

# Definitions

**Type 1 diabetes** is a chronic illness characterized by the body's inability to produce insulin due to the autoimmune destruction of the beta cells in the pancreas. Onset most often occurs in childhood, but the disease can also develop in adults in their late 30s and early 40s

**Type 2 diabetes** consists of physiological dysfunctions characterised by hyperglycemia, resulting from the combination of insulin resistance, inadequate insulin secretion, and excessive or inappropriate glucagon secretion.

<http://emedicine.medscape.com/article/117853-overview>

## *What is diabetes mellitus?*

# Pathophysiology of DM1

- Lymphocytic infiltration and destruction of insulin-secreting beta cells of the islets of Langerhans in the pancreas
- As beta-cell mass declines, insulin secretion decreases until the available insulin no longer is adequate to maintain normal blood glucose levels
- After 80-90% of the beta cells are destroyed, hyperglycemia develops and diabetes may be diagnosed
- Patients need exogenous insulin to reverse this catabolic condition, prevent ketosis, decrease hyperglucagonemia, and normalize lipid and protein metabolism.
- Autoimmune

# Pathophysiology of DM2

- Both insulin resistance and inadequate insulin secretion must exist  
(all overweight individuals have insulin resistance, but diabetes develops only in those who cannot increase insulin secretion sufficiently to compensate for their insulin resistance)
- Beta-cell dysfunction is a major factor across the spectrum of prediabetes to diabetes
- Progressive
- Complex genetic and environmental interplay
- Maternal diet during fetal development
- Protective effect of breast feeding
- Main cause is obesity

# Complications

Macrovascular	Microvascular	Neuropathy
Stroke	Nephropathy	Gastroparesis
Ischaemic heart disease	Retinopathy	Erectile dysfunction
Peripheral vascular disease	Neuropathy	Foot complaints

