



**Wolverhampton
Diabetes Care**

What Care to Expect

Classification of Diabetes Mellitus

Once diagnosed, every effort should be made to accurately categorise the type of diabetes.

Diabetes mellitus. This is a group of metabolic diseases characterised by hyperglycaemia resulting from defects in insulin secretion, insulin action, or both. The chronic hyperglycaemia of diabetes is associated with long-term damage, dysfunction, and failure of various organs, especially the eyes, kidneys, nerves, heart and blood vessels. Only the microvascular complications are specific to diabetes.

Type 1 Diabetes. This is due to β -cell destruction leading to an absolute deficiency of insulin. It is usually acute in onset and requires obligatory treatment with insulin to prevent life threatening ketoacidosis coma. It accounts for 10% or less of all diabetes.

Type 2 Diabetes. This is due to an imbalance between insulin secretion and insulin action. It is often insidious in onset and may have been present a number of years before diagnosis. It accounts for 90% or more of all diabetes.

Type 3 Diabetes. This is a group of disorders, many of genetic origin, that lead to or are associated with diabetes. In particular Type 3A is an autosomal dominant genetic defect in β -cell function characterised by onset at an early age. They were previously referred to as maturity-onset diabetes of the young (MODY). They include HNF-1 β , glucokinase and less commonly HNF-4 β , HNF-1 β , insulin promoter factor (IPF)-1 and NeuroD1 gene defects. They should be considered in those diagnosed aged <30 years with a strong family history of diabetes extending over 3 generations. The various types are: A Genetic defects of β -cell function; B Genetic defects of insulin action; C Diseases of the exocrine pancreas; D Endocrinopathies; E Drug induced; F Infections; G Other immune mediated; H Other genetic syndromes associated with diabetes.

Type 4 Diabetes/Gestational Diabetes Mellitus. This is a glucose intolerance found in pregnancy and documented to revert back to normal after delivery. It usually recurs in subsequent pregnancies and there is a high future risk of diabetes in the mother.

Impaired Fasting Glucose & Impaired Glucose Tolerance. These are defined according to fasting blood glucose or glucose tolerance test outcomes. They are associated with a higher risk for macrovascular disease and an increased future risk of developing overt diabetes.

Categorisation of diabetes can thus usually be done on clinical grounds and with observation of the natural history. Only when there is sufficient uncertainty to have significant impact on the management plan is further more detailed investigation warranted.

Table:

The general classification of diabetes mellitus.

Type 1	Remember, these statements are generalities	Type 2
Younger	Either can occur at almost any age	Older
Rapid onset	Either can be slow or rapid in onset	Slow onset
Symptomatic	Truly asymptomatic T2DM is unusual	Asymptomatic
Weight loss	No all T2DM patients are obese and many lose weight at diagnosis	Obese
Ketonuria + ve	Urine ketones must be tested for	Ketonuria - ve
Ketoacidosis likely	T2DM can still get hyperglycaemic coma e.g. HONK	unlikely
Insulin mandatory	Many patients with T2DM are insulin treated.	Insulin maybe