

# DIABETES MELLITUS

- is a chronic disorder of carbohydrate, protein, and fat metabolism resulting from insulin deficiency or abnormality in the use of insulin



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# Types

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## 1. Type I

- ✓ formerly known as Insulin - Dependent Diabetes Mellitus (IDDM)
- ✓ Autoimmune (Islet cell antibodies)
  - Early introduction of cow's milk and cereals
  - Intake of medicine during pregnancy
  - Indoor smoking of family members
- ✓ destruction of beta cells of the pancreas → little or no insulin production
- ✓ requires daily insulin admin.
- ✓ may occur at any age, usually appears below age 15



# Pre-Diabetes

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- Impaired fasting glucose (IFG)
  - FPG- 100-125mg/dL
- Impaired glucose tolerance (IGT)
  - OGTT 140-199mg/dL
- HbA1c 5.7-6.4%



## **2. Type II**

- ✓ formerly known as **Non Insulin-Dependent Diabetes Mellitus (NIDDM)**
- ✓ probably caused by:
  - disturbance in insulin reception in the cells
  - ↓ number of insulin receptors
  - loss of beta cell responsiveness to glucose leading to slow or ↓ insulin release by the pancreas
- ✓ occurs over age 40 but can occur in children
- ✓ common in overweight or obese
- ✓ w/ some circulating insulin present, often do not require insulin

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## Clinical Manifestations ( Signs and Symptoms)

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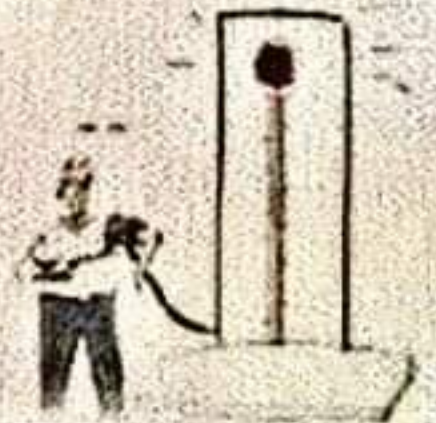
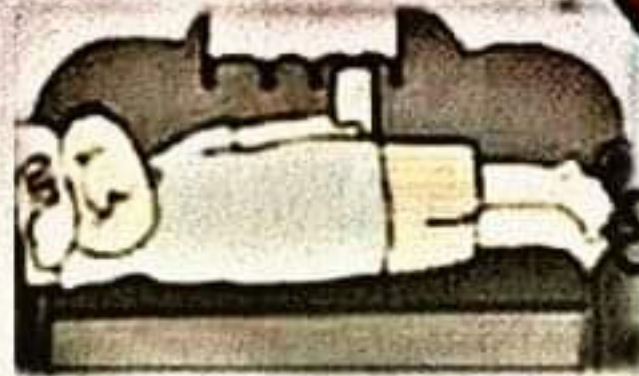
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- Polyuria
- Polydipsia
- Polyphagia
- weight loss
- nausea / vomiting
- changes in LOC (severe hyperglycemia)  
(sleepiness, drowsiness → coma)
- recurrent infection, prolonged wound healing
- altered immune and inflammatory response, prone to infection (glucose inhibits the phagocytic action of WBC → resistance)
- genital pruritus - (hyperglycemia and glycosuria favor fungal growth : candidal infection - resulting in pruritus, common presenting symptom in women)
- weakness
- fatigue
- ↑ blood sugar / glucose level
- (+) glucose in urine (glycosuria)



# Risk Factors

- Obesity DRx ToniSingh
- Race
- History of CVD
- HTN
- Physical inactivity
- Familial history
- Polycystic Ovary Syndrome
- Gestational Diabetes





# Diagnostics

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# Fasting Plasma Glucose

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## Fasting Plasma Glucose Tolerance Test



**No food or drink  
8 to 12 hours  
prior to test**



**Blood is drawn and  
tested for the level  
of glucose in blood**

**High glucose level = potential diabetes**



# Oral Glucose Tolerance Test (OGTT)

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## Oral Glucose Tolerance Test



**No food or  
drink 8 to 12  
hours prior  
to test**



**Drink glucose**



**Blood is tested  
two hours later**

**High glucose level = potential diabetes**