



A metabolic disease associated with elevated levels of glucose in blood; due to inadequate production of insulin hormone or inadequate sensitivity of cells to insulin action.

**TYPES**

- Type 1 Diabetes**  
Body does not produce insulin
- Type 2 Diabetes**  
Unable to use insulin
- Gestational Diabetes**  
Not able to use or meet all the insulin needs of pregnancy

**SYMPTOMS**

**No Specific Symptoms In General**

**HYPOGLYCEMIA**  
**BLOOD GLUCOSE LEVEL BECOMES TOO LOW**

- Excessive Sweat
- Hungry
- Headache
- Trouble in concentration
- Fast or irregular heart beat
- Blurred vision
- Dryness or tingling lips
- Seizures or convulsions (jerky movements)
- Unconsciousness

**HYPERGLYCEMIA**  
**BLOOD GLUCOSE LEVEL BECOMES TOO HIGH**

- Feeling thirsty
- Feeling tired or weak
- Headaches
- Urinating often
- Blurred vision

**GOALS**

**GOALS OF MNT**

- Normal or as near normal glucose, lipids & blood pressure
- Prevent or slow down complications
- Address individual nutrition needs
- Maintain pleasure of eating with limited food choices

**TREATMENT**

- EAT THE HEALTHIEST FOODS IN MODERATE AMOUNTS AND STICK TO REGULAR MEAL TIMES
- FOLLOW A HEALTHY-EATING PLAN THAT'S NATURALLY RICH IN NUTRIENTS AND LOW IN FAT AND CALORIES

**DIET**

Choose foods that are lower in calories, saturated fat, trans fat, sugar, and salt.

**MEDICINE**

Work up to 30 minutes or more of physical activity on most days of the week.

**EXERCISE**

Take medicines for diabetes even when you feel good or have reached your optimum blood glucose.

**EAT SMART**

**MANAGE WEIGHT**

**TIPS FOR SUCCESS**

“Healthy Life style & Right Dietary Modifications helps to prevent **DIABETES**”

**MOVE MORE**

**DON'T SMOKE**

**RISK**

**RISK FACTORS**

- Improper Diet
- Family History
- Obesity
- Physical Inactivity
- Tobacco use
- GDM History
- Birth Weight

**TRACK**

< 100mg/dl	Healthy range
100- 125 mg/dl	Pre Diabetes
>126 mg/dl	Diabetes Mellitus

**HEALTHY**

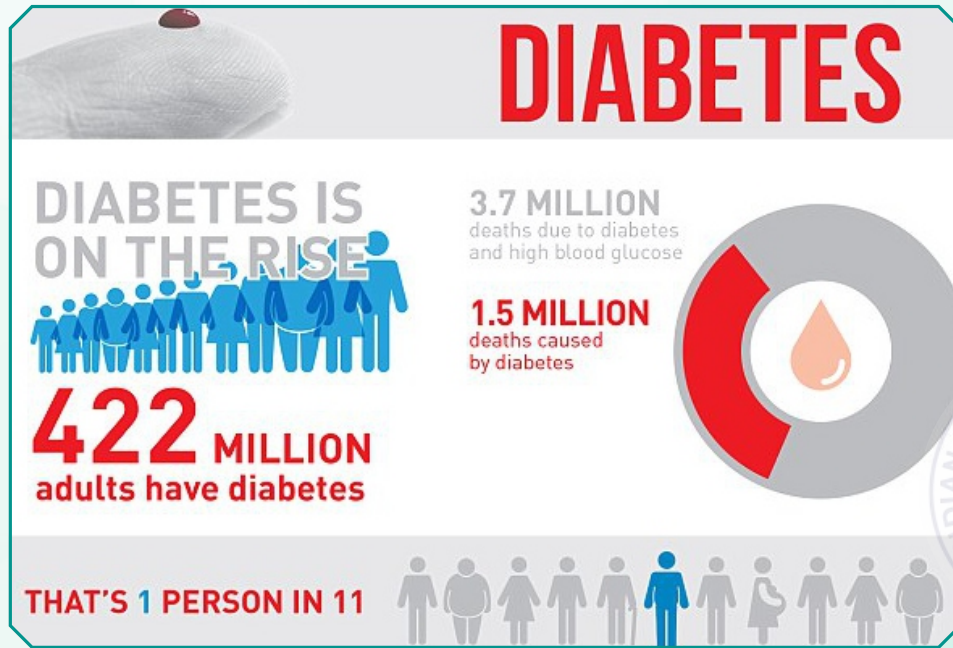
**MEDICAL NUTRITION THERAPY (MNT)**

- Emphasize on a variety of nutrient dense foods in appropriate portion sizes
- Count on carbohydrates from fruits, vegetables (non starchy), whole grains, legumes and low-fat milk
- Encourage to choose fiber rich foods (>5 g fiber/serving)
- Limit saturated fat to <7% of total calories and intake of trans fat should be avoided
- Focus on good quality proteins
- Minimize added sugars and refined grains
- Choose whole foods over highly processed foods to the extent possible
- Replace sugar-sweetened beverages (SSBs) with water as often as possible
- Sugar alcohols and non nutritive sweeteners are safe when consumed within the daily intake levels
- Practice mindful eating
- A “one-size-fits-all” eating plan is not evident for the prevention or management of diabetes

Follow a diet plan that's moderate in carbohydrate, low in fat and calories, and nutrient rich

# WHAT IS DIABETES?

\* Blood glucose is the main source of energy and comes from the food you eat. Insulin, a hormone made by the pancreas helps glucose from food get into your cells to be used for energy. When body does not make enough - or any-insulin or does not use well ,glucose stays in blood and too much glucose in blood is known as diabetes.



### Type 1 Diabetes

Body does not produce insulin



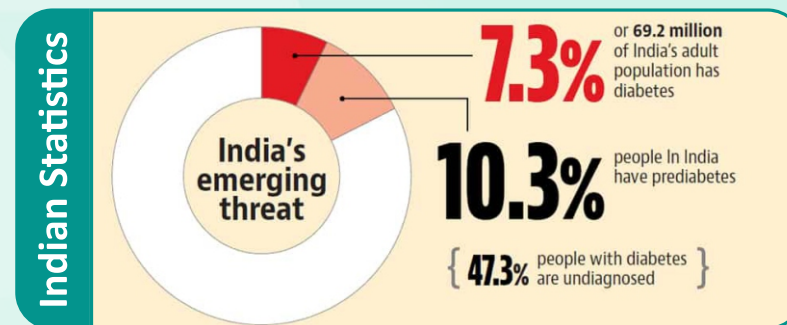
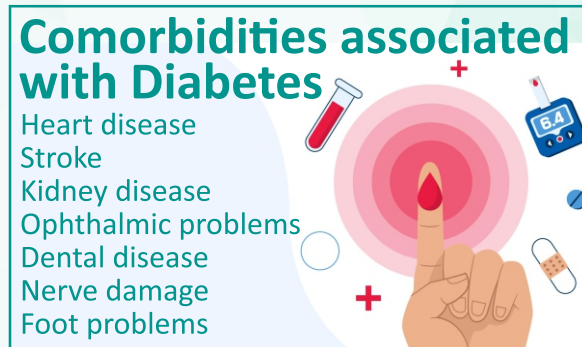
### Type 2 Diabetes

Unable to use insulin



### Gestational Diabetes

Not able to use or meet all the insulin needs of pregnancy



# CHRONIC COMPLICATION OF DIABETES

### DIABETIC EYE DISEASE

In most countries diabetic continues to be the leading cause of blindness in the working age population

### DIABETES AND CARDIOVASCULAR DISEASES

Cardiovascular diseases account for, from one -third half of all, diabetes - related deaths

### DIABETES ORAL HEALTH

Diabetes and poor oral health negatively affect each other in two way relationship

### DIABETIC KIDNEY DISEASE

Diabetes hypertension (high blood pressure) of combination of both, cause 80% of end stage kidney disease globally

### DIABETES - RELATED COMPLICATION OF PREGNANCY

An estimated 15.8(20.4 million) of live births were affected by hyperglycemia in pregnancy in 2019

### NERVE AND / OR VASCULAR DAMAGE AND DIABETIC FOOT COMPLICATION

Diabetic foot and lower limb complications affect between 40 and 60 million people with diabetes globally

# WHAT CAUSES DIABETES?

**TYPE 1:** Auto Immune Response

Idiopathic

**TYPE 2:** Improper Life style

Genetics

Obesity

Insulin resistance

Hormonal imbalance

Medicines

## GLUCOSE TESTING AND INTERPRETATION

NORMAL	PRE DIABETES	DIABETES
FPG <100 mg/dl	IFG >_ 100-125 mg/dl	FPG >_126 mg/dl
2 hour PG -<140md/dl	IGT 2 HourPPG >_ 140-199 mg/dl	2 hour PPG >_ 200mg/dl Random PPG >_ 200 mg/dl
HbA1C <5.5%	5.5% TO 6.4%	> 6.5%

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