



RAMA
UNIVERSITY

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FACULTY OF NURSING



M.S.N 1ST UNIT-8TH

DIABETES MELLITUS

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DIABETES MELLITUS

Definition: It is a endocrine disorder in which condition increase blood glucose level in the blood that is called diabetes mellitus.

Types of diabetes mellitus:

- 1: Insulin dependent diabetes mellitus
- 2: Non insulin dependent diabetes mellitus
- 3: Gestational diabetes mellitus

TYPE-1 INSULIN DEPENDENT DIABETES MELLITUS

- **Type 1 diabetes is an autoimmune disease. This means it begins when the body's immune system mistakenly attacks other cells in the body. In type 1 diabetes, the immune system destroys the insulin-producing cells (called beta cells) in the pancreas. This leaves the person with little or no insulin in his or her body. Without insulin, glucose accumulates in the bloodstream rather than entering the cells. As a result, the body cannot use this glucose for energy. In addition, the high levels of blood glucose cause excessive urination and dehydration, and damage the body's tissues.**

TYPE-2 NON INSULIN DEPENDENT DIABETES MELLITUS

- **Type 2 diabetes occurs when your body's cells become less responsive to insulin's efforts to drive glucose into the cells, a condition called insulin resistance. As a result, glucose starts to build up in the blood.**
- **In people with insulin resistance, the pancreas "sees" the blood glucose level rising. The pancreas responds by making extra insulin to try to usher the glucose into the cells. At first, this works, but over time, the body's insulin resistance gets worse. In response, the pancreas makes more and more insulin. Finally, the pancreas gets "exhausted." It cannot keep up with the demand for more and more insulin. As a result, blood glucose levels rise and stay high.**
- **Type 2 diabetes is also called adult-onset diabetes. That's because it almost always used to start in middle or late adulthood. However, more and more children and teens are now developing this condition.**

GESTATIONAL DIABETES MELLITUS

- A form of high blood sugar affecting pregnant women.

Causes of diabetes mellitus: Receptors problem
Obesity
Old age
Genetical cause
Panceas abnormalities

SYMPTOMS:

- When diabetes does cause symptoms, they may include:
 - excessive urination sweating
 - trembling
 - dizziness
 - hunger
 - confusion
 - seizures and loss of consciousness
 - excessive thirst
 - leading to drinking a lot of fluid
 - weight loss
- *Diabetic foot
- *Decrease wound healing

DIAGNOSIS

- **Diabetes is diagnosed through blood tests that detect the level of glucose in the blood.**
- **Fasting plasma glucose (FPG) test.** A blood sample is taken in the morning after you fast overnight. A normal fasting blood sugar level is between 70 and 100 milligrams per deciliter (mg/dL). Diabetes is diagnosed if the fasting blood sugar level is 126 mg/dL or higher.
- **Oral glucose tolerance test (OGTT).** Your blood sugar is measured two hours after you drink a liquid containing 75 grams of glucose. Diabetes is diagnosed if the blood sugar level is 200 mg/dL or higher.
- **Random blood glucose test.** A blood sugar of 200 mg/dL or greater at any time of day, combined with symptoms of diabetes, is sufficient to make the diagnosis.
- **Hemoglobin A_{1c} (glycohemoglobin).** This test measures your average blood glucose level over the prior two to three months. Diabetes is diagnosed if the hemoglobin A_{1c} level is 6.5% or higher.

PREVENTION

- **Type 1 diabetes cannot be prevented.**
- **You can decrease your risk of developing type 2 diabetes.**
- **If a close relative—particularly, a parent or sibling—has type 2 diabetes, or if your blood glucose test shows "pre-diabetes" (defined as blood glucose levels between 100 and 125 mg/dL), you are at increased risk for developing type 2 diabetes. You can help to prevent type 2 diabetes by**
- **maintaining your ideal body weight.**
- **exercising regularly—such as a brisk walk of 1-2 miles in 30 minutes—at least five times a week, even if that does not result in you achieving an ideal weight. That's because regular exercise reduces insulin resistance even if you don't lose weight.**

- taking medication. The medication metformin (Glucophage) offers some additional protection for people with pre-diabetes.
- If you already have type 2 diabetes, you can still delay or prevent complications by doing the following.
- Keep control of your blood sugar. This helps reduce the risk of most complications.
- Lower your risk of heart-related complications. Aggressively manage other risk factors for atherosclerosis, such as:
 - high blood pressure
 - high cholesterol and triglycerides
 - cigarette smoking
 - obesity

Treatment

- IDDM: Provide Insulin
- NIDDM: Tab Metformine