes

- In diabetes glucose levels in blood remain dangerously high because insulin is not doing its job of removing excess insulin.

Diabetes: Types of

- Type 1 diabetes
- Type 2 diabetes
- Gestational diabetes
- Pre-diabetes

Type 1 diabetes

- High glucose levels in blood because pancreas no longer makes the hormone insulin
- If no insulin made, when eat carbohydrates and glucose enters bloodstream increasing glucose levels, insulin is not available to take excess glucose out of bloodstream

Type 2 diabetes

- High glucose levels in blood because although pancreas makes insulin, insulin is not working properly.
- Therefore, insulin is not taking out excess glucose from blood.
- Why isn't insulin working properly?

Gestational Diabetes

- Only affects pregnant women
- Pregnant women can develop high blood glucose levels
- For most, gestational diabetes will go away after giving birth

Pre-diabetes

- Higher than normal glucose levels after eating carbohydrates, but not high enough to be classified as diabetes

Role of Nutrition in Diabetes

- Type 1 Diabetics
 - Must inject insulin to bring blood glucose levels to normal range
 - Limit overall carbohydrate intake
 - Best food sources are from whole natural food sources of carbohydrates high in fiber and low in sugar

Role of Nutrition in Diabetics

- Type 2 Diabetics:
 - Limit overall amount of carbohydrates in diet
 - Limit carbohydrate intake to high fiber low sugar whole natural food sources

What factors increase risk for type 2 diabetes

- Diet high in processed carbohydrates:
high in additional sugars and low in fiber
- Obesity and excess body fat
- Lack of physical activity
- High stress levels

Health problems common in diabetics

- Blindness
- Tooth loss
- Increased risk of heart disease
- Nerve damage resulting in numbness and pain
- Amputations of toes, feet, lower leg
- Increased risk of stroke
- Kidney failure

Type 1 Diabetes

- Pancreas no longer makes insulin
- Why?
- Body attacks pancreas so no longer makes insulin
- Why?
- Unknown reason
- This is called an autoimmune disease when body attacks self

Type 1 Diabetes

- Pancreas does not make insulin
- Type 1 diabetic needs to inject insulin after eat meal
- If does not inject insulin, person can die
- Type 1 diabetes is not reversible, you have it for life

Type 2 Diabetes

- Pancreas does make insulin, but our body cells resist using it properly.
- Why?
- Unknown
- Type 2 diabetics can manage their diabetes through diet, physical activity, reducing stress levels.
- May be reversed through lifestyle measures in some cases.

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