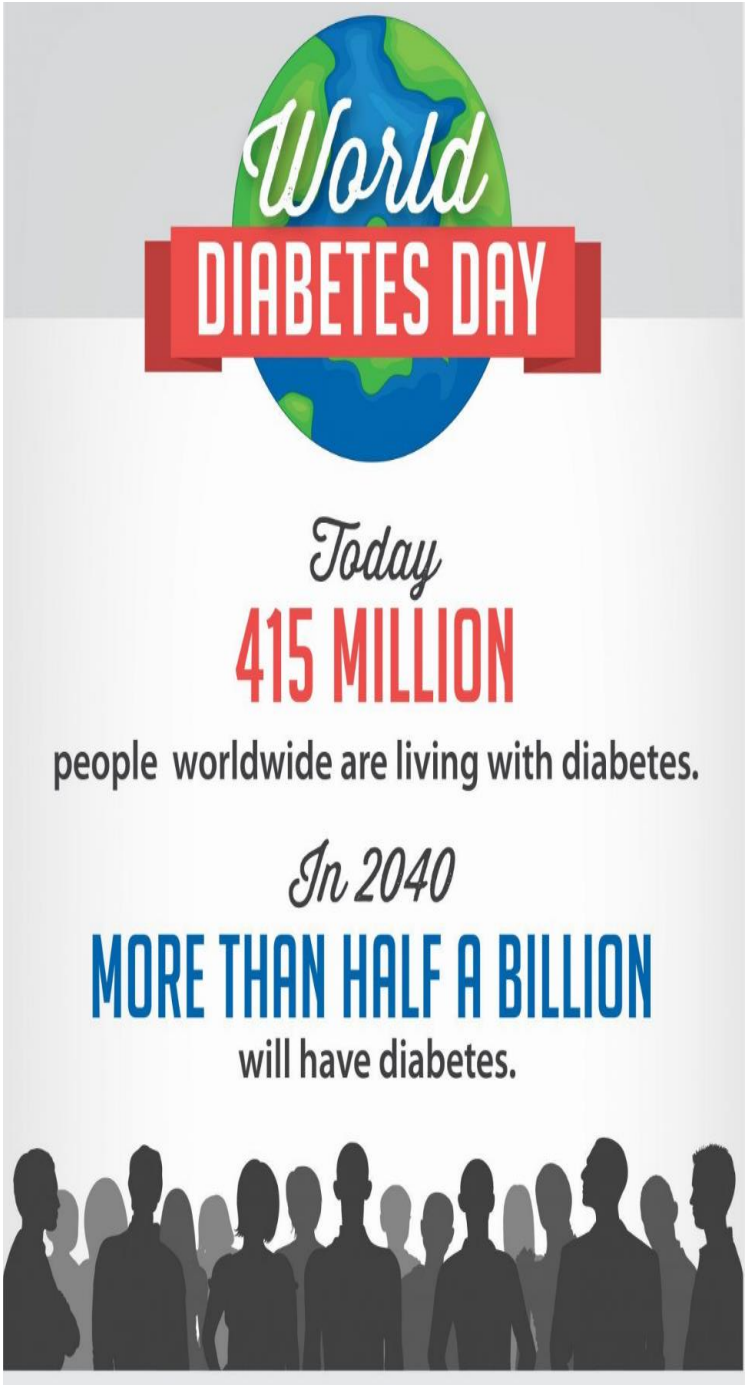
# Access to Diabetes care:
# If not now, when?




## INFORMATION BOOKLET FOR HEALTHCARE PROVIDERS

**Department of Preventive & Social Medicine**

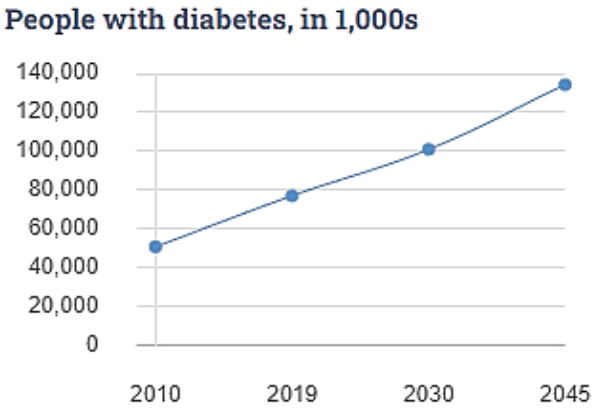
**All India Institute of Hygiene & Public Health**

**110, Chittaranjan Avenue, Kolkata-700073**

# WHAT IS DIABETES MELLITUS?

Diabetes mellitus is a group of metabolic diseases in which the person has high blood glucose (blood sugar) level either due to inadequate insulin production or because the body's cells do not respond properly to insulin or both.

There is a rising trend of diabetes mellitus (DM) throughout the world to which *India* is no exception. The diagram on the right side shows the estimates of people living with diabetes (age group= 20-79 yrs.) in India: past, present and future prediction

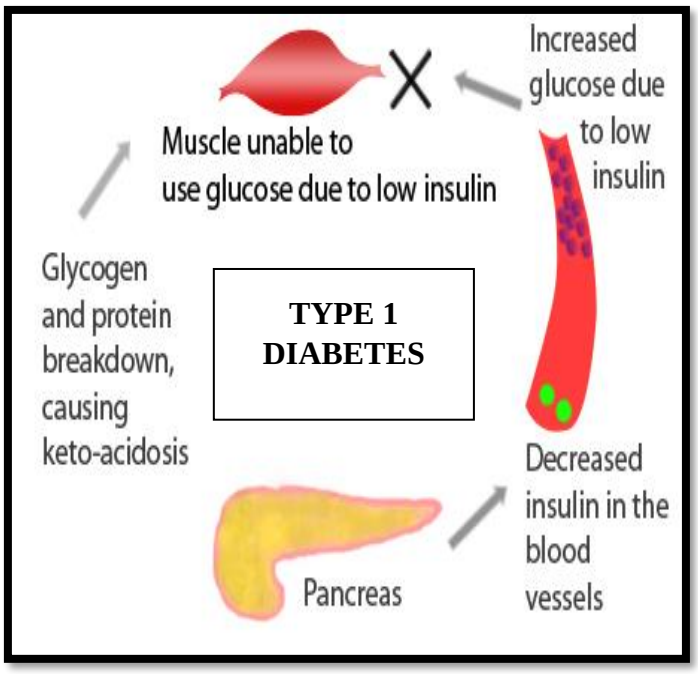


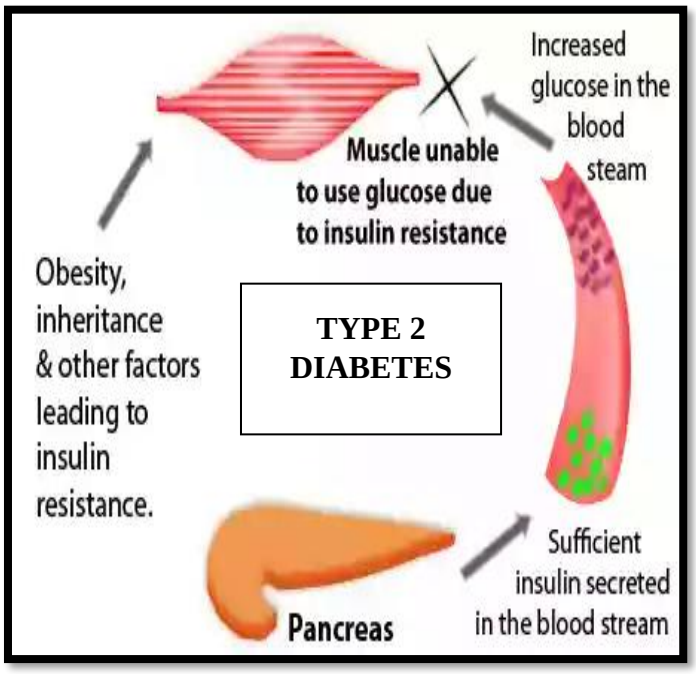

*'Diabetes'* in Greek, means 'Siphon' or 'to pass through' and 'Mellitus' in Latin, means 'Honeyed or Sweet'

Source: India Diabetes report 2010-2045, IDF Diabetes Atlas, 9th edition. 2019.

# PATHOPHYSIOLOGY OF DIABETES

Diabetes Mellitus is classified on the basis of pathogenic process that leads to Hyperglycaemia.




**Type 1 Diabetes:** It is due to pancreatic islet beta cell destruction by an autoimmune process.

**Type 2 Diabetes:** It is due to insulin resistance with a defect in insulin secretion.

| Types of Diabetes Mellitus | Causes | Risk Factors | Characteristics |
|---|---|---|---|
| Type 1 | Beta Cell destruction leading to complete Insulin deficiency | 1.Genetics (Family History)<br>2.Viral Infection | 1. Usual onset before the age of 25 yrs.<br>2. Abrupt onset of symptoms<br>3. Dependent on exogenous insulin to sustain life |
| Type 2 | Heterogeneous group of disorders characterized by variable degrees of insulin resistance, impaired insulin secretion, increased glucose production | 1.Family History of DM<br>2.Obesity (BMI≥25 Kg/$m^{2)}$<br>3.Physical inactivity<br>4.History of Gestational Diabetes Mellitus (GDM) or delivery of baby > 4 kg)<br>5.History of cardiovascular disease<br>6.Polycystic Ovary Syndrome | 1. Age of onset after 25 years<br>2. Onset is gradual<br>3. Features of insulin resistance |
| Gestational Diabetes Mellitus (GDM) | Diabetes that occurs among women during pregnancy | 1.Obesity<br>2.GDM in previous pregnancy<br>3.Previously delivered baby of weight >4 kg<br>4.PCOS<br>5.Diabetes in immediate family members | 1. It is associated with risk of complications during pregnancy and delivery<br>2. Children of women with Gestational Diabetes are at an increased risk of Type 2 diabetes in future |

**Symptoms of Diabetes:**

- Increased frequency of urine
- Increased thirst
- Weight loss in spite of increased appetite
- Tiredness, weakness
- Recurrent urogenital infection
- Delayed wound healing

**More than half of all patients with DM will have no symptoms at all. Diabetes may remain asymptomatic for many years before it is detected*

**Criteria for diagnosing Diabetes Mellitus (as per World Health Organization 2019)**

| Measurement | Diagnostic cut-off value |
|---|---|
| Fasting plasma glucose | ≥126 mg/dL (7 mmol /L) |
| 2-hour post-load venous plasma glucose | ≥200mg/dL (11.1 mmol/L) |
| Random plasma glucose | ≥200mg/dL (11.1 mmol/L) in the presence of signs and symptoms |
| HbA1c | ≥6.5% (48 mmol/mol) |

## Why is raised blood glucose dangerous?

**Prolonged level of raised blood glucose may lead to the following complications**

| Emergency conditions | Long term complications |
|---|---|
| 1. Hyperglycaemic Coma<br>2. Diabetic Keto Acidosis<br>**3.** Hypoglycaemia | 1. Diabetic Nephropathy<br>2. Diabetic Retinopathy<br>3. Diabetic Neuropathy<br>4. Diabetic Foot Disease<br>5. Stroke<br>6. Infection |

## Why care for diabetes is important?

Care for diabetes is important to prevent or delay complications and maintain a good quality of life. This requires control of blood glucose, cardiovascular risk factor management, regular follow-up and encouragement of the individual to maintain self-care activity.

# CARE OF TYPE 2 DIABETES MELLITUS

1. **Glycaemic Control:** Glycaemic control is very much important to prevent complications and further progression of disease. Self-monitoring of blood glucose by glucometer should be taught to patients.

2. **Medication adherence:** For proper control of blood glucose, medications (either oral medications or insulin injections) should be taken as prescribed by the doctor

3. **Regular follow-up:** According to ICMR guidelines (2018), the following recommendations need to be followed for proper monitoring and prevention of future complications in people living with diabetes:
   - Fasting plasma glucose (FPG & 2hr post prandial plasma glucose (PPPG) at least once a month
   - HbA1c at a frequency of at least 6- 12 months
   - Screening for long term complications at least once a year

   People with diabetes need to be counselled regarding the importance of regular follow-up at the health facilities as prescribed by the doctor

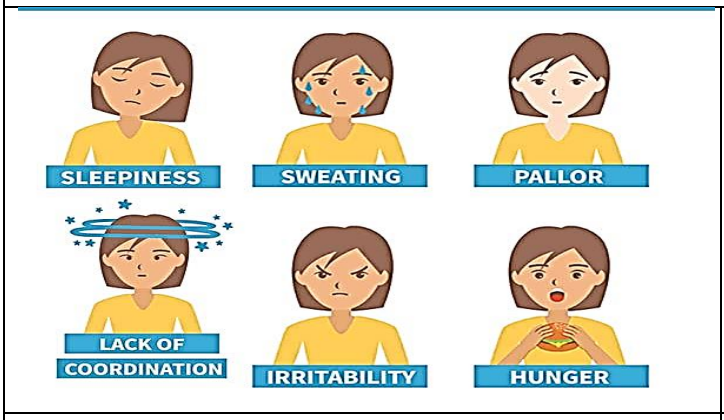
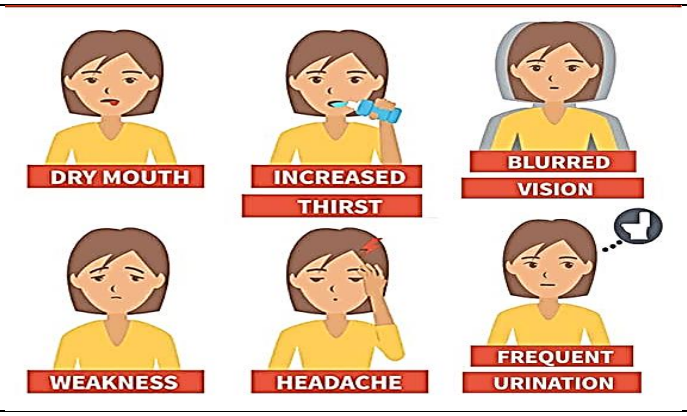
**The following issues should be discussed with people living with Type 2 diabetes at the point of care:**

- ✓ Glycaemic Control
- ✓ Medication adherence
- ✓ Regular follow-up
- ✓ Lifestyle measures
- ✓ Management of co-morbidities
- ✓ Identify hypoglycaemia and hyperglycaemia
- ✓ Heart care
- ✓ Foot care
- ✓ Eye care
- ✓ Counselling of family members

4. **Lifestyle measures:** Diet, exercise, de-addiction, stress management [*please refer to the section on prevention of diabetes mellitus on* ***page no. 10-12***]

5. **Management of co-morbidities:** People with diabetes having associated hypertension, obesity, cardiovascular diseases or any other co-morbidities should strictly adhere to their prescribed treatment regimen and undergo follow-up visits to their doctor.

## 6. Identify the signs and symptoms of hypoglycaemia and hyperglycaemia

| Hypoglycaemia | Hyperglycaemia |
|---|---|
| **Signs and symptoms** | |
|  |  |
| **Management:**<br>1. Check blood sugar<br>2. If patient can eat, give sugar or sweets to eat<br>3. If patient is unconscious, give I.V dextrose | **Management**<br>1. Check blood sugar<br>2. Start intravenous fluid<br>3. Give S.C or I.V insulin as advised by doctors |

7. **Heart care:** Over time, high blood sugar can damage the blood vessels and nerves supplying the heart. Healthy lifestyle changes like following a healthy diet, maintaining body weight, staying physically active and reducing stress can help lower the risk for heart disease or prevent it from getting worse.

**Take Care of Your Heart**

Follow a healthy diet

Aim for a healthy weight

Get active

Manage your ABCs

Manage stress

**Manage your ABCS**

**A**: Get a regular HbA1c test to measure your average blood sugar over 2 to 3 months; aim to stay in your target range as much as possible

**B:** Try to keep your Blood pressure below 140/90 mmHg or as per the target your doctor sets

**C.** Manage your Cholesterol levels

**S:** Stop Smoking and don't start

Source: www.cdc.gov

8. **Foot care:**

| ✓ DO'S | DON'Ts (×) |
|---|---|
| • Inspect the foot daily using mirror<br>• Wash feet daily in lukewarm water, also in between toes<br>• Apply moisturizing lotion to feet after drying<br>• Have your foot checked at each clinic visit<br>• Inspect footwear daily for defects/foreign body<br>• Change foot-ware regularly | • Walk barefoot<br>• Smoke/consume excess alcohol<br>• Exposure to extreme temperature<br>• Use hot fomentation<br>• Use chemical agents, corn caps or blades to remove corns or callus<br>• Wear new foot-wear for more than few hours a day<br>• Neglect any minor foot lesions |

## 9. Eye care

- All diabetic patients should get their eyes checked at least once a year by a trained ophthalmologist even if there are no eye symptoms and the vision is 6/6

## 10. Counselling of family members

- Most diabetics need to make **some major lifestyle changes. The family members must be counselled to facilitate him/her to make the changes**
- Diabetics are more **prone to depression and stress**. Help him/her cope with the stress.
- Family members should be encouraged to follow the **same dietary pattern** for providing support to the diabetic person
- **Emphasize the importance of exercise to the family members**. **Relatives can make exercising easier by agreeing to exercise together**, although each diabetic should speak to their healthcare adviser in order detect type of exercise will suit his/her condition
- Counsel them about importance of regular and timely follow-up visits to the doctor so that they can emphasize the same to the patient

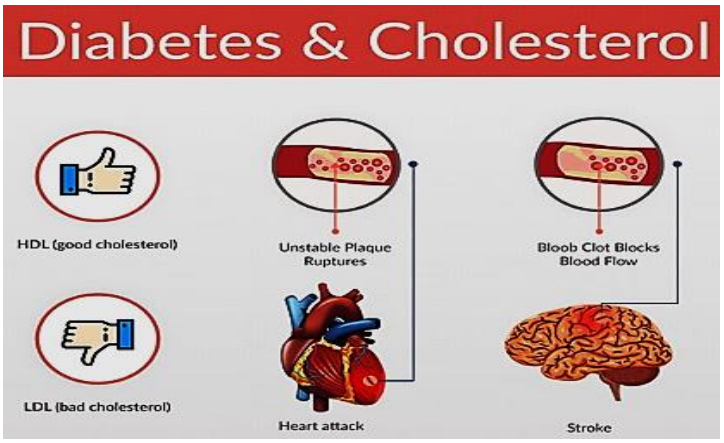
## Checklist for prevention of diabetes complications:

**Every 3-6 months** the patient should have a physical review by the physician for:

- ✓ Testing blood sugar levels
- ✓ Testing glycosylated haemoglobin levels (HbA1C)
- ✓ Examine feet for sensations and circulation; also, for calluses, dryness, sores, infections, injuries
- ✓ Check blood pressure
- ✓ Help the patient to quit usage of tobacco and alcohol, if he/she continues to use
- ✓ Reinforcement of life style measures- increase physical activity levels and improve diet (*For details please refer to the section on prevention of diabetes in* ***page no. 10-12***)

| Targets for metabolic control in diabetes (ICMR guidelines, 2018) | | | |
|---|---|---|---|
| **Measurements** | **Ideal** | **Satisfactory** | **Unsatisfactory** |
| Fasting Plasma Glucose (mg/dl) | 80 -110 | 111 - 125 | > 125 |
| 2-hour Postprandial Glucose (mg/dl) | 120 - 140 | 141 - 180 | > 180 |
| Blood pressure (mm Hg) | < 130/80 | < 140/90 | > 140/90 |
| Body Mass Index (kg/m$^2$) | 20 – 23 | 23.1 - 25 | > 25 |
| Waist (cm) | Men < 90, Women < 80 | - | - |
| Glycated Haemoglobin [HbAlc] (%) | < 7 | ≥ 7 - < 8 | ≥8 |

| Targets for lipid control in diabetes (ICMR guidelines, 2018) | |
|---|---|
| Total Cholesterol (mg/dl) | < 200 |
| HDL Cholesterol (mg/dl) | > 40 for men<br>> 50 for women |
| LDL Cholesterol (mg/dl) | < 100 |
| Non-HDL Cholesterol(mg/dl) | <130 |
| Triglycerides (mg/dl) | <150 |




**Source: www.thediabetescouncil.com**

# CARE OF TYPE 1 DIABETES MELLITUS

## 1. Treatment with insulin

Type 1 diabetes (usual affects children and adolescents) is generally treated with combinations of regular and NPH (neutral protamine Hagedorn) insulin or synthetic insulin analogues.

**The following issues should be discussed with persons living with Type 1 Diabetes at the point of care**

- ✓ Treatment with insulin
- ✓ Sick day management
- ✓ Blood glucose monitoring
- ✓ Nutritional management
- ✓ Life style measures
  - Physical activity
  - Psychological care

### Storage of insulin

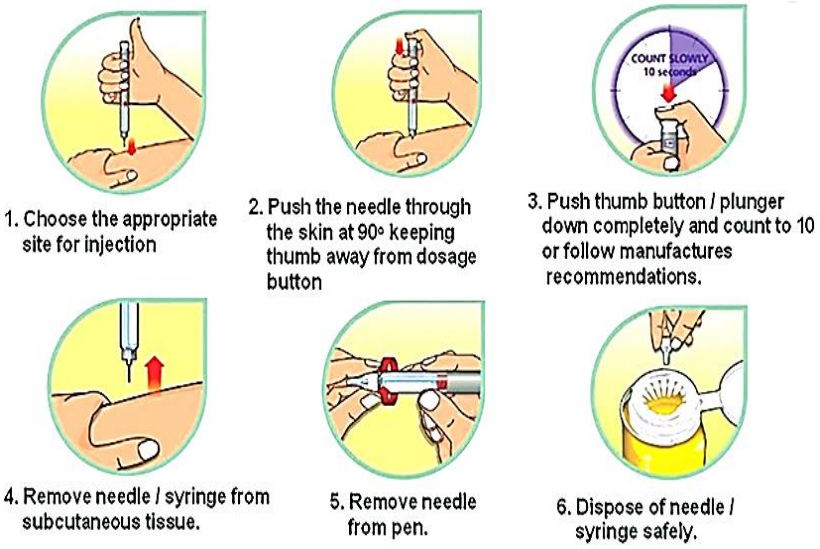
- Insulin should be stored in the lower compartment in the door of the refrigerator. It should not be kept in the freezer compartment. Ideal storage temperature is +2-8°C
- Insulin should not be exposed to direct sunlight/heat
- Excess agitation should be avoided to prevent loss of potency, clumping, frosting or precipitation
- If refrigerator is not available, insulin should be stored in a cool place; e.g., in an earthenware pot of water (inside a plastic bag)
- If regular insulin shows haziness, it should be discarded. If cloudy insulin cannot be re-suspended, it should not be used

### Use of syringes

- Conventional insulin administration involves subcutaneous injection with syringes marked in insulin units
- There may be differences in the way units are indicated (U-40, U-100) and in India, both are available in 1 ml syringe. Fixed needle (single unit) syringes are desirable.
- Syringes and needles must never be shared with another person
- If reuse is planned, the needle should not be wiped or washed
- Change needles after 3-4 uses, otherwise there is a risk of needle getting infected

**Injection Procedure:**

- Injections are given into the subcutaneous tissue
- Inject insulin by lifting up a fold of skin and inject at a 90º angle
- Thin individuals or children may need to pinch the skin and inject at a 45º angle to avoid intramuscular injection, especially in the thigh area.




***Insulin pens***

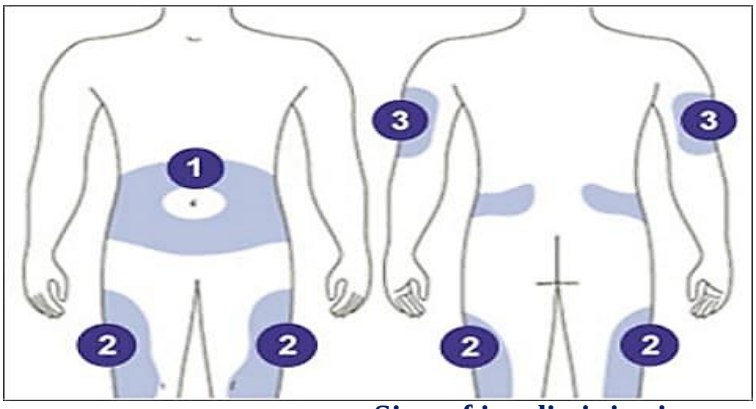
*Several pen-like devices and insulin containing cartridges are available for administering insulin easily through a needle via the subcutaneous route*

## Site of injection

- ✓ Insulin can be injected into the subcutaneous tissue of the upper arm, the anterior and lateral aspects of the thigh, buttocks and the abdomen.
- ✓ For self-injection, abdomen and thigh are the most convenient sites
- ✓ Rotation of the injection site is important. Rotating within one area is recommended rather than moving on to a different area with each injection, it may decrease variability in absorption
- ✓ Exercise increases the rate of absorption from the injection sites
- ✓ The most commonly recommended interval between injection of short acting (regular) / premixed insulin and a meal is 30 min

### Disposal of Needles

- Used needles must be disposed of in a bio-safe manner
- Used sharps should be collected in a strong cardboard/ glass container, sealed and labelled and handed over to the nearest healthcare facility




**Sites of insulin injections**
Source: ICMR guidelines 2018

## 2. Sick day management

- ✓ Do not stop insulin on the sick days and continue as per prescribed treatment regime
- ✓ Consult a doctor for evaluation and treatment of acute illness
- ✓ Monitor blood glucose levels at least 3-4 hourly at home or as advised by doctor
- ✓ Adequate intake of food and fluids. Avoid any strenuous exercises
- ✓ Consider admission if danger signs appear like dehydration, severe acute illness, severe hypoglycaemia or if supportive cannot be ensured at home

## 3. Blood glucose monitoring

- Ideally it should be done at least 2-4 times daily

| Recommended target of blood glucose levels | |
|---|---|
| Before meals | 72-126 mg/d (4-7 mmol/L) |
| After meals | 90-180 mg/dl (5-10 mmol/L) |
| At bed time | 108-180 mg/dl (6-10 mmol/L) |
| At 3 am | 90-144 mg/dl (5-8 mmol/L) |

Source: International Society of Paediatric and Adolescent Diabetes

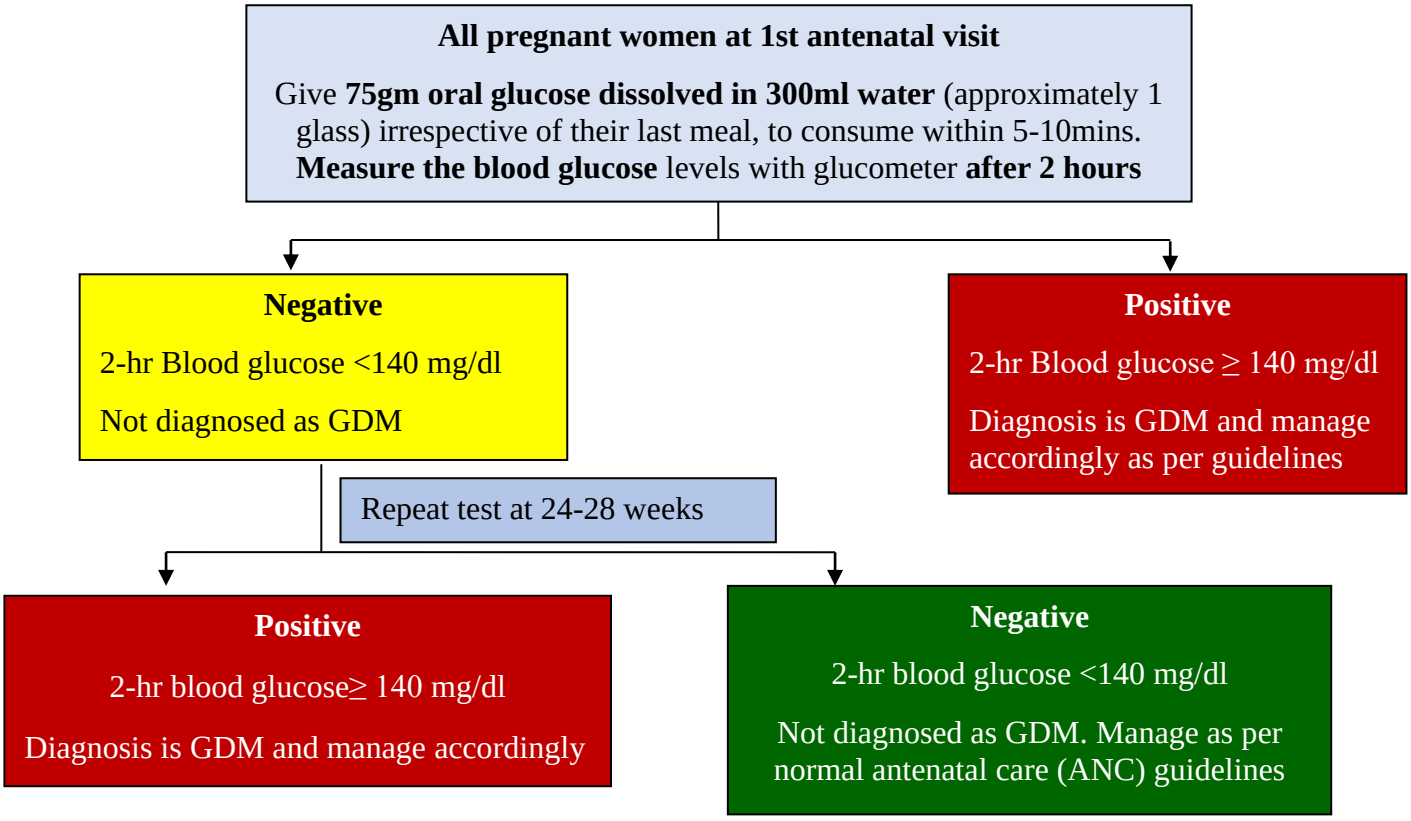
## 4. Nutritional management [*please refer to section on prevention of diabetes* ***page no. 11***]

## 5. Life-style measures

- Physical activity [*please refer to section on prevention of diabetes* ***page no. 12***]
- Psychological care
  - ✓ Encourage the family members to learn about diabetes and share their diabetes knowledge with family and friends to engage support
  - ✓ Encourage the child for self-care
  - ✓ Encourage the parents to stay positive
  - ✓ Once settled into a routine, encourage parents to try to re-focus on their child as a whole person – not just on diabetes

# CARE OF GESTATIONAL DIABETES MELLITUS

## How to identify mothers with Gestational Diabetes Mellitus (GDM)?




## Why care of gestational diabetes mellitus is important?

Raised Blood glucose levels during pregnancy can have the following consequences:

**Maternal Risk**

- Abortion/ Miscarriage
- Polyhydramnios
- Pre-eclampsia
- Prolonged labor
- Uterine atony
- Obstructed labor
- Postpartum Hemorrhages
- Infection

**Foetal Risk**

- Spontaneous abortion
- Intrauterine death
- Stillbirth
- Congenital malformation
- Shoulder dystocia
- Birth injuries
- Neonatal hypoglycaemia
- Infant respiratory distress syndrome

**The following issues should be discussed with an antenatal mother with gestational diabetes mellitus at the point of care**

- ✓ Medical Nutrition Therapy (MNT)
- ✓ Insulin therapy
- ✓ Self-management
- ✓ Delivery care
- ✓ Post-natal care
- ✓ Pre-conceptional care and counselling

## 1. Medical Nutrition Therapy (MNT)

MNT primarily involves a carbohydrate controlled balanced meal with high amount of dietary fiber
A mother should follow:

- ✓ Discipline regarding meal timings
- ✓ Include all food groups in her daily diet
- ✓ Meal plan should be divided in to 3 major meals (breakfast, lunch and dinner) and 2-3 mid-day snack
- ✓ Eating heavy at one meal or skipping any meal or fasting for long hours should be avoided

## 2. Insulin therapy

Patient is always started with MNT and if the blood glucose levels are not controlled within 2 weeks, then insulin therapy is started along with MNT

## 3. Self-management

A) Give health education to the mother about:

- ✓ Medical nutrition therapy
- ✓ Insulin administration and management
- ✓ Sick day management
- ✓ Use of glucometer and recording blood glucose results

**Number of antenatal visits:**

- **Once in two weeks in second trimester**
- **Weekly in third trimester**

B) Daily fetal activity assessment

- Ask the patient to lie down on her side after a meal and note how long it takes for the fetus to kick 10 times
- If the fetus does not kick 10 times within 2 hours, she should immediately consult a doctor

## 4. Delivery care

- Counsel about institutional delivery
- Timing of delivery: Routine delivery prior to 39 weeks is not done
- No contraindication to breast feeding
- Essential newborn care with emphasis on early breastfeeding initiation to prevent hypoglycemia

## 5. Post-natal care

- Perform 75 g oral glucose tolerance test at 6 weeks postpartum
- **Test normal:** Lifestyle modifications, weight control & exercise
- **Test positive:** Consult a physician
- The woman should be screened annually for diabetes

## 6. Pre-conceptional care and counselling

- Woman with history of GDM to be counselled about BMI & blood sugar estimation before next pregnancy
- **Desired blood sugar levels**:
  - **FPG** <100 mg/dL
  - **2-hour PPPG** <140 mg/dL
- To consult a gynecologist as soon as she misses her period

# PREVENTION OF DIABETES MELLITUS

## 1. Screening

**Why Screening is important?**

**As most cases of diabetes are asymptomatic (especially Type 2), screening will help in early diagnosis and treatment and prevent further complications.**

**Commonly used screening tests include**

- Fasting blood glucose
- 2-hours post prandial blood glucose
- Random blood glucose
- Glycosylated hemoglobin

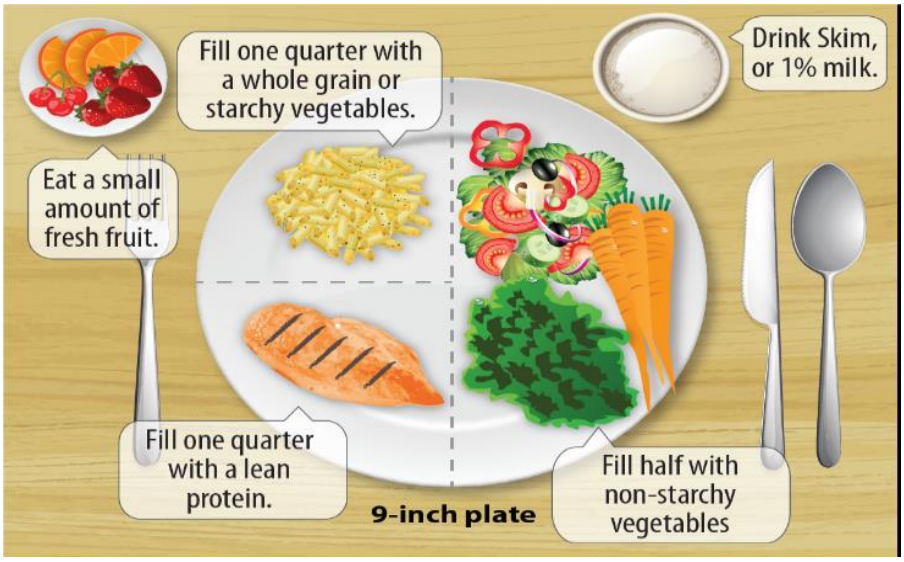
Screening via blood glucose testing should be performed in all individuals **>30 years of age** preferably at an earlier age in adults who have one or more of the following **risk factors**:

1. Family history of diabetes
2. Overweight/obese (BMI ≥25 kg/m$^2$) or have increased waist circumference (>90 cm in males or >80 cm in females)
3. History of high blood pressure (≥130/80 mmHg) or on treatment for hypertension
4. History of lipid disorders
5. Sedentary lifestyle
6. History of diabetes in pregnancy or delivering a big baby (birth weight >4kg)
7. History of cardiovascular diseases
8. History of ovarian cysts or black/brown pigmentation of shoulders (acanthosis nigricans)

## 2. Life style measures

### a. Diet

- Intake of green leafy vegetables and fresh fruits should be increased
- Less salt should be consumed; adding/sprinkling salt should be avoided to cooked and uncooked food.
- Preparations that need to be moderated are: Pickles, chutneys, sauces, papads, chips, cheese and salted butter, bakery products and dried salted fish
- All forms of free sugar and refined carbohydrates for example biscuits, breads, naan, cakes, etc should be restricted
- Fast/junk foods and aerated drinks should be avoided. Fresh lime is preferred
- In practice, it is best to use mixture of oils. (Oils which can be mixed and matched are mustard oil, soya bean oil, olive oil, sesame oil, and sunflower oil)
- Usage of ghee, vanaspati, margarine, butter and coconut oil should be moderated
- In case of non-vegetarians, intake of fish and chicken (not fried) should be increased. Red meat should be consumed in small quantities and less frequently



## b. Alcohol and Tobacco Intake Cessation:

- Individuals should avoid alcohol
- All non-smoker should be advised not to start smoking and all the smokers have to be strongly encouraged and empowered to stop smoking (5 steps of counselling on Tobacco cessation, 5As: Ask, Advice, Assess, Assist, Arrange)
- Moreover, those who consume tobacco in other forms except smoking should also be advised to stop

## c. Physical activity

- Regular exercise is important for promoting weight control or weight loss
- Exercise should be done regularly (moderate to vigorous) for 5-7 days per week; it should be started slowly and then worked up gradually:
  - At least 30 minutes (accumulated) of physical activities per day for cardiovascular disease protection
  - 45 minutes/ day (accumulated) for fitness
  - 60 minutes/ day (accumulated) for weight reduction
- Spending long hours in front of TV, computer, mobile phones etc should be discouraged
- Outdoor activities like cycling, gardening etc should be encouraged

## d. Weight control

- All individuals who are overweight or obese should be encouraged to reduce body weight through a combination of a low-calorie diet and dynamic physical activity
- Ideal BMI [WHO criteria]:

| BMI [Kg/m$^2$ ] | Category |
|---|---|
| 18.5 – 24.9 | Normal |
| 25.0 -29.9 | Overweight |
| ≥ 30 | Obesity |

## e. Stress Management:

**Coping with stress:**

General advices on stress management should be discussed with a person with diabetes

- Know about your disease, talk with your health care providers
- Talk to your family and friends, regarding your stress. Identify your buddy
- Plan your own activities and manage timelines
- Manage some leisure time for yourself. Adopt hobbies to be physically active
- Practice relaxation skills, like meditation, deep breathing, yoga
- Be active: walk, run, exercise, swim, cycle etc
- Limit alcohol and caffeine
- Eat healthy food
- Have enough sleep (at least 6 to 8 hours)
- Consult with your health care provider for any issue that you cannot cope with

# DIABETES & COVID-19

**People with diabetes are more likely to become seriously ill from COVID-19** as diabetes compromises the immune capacity of the body. The **risk of getting severely ill from COVID-19 is significantly reduced if diabetes is well-managed**.

**A person living with diabetes needs to know and do the following issues regarding COVID-19 prevention and management:**

1. **Follow COVID-19 appropriate behaviour** by using face-masks, maintaining social distancing, proper cough etiquette and regular handwashing. Disinfect the person's surroundings as much as possible
2. Avoid **contact with persons having symptoms suggestive of COVID-19** (fever, body ache, cough, loss of smell etc)
3. **Vaccinate with COVID-19 vaccines** and remember to complete the full schedule (2 doses). **Even after getting vaccinated, follow COVID-19 appropriate behaviour**
4. Pay **extra attention to glucose control**. Regular monitoring can help avoid complications caused by high or low blood glucose
5. Ensure a **good supply of the diabetes medications** and **continue the medications as per treatment regime** prescribed by the medical practitioner
6. **Correct the situation if blood glucose drops suddenly** (*Please refer to **page no. 5***)
7. Maintain an **appropriate balanced diet with adequate fluid intake** (refer to the preventive section of diabetes) and perform **adequate home-based exercises**.
8. Always **take preparations beforehand which provides assistance after falling ill**. Keep all the relevant contact details which may come in hand in times of need
9. In case of **any symptoms of COVID-19, get tested for COVID -19 (RT-PCR or RAT)** at nearest laboratory and **contact a doctor immediately for medical advice**
10. In **home isolation due to COVID -19, monitor blood glucose levels** with a glucometer and **$SpO_2$ ($O_2$ saturation) levels** with a digital pulse oximeter if feasible

Look for **Danger signs**:

- Fall in oxygen saturation ($SpO_2$ < 94% in room air)
- Difficulty in breathing
- High grade fever or fever persisting for more than 7 days
- Palpitation, chest pain/ tightness
- Severe cough
- Hypoglycaemia/Hyperglycaemia

If **any danger signs appear, immediately get admitted to a nearby hospital** for appropriate management

# FAQS AND MYTHS ABOUT DIABETES

**Myth: People with diabetes cannot eat sugar**

**Fact:** People with diabetes need to eat a diet that is balanced, which can include some sugar in moderation.

**Myth: Type 2 diabetes only affects fat people**

**Fact:** Though type 2 DM is often associated with being overweight and obese, it is untrue that type 2 diabetes affects only overweight people.

**Myth: People with diabetes can go blind and lose their legs**

**Fact:** Diabetes may be one of the leading causes of blindness and amputation but these are completely preventable. If people living with DM control blood pressure, blood glucose, body weight and quit smoking, their chances of complications is greatly reduced.

**Myth: Insulin causes weight gain**

**Fact:** Insulin helps the body to use the glucose derived from foods more efficiently. If weight gain becomes a concern, advice from dietician can be taken before starting insulin.

**Myth: Insulin is addictive**

**Fact:** Insulin is never addictive. It is a natural substance that the body produces and utilises.

**Myth: Once insulin is started, one can never be insulin free later on**

**Fact:** Once blood sugar comes in normal range, one can never get back to their normal oral drug regime. Even if insulin is started in diabetics to avoid any overwhelming instances before any routine surgery, they can easily resume their oral medications afterwards. It does not cause dependency.

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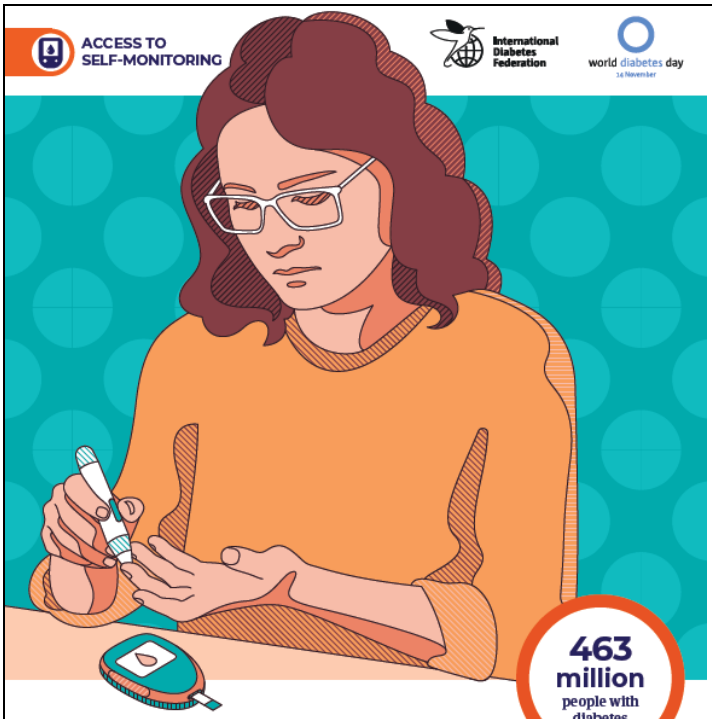
ACCESS TO SELF-MONITORING

International Diabetes Federation

world diabetes day 14 November



463 million people with diabetes

Blood glucose monitoring is a fundamental component of diabetes care. Many people with diabetes do not have access to the equipment and supplies they need.

## IF NOT NOW, WHEN?

ACCESS TO ORAL MEDICATION

International Diabetes Federation

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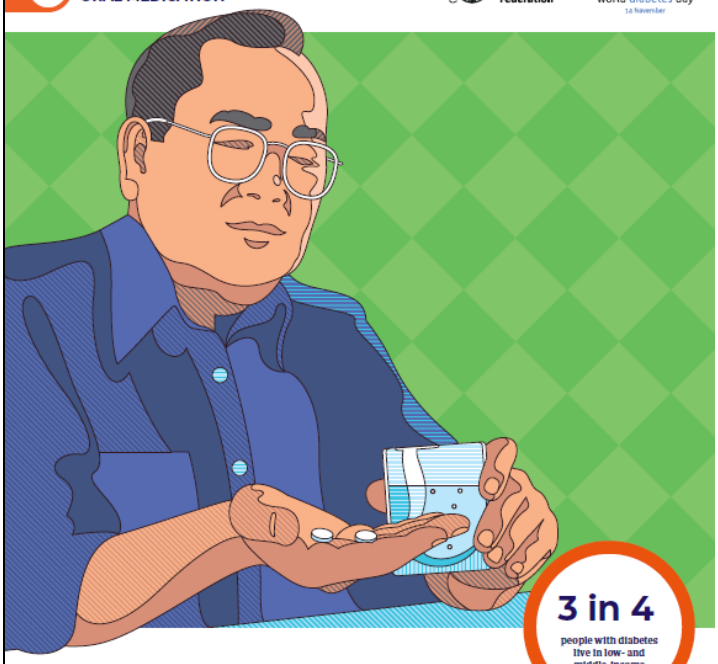

3 in 4 people with diabetes live in low- and middle-income countries

Many people with diabetes need oral medicines to manage their condition. These remain unavailable or unaffordable in many low- and middle-income countries.

## IF NOT NOW, WHEN?

Join our campaign at:
www.worlddiabetesday.org
#IfNotNowWhen

world diabetes day 14 November

world diabetes day 14 November

# ACCESS TO DIABETES CARE: IF NOT NOW, WHEN?

**1 in 10** people around the globe have diabetes

A century after its discovery, **insulin and other fundamental components of diabetes care remain beyond the reach of millions who need them.** Without treatment or sufficient support, people with diabetes are at risk of serious and life-threatening complications:

Heart Attack | Stroke | Kidney Failure | Blindness | Lower-limb amputation

**Over 700 million** people are expected to be living with diabetes by 2045

**3 in 4 people** with diabetes live in low and middle-income countries

**Half of all** people living with diabetes are undiagnosed

**1 in 2 people** who need insulin cannot access or afford it

The World Health Organization Global Diabetes Compact and 2021 Resolution call for **urgent coordinated global action** to tackle diabetes. These are significant milestones, but **words must now be turned into action.**

IDF calls on NATIONAL GOVERNMENTS AND POLICYMAKERS to:

- **Ensure affordable access to fundamental care** for people living with diabetes
- Develop policies to **improve the prevention of type 2 diabetes**
- Improve screening to **ensure timely diagnosis** and prevent diabetes-related complications
- Implement mechanisms to **engage people with diabetes meaningfully in the development of policies to tackle diabetes**

United, the global diabetes community has the numbers, the influence and the determination to bring about meaningful change.

**We need to take on the challenge**

Join our campaign at:
www.worlddiabetesday.org
#IfNotNowWhen

International Diabetes Federation

INSULIN AT 100

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