Diabetes screening and diagnosis

Screening for hyperglycaemia can help to identify people who are at risk for preventable diabetes complications so that earlier treatment can be offered. Early diagnosis and treatment of type 2 diabetes are associated with improved life expectancy and quality of life.

Risk factors that should trigger screening in the presence of obesity/overweight


Known genetic predisposition


Low birth weight


Family history of diabetes


CVD, HTN, low HDL, high TG


History of GDM or delivering a large baby


Poor diet


Sedentary lifestyle


PCOS

Multiple tests are available to support a diagnosis of diabetes.

Test	Diagnostic threshold for diabetes	Delivery protocol
Fasting plasma glucose	≥7.0 mmol/l (126 mg/dl)	Patient must fast for 8–12 hours prior to test.
2-hour venous plasma glucose (oral glucose tolerance test)	≥11.1 mmol/l (200 mg/dl)	Patient must fast for 8–12 hours prior to test. Measure fasting glucose. Administer 75 g oral glucose. Measure *venous* plasma glucose after 2 hours.
2-hour capillary plasma glucose (oral glucose tolerance test)	≥12.2 mmol/l (220 mg/dl)	Patient must fast for 8–12 hours prior to test. Measure fasting glucose. Administer 75 g oral glucose. Measure *capillary* plasma glucose after 2 hours.
Random plasma glucose	≥11.1 mmol/l (200 mg/dl)	Administered at any time, fasting not necessary. Appropriate for patients with symptoms of hyperglycaemia.
HbA1c	≥6.5% (48 mmol/mol)	Administered at any time, fasting not necessary.

CVD, cardiovascular disease; GDM, gestational diabetes mellitus; HDL, high-density lipoprotein; HTN, hypertension; PCOS, polycystic ovary symdrome; TG, triglycerides.