

Diabetes

Diabetes mellitus is a chronic metabolic disease characterized by elevated levels of blood glucose, caused either by a lack of or impaired utilization of endogenous insulin. Diabetes increases cardiovascular risk and results in damage to large blood vessels of the heart, limbs, and brain, and small vessels of the kidneys, eyes, and nerves. Blindness, kidney failure, heart attacks, stroke, and limb amputation are common complications.

Types of Diabetes

a) Type 1 diabetes

characterized by insulin deficiency that results from the destruction of the insulin-producing cells of the pancreas. It manifests as sudden and severe hyperglycemia, diabetic ketoacidosis, and death unless treated with insulin. The onset of the disease is most common in childhood or adolescence.

Type 1 diabetes requires insulin therapy, therefore, immediate referral to a physician. After initial stabilization, a “honeymoon period” often occurs when the insulin requirements are initially low. After a few months, the insulin requirements usually increase.

b) Type 2 diabetes

Type 2 diabetes is characterized by progressive insulin resistance and a relative lack of insulin. It may be asymptomatic and diagnosed several years after onset (for between five and seven years), once complications have already arisen.

Globally, type 2 diabetes is the most common type of diabetes. Its increasing prevalence is linked to obesity, high-fat, salt, and sugar diets, and urbanization. It usually (but not exclusively) occurs in adults over 40 years old. It can also present, rarely, in children.

c) Pre-diabetes

Patients found to have raised blood sugar on random or fasting blood testing, but who do not fulfil WHO criteria for diagnosis of diabetes (see below), are

considered to have 'pre-diabetes'. These patients are at increased risk of developing diabetes later in life.

d) Gestational diabetes (GDM)

Onset or first recognition during pregnancy; often resolves at the end of pregnancy. Usually develops in the late (second or third trimester¹) pregnancy when insulin antagonistic hormones peak, leading to insulin resistance, glucose intolerance, and hyperglycemia. Gestational diabetes does not include previously diagnosed diabetics who become pregnant. If diagnosed in 1st trimester, this is considered pre-gestational diabetes.

e) Drug-induced hyperglycaemia (e.g. Protease inhibitors, corticosteroids, or thiazide diuretics): to discuss operation officer

Risk Factors of Diabetes

- Alcohol
- Obesity
- Pregnancy (pre-eclampsia)
- First-degree relative with diabetes
- Renal Diseases: Renal vascular disease, Polycystic kidney disease, Parenchymal renal disease, particularly glomerulonephritis
- Endocrine Disease: Pheochromocytoma, Cushing's Syndrome, Thyrotoxicosis, Primary Hypothyroidism, Primary Hyperaldosteronism (Conn's Syndrome), Glucocorticoid-suppressible hyperaldosteronism, Hyperparathyroidism, Acromegaly, hypothyroidism, Congenital adrenal hyperplasia, Liddle's Syndrome
- Drugs: Oral contraceptives containing estrogens, anabolic steroids, corticosteroids, NSAIDs, carbenoxolone, and sympathomimetic agents.