



**NATIONAL REGISTER**  
OF HEALTH SERVICE PSYCHOLOGISTS

# **Pharmacology for Common Medical Conditions: Diabetes**

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# Diabetes: Clinical Definitions (ADA, 2016)

- **Hemoglobin A1C  $\geq 6.5\%$  ( $\geq 5.7-6.4\%$  for prediabetics\*)**
- **Fasting plasma glucose (2 hrs post-meal)  $\geq 126$  mg/dl (100-125 mg/dl for prediabetics)**

**OR**

- **Oral glucose tolerance test  $\geq 200$  mg/dl ( $\geq 125$  in prediabetics)**
- **Random plasma glucose of  $\geq 200$  mg/dl**

\*Prediabetic = BMI  $\geq 25$ ;  $\geq 23$  in Asian Americans and  $\geq 1$  risk factor (1<sup>st</sup> degree relative with diabetes, sedentary lifestyle, high risk ethnic group)

# Hemoglobin A1C

- Measures the amount of *glycosylated hemoglobin* inside red blood cells.
- Forms slowly over several months at a rate proportional to the average circulating rate of serum glucose
- Thus, measures the **average rate of serum glucose for a period of 2-3 months prior** to being tested
- An excellent measure of how effective glucose control has been **over a period of several months**

# BMI (body mass index)

- **Formula based on height and weight.**
- **Complete BMI table:**  
[http://www.nhlbi.nih.gov/health/educational/lose\\_wt/BMI/bmi\\_tbl.htm](http://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmi_tbl.htm)
- **BMI formula:**  
BMI = (Weight in Pounds / (Height in inches x Height in inches) ) x 703.

Drug Class	Generic	Trade
<b>Insulin</b> <b>Rapid acting</b> <b>Short acting</b> <b>Intermediate acting</b> <b>Long acting</b>	  NPH (isophane) Glargine, detemir	  Lispro
<b>Sulfonylureas</b>	Glipizide Glyburide Glimepiride	Glucotrol Diabeta, Micronase Amaryl
<b>Biguanides</b>	Metformin	Glucophage
<b>Sodium-Glucose Co-transporter inhibitors</b>	Canagliflozen Dapagliflozen Empagliflozen	Invokana Farxiga Jardiance
<b>Glucagon-like-peptide 1 agonists</b>	Exenatide Dulaglutide Albiglutide	Bydureon, Byetta Trulicity Tanzeum

# The metabolic syndrome

- **Increased central (truncal) obesity**
- **Elevated blood pressure**
- **Increased serum cholesterol**, particularly low density lipoproteins (LDLs) and triglycerides, and
- **Hyperglycemia**

# Psychosocial assessment of diabetic patients:

- **Eating patterns, nutritional status, weight and physical activity history**
- **Common medical comorbidities**
- **Psychosocial problems, behavioral support history and needs**
- **Depression screening as needed (PHQ-2, PHQ-9)**
- **Alcohol, tobacco and other substance use**
- **Diabetes self management and support history**
- **Glucose monitoring and patient use of data**
- **History of diabetic ketoacidosis**
- **Cognitive or neuropsychological assessment (over 65 years or as indicated)**



## 2 new NIH interactive tools

- **Body Weight Planner:**

<http://www.niddk.nih.gov/health-information/health-topics/weight-control/body-weight-planner/Pages/bwp.aspx/Pages/default.aspx>

- **DASH planner**



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