

# clinical - endo

- DIABETES MELLITUS : HYPERGLYCEMIA due to insulin resistance, or relative insulin deficiency .
- type 2 is more common due to obesity and sedentary lifestyle (adults & children).
- Type 1 Diabetes : autoimmune destruction of the beta cells (A) , or nonautoimmune (B) , absolute insulin deficiency , factors : genetic (10% familial), autoantigens (GAD , ZnT8 , insulin , IA-2) , "idiopathic" , high ketoacidosis .
- Type 2 Diabetes : Multifactorial, peripheral insulin resistance or beta cell dysfunction , factors : resistance (environmental , aging and genetics ) >> "glucotoxicity" , absent autoantibodies .
- Monogenic diabetes young : multigeneration , "MODY1,2,3..." , mutations : (HNF1A, 50-65% , HNF4A, 10% , GCK, 15-30%) , absent autoantibodies .
- Latent autoimmune diabetes in adults (LADA): autoimmune , different age from type 1 , commonly with acidosis , prolonged hyperglycemia , like honey moon period .
- honey moon period : in type 1 , still there is b cells .
- When to perform islet autoantibody testing : uncertain by clinical , sub-therapeutic response , obesity , unintentional weight loss , family history or its absence in type 2 .
- family history is more significant in type 2 .
- Gestational Diabetes : usually in second half of pregnancy , screening and intensive dietary and glycemic management , High risk of type 2 on both .
- Medical conditions (Gestational diabetes , Polycystic ovary syndrome , Metabolic syndrome) >>> type 2 .
- Obesity is a risk factor for 2 , mainly (visceral) fat (waist circumference ) , better lifestyle or sport help in cells response to insulin & diet lowers risk of it .
- both parent are diabetic , then x6 high risk of type 2 .
- smoking : increase glucose , visceral fat , impair insulin sensitivity .
- classical symptoms of hyperglycemia : polyuria, polydipsia , weight loss (depends on loss of insulin which is anabolic hormone builds protein + skeletal muscle synthesis ) .
- Hyperosmolar hyperglycemic state & DKA are uncommon in type 2 .
- DKA (ketoacidosis) less common in type 1 adults , due to some b cells function (some insulin ) .
- diagnostic : if random glucose **(140-199)** > then prediabetes .
- on A1C , symptomatic , more than 6,5% diabetic .
- on fasting for 8 hours ,  $\geq 126$  is diagnostic , prolong fasting increase glucose , so dont .
- after sleeping , glucose less than 100 = normal fasting level , prediabetic .
- diabetic patents are advised to lose weight because of drugs (**Sulfonylurea & insulin**) side effect = weight gain .
- Anti-obesity drugs : glucagon-like peptide-1 (GLP-1) analog , injectable agent , cause weight reduction .
- A1C is desired in diabetic patient to be less than 7,5 % . insulin has highest efficacy .
- unintentional weight loss should be insured it is not from malignancy .

**good luck**

