

Classification of Diabetes



	Type 1 diabetes (T1D)	Latent autoimmune diabetes in adults (LADA)	Type 2 diabetes (T2D)	Monogenic diabetes	Gestational diabetes mellitus (GDM)	Type 3c diabetes
Pathophysiology & diagnosis	Autoimmune destruction of pancreatic beta cells. Clinical diagnosis +/- BG & ketone levels. Urgent specialist discussion required	LADA is essentially "slow-onset" T1DM. Gradual autoimmune destruction of pancreatic beta cells. Diagnosis & management similar to T1DM	IR with relative insulin deficiency. Diagnose if HbA1c >48mmol/mol	Genetic mutation leading to diabetes. Maturity onset diabetes of the young (MODY) commonest www.diabetesgenes.org for diagnosis guidance	Impaired glucose tolerance in pregnancy due to pancreatic beta-cell dysfunction on background of IR. NICE NG3 (2015) diagnostic criteria: FBG ≥5.6mmol/l or 2-hour BG post 75g OGTT ≥7.8mmol/l.	Pancreatic function disrupted by disease e.g. pancreatitis, CF, haemochromatosis (check ferritin) & pancreatic cancer
Age at diagnosis	Usually <25 years but can occur at any age	Can occur at any adult age. Often initially mistaken for T2D	Both adults & children at any age	MODY onset often 2nd - 5th decades and usually <45 years	Can occur in any women of child-bearing age. Follow-up after delivery: women require lifelong annual HbA1c (NICE NG3 (2015))	Both adults & children at any age. Exclude pancreatic cancer in those >60 years with new-onset diabetes & weight loss (NICE NG12 (2015))
Weight at diagnosis	Usually thin but can be overweight. Marked weight loss common	Variable	Usually overweight	Variable	RF for GDM include overweight/obesity but baseline weight can be variable	Variable
Family history of diabetes	Infrequent (5-10%)	Variable	Frequent (75-90%)	Multi-generational. MODY is AD. A strong FH of diabetes (any type) involving 2 or 3 consecutive generations may point towards a diagnosis of MODY	FH of diabetes is an important RF for GDM	Variable. Haemochromatosis & CF are AR
History of autoimmune disease	Often personal or FH e.g. thyroid & coeliac	Variable	Variable	Variable	Variable	Variable but often PEI present e.g. diarrhoea, steatorrhoea or abdominal pain. Check faecal elastase-1
Pancreatic autoantibodies	Present	Present	Absent	Absent	Absent	Absent
C-peptide levels	Low/absent	Initially normal then low/absent	Normal to high	Normal	Normal to high	Low
Insulin sensitivity	Normal when treated	Some IR	Reduced	Normal (maybe reduced if obese)	Reduced	Compensatory increase in peripheral insulin sensitivity
Insulin requirements	Immediate – specialist input urgently required	Latent; months to years	Variable	Variable	Variable	Variable
Risk of diabetic ketoacidosis (DKA)	High	Low initially but high once insulin-deficient	Low but euglycaemic DKA rare side-effect of SGLT2 inhibitors	Low	Low	Low but hypoglycaemia is common & can be prolonged

Glossary of Abbreviations

AD: autosomal dominant **AR:** autosomal recessive **BG:** blood glucose **CF:** cystic fibrosis **FH:** family history **IR:** insulin resistance **OGTT:** oral glucose tolerance test **PEI:** pancreatic exocrine insufficiency **RF:** risk factor(s)

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