

BG Levels

- Normal 60-110 mg/dL
- Hypoglycemia <60 mg/dL
- Hyperglycemia
 - FBG > 110 mg/dL
 - 2 hrs after meal, BG > 140 mg/dL

Assessment

- **Sensory Perception**
 - Blurred Vision
 - Anxiety
- **Oxygenation**
 - Kussmaul's breathing
 - Fruity breath
- **Perfusion** ↓
- **Elimination**
 - Gastroparesis
- **Infection**
 - Ulcers
 - ↑ Infection
 - Pruritis
- **Mobility**
 - Neuropathy → PVD

Diabetes Mellitus

Chronic metabolic disease characterized by ↑ BG as a result of defects in insulin production or use of insulin.

Almost 8% of population
7th leading cause of death

↓ incidence is prevention

S/S

- Always tired
- Polyuria
- Polyphasia
- Polydipsia
- Unexplained weight loss
- Wounds that won't heal
- Blurred vision
- Vaginal infections
- Sexual dysfunction
- BG > 140
- Family hx
- Numbness/tingling in feet
- Overweight

Patho

- **Type 1**
 - Auto antibodies present in blood
- **Type 2**
 - Adult onset
- **Metabolic Syndrome**
- **Gestational Diabetes**
- **Impaired Glucose Tolerance**
- **Prediabetes**
- **Type 1.5 (new) LADA**
 - 10% of people c Type 2
 - Part Type 1/Part Type 2

Labs/Diagnostics

- **Casual Plasma Glucose (PG)** 200 mg/dl
- **Fasting Plasma Glucose (FPG)** 126 mg/dl
- **Hemoglobin A1C (Hgb A1C)**
 - 3 mo range of BG
 - >6.5% indicates DM
 - normal 5.5 - 6%
 - Goal < 7%

Nutrition Therapy

- **Goals**
 - Maintain normal BG
 - Optimal lipid levels
 - Prevent/tx complications
 - 2 Balanced meals + snacks
- **% Nutrients Changed to BG**
 - CHO: up to 100%
 - Protein: 50% (slower to metabolize & slows release of BG)
 - Fat: <10%
- **CHO Counting**
 - 10-15g CHO requires 1 unit of Reg or Humalog or Lispro for coverage
- **Food Classification Systems**
 - Exchange Lists
 - Food Guide Pyramid
 - Nutrition Labels
 - Glycemic Index: how much a food ↑ BG
 - Rate the Plate: food plate is divided
 - ¼ grains or starchy veggies
 - ¼ proteins
 - ½ non-starch veggies
- **Alcohol**
 - Counted as part of daily exchanges

Exercise

- ↑ Glucose uptake by muscles
- Improves insulin utilization
- ↓ Need for meds
- ↓ Cholesterol & triglycerides
- Improves circulation & muscle tone
- ↓ Cardio complications
- ↓ Insulin resistance in Type 2

Monitoring

- **Blood Glucose Levels**
 - FBG 60-110
 - FBG dx of DM <126
 - Pre-prandial 70-130
 - Post-prandial <180
- **BG Monitoring Frequency**
 - 2-4 x daily
 - Insulin pts: at least 3x daily before meals
- **Other Monitoring**
 - Serum Triglycerides & Cholesterol
 - Urine test for protein & microalbumin
 - Kidney fx (Q6 mo)
 - Liver fx (Q3-Q6 mo)
 - HgbA1c (Q3-Q6 mo)

Diabetes Mellitus

Collaborative Mgmt:

- Education
- Nutrition
- Exercise
- Monitoring
- Pharmacologic Therapy

Education

- Patient Teaching

Med Therapy

- Sulfonylureas
- Biguanides
- Alpha-glucosidase inhibitors
- Non-sulfonylureas
- Insulin Secretagogues
 - Meglitinides
- Thiazolidinediones
- DDP-4
 - Incretin Mimetics