# DIABETES

1. DIABETES – Inability of the pancreas to produce insulin, or the body is unable to use insulin correctly (*affects the way body cells convert sugar into energy)

2. FUNCTION OF INSULIN: "Opens doors" to the cells and pushes in sugar.

*Pancreas is part of the endocrine system, therefore insulin is a hormone. Endocrinology is the study of hormones.
*Artificial insulin is from pigs and can be taken as an injection, pill, or through a diabetic pump.
*Blood sugar = GLUCOSE

3. 3 TYPES OF DIABETES:

A. Type 1: (5-10% of all cases) Autoimmune disease (immune system mistakenly attacks itself)
*Needs Insulin in daily doses through injections or insulin pump

B. Type 2: (90-95% of cases) Also called "adult onset," but is becoming more and more prevalent in youth and teens; Can sometimes be regulated through diet/exercise, or by taking a pill

C. Gestational: Temporary diabetes condition caused during pregnancy

4. EFFECTS OF DIABETES ON THE BODY

A. Lack of energy

B. Long-term results if the disease is not treated include: blindness, kidney failure, amputations, heart disease and stroke (circulatory system is greatly affected)

5. SYMPTOMS OF DIABETES

A. Frequent urination

B. Excessive Thirst

C. Unexplained weight loss

D. Blurry vision

E. Lack of energy (fatigue)

F. Irritability

G. Extreme hunger

H. Slow healing of sores; More infections than usual

I. Tingling in hands/feet

## 6. TESTING FOR DIABETES – Blood test (Glucose levels) – Urine test can provide useful indicators of the presence of diabetes in some cases

3 Common tests for diagnosis of diabetes:

- Fasting plasma glucose test - A person is said to have diabetes if his or her fasting blood sugar level is higher than 126 mg/dL after not eating -- fasting -- for eight hours.
- Oral glucose tolerance test - After fasting for eight hours, a person is given a special sugary drink. That person is said to have diabetes if two hours after the drink he or she has a sugar level higher than 200.
- Randomly checked blood sugar level - If it is greater than 200, with symptoms of increased urination, thirst, and/or weight loss, that person is said to have diabetes. (With this test, a fasting sugar level or oral glucose tolerance test will be needed to confirm the diagnosis.)

## 7. GLUCOSE LEVELS:

*Vary depending on when a person has last ingested food/drink.

A healthy fasting glucose level is less than 100mg/dL after fasting (Perhaps 70-80, and can be lower for those who are in good health in some cases) and less than 140 mg/dL 2 hours after eating. *Most people who are not diabetic will not drop below 60 even with prolonged fasting – liver works to keep sugar levels normal turning fats/muscle into usable sugars

## 8. LOW BLOOD SUGAR (HYPOGLYCEMIA):

-Shock symptoms caused by too much insulin, too little food, or too much exercise

## 9. HIGH BLOOD SUGAR (HYPERGLYCEMIA):

-Diabetic symptoms cause by too much food/alcohol (carbs/sugars), too little insulin, not enough exercise
-Patient will need more insulin to regulate and lower blood sugar levels