

## Pancreas and Diabetes

EQ: Why are there different types of diabetes?

- I. Pancreas
  - a. The pancreas is a large gland behind your stomach that helps the body to maintain healthy blood sugar (glucose) levels.
  - b. Contains islands of cells called the Islets of Langerhans which secrete glucagon and insulin
  - c. **Glucagon**
    - i. stimulates the liver to break down glycogen
    - ii. raises blood sugar concentration
  - d. **Insulin**
    - i. decreases blood sugar concentrations
    - ii. affects the uptake of glucose by cells
- II. Diabetes
  - a. Diabetes Mellitus
    - i. results from an insulin deficiency
    - ii. blood sugar rises (hyperglycemia) and excess is excreted in the urine.
    - iii. Type I
      1. insulin dependent diabetes mellitus
        - a. used to be called juvenile onset diabetes
      2. often caused by inherited immune disorder that destroys pancreatic cells
    - iv. Type II – Non insulin dependent
      1. Used to be called mature onset diabetes
        - a. We used to see it mostly after the age of 40
      2. often individuals are overweight
      3. often be controlled with diet and exercise
  - b. Hypoglycemia
    - i. occurs if blood sugar levels become too low
    - ii. can be cured with direct injection of glucose or with eating something high in sugar
    - iii. This is why diabetics often have candy.
  - c. Diabetes Insipidus
    - i. an uncommon condition that occurs when the kidneys are unable to conserve water as they perform their function of filtering blood.
    - ii. an uncommon condition that occurs when the kidneys are unable to conserve water as they perform their function of filtering blood.
    - iii. Symptoms
      1. Excessive thirst
        - a. May be intense or uncontrollable
      2. May involve a craving for ice water
      3. Excessive urine volume