Definitions, Mechanisms of Disease

- Type 2 Diabetes: A genetically predisposed form of diabetes involving underlying insulin resistance and evolving insulin secretory defects and relative deficiency.
  - Factors influencing the evolution of diabetes
    - Sedentary Lifestyle
    - Obesity/Weight Gain
    - High Fat Diet
- Type 1 Diabetes: An autoimmune syndrome involving progressive and critical Beta Cell destruction and insulin deficiency.
  - Median age of onset: 15 year
  - Insulin Therapy is mandated
- LADA (Latent Autoimmune Diabetes of Adulthood): A later onset and sometimes attenuated form of Type 1 Diabetes.
  - Islet Cell Antibody Positive
  - Progression seems to be slower

Disclosures

I have no disclosures to report.
Definitions, Mechanisms of Disease

- **Diagnostic Criteria of Type 2 Diabetes**
  - Fasting Plasma Glucose of **126 mg%** or greater, OR
  - Symptoms (polyuria, polydypsia, unexplained weight loss) AND a random glucose of **200 mg%** or greater OR
  - Plasma glucose of **200 mg%** or greater 2 hours after a 75 gram oral glucose load
  - Hemoglobin A1c of **8.5%** or greater

- **Diagnostic Criteria of Pre-Diabetes**
  - Fasting Plasma Glucose of **100-125 mg %**
  - Plasma glucose of **140-199 mg%** 2 hours after a 75 gram oral glucose load
  - Hemoglobin A1c **5.7%-6.4%**

- **Diagnostic Criteria of Gestational Diabetes**
  - Screen at 24-28 weeks, 75 gram OGTT
    - Fasting plasma glucose of **92 mg%** or greater, OR
    - 1 hour plasma glucose of **180 mg%** or greater
    - 2 hour plasma glucose of **153 mg%** or greater

Principles of Type 2 Diabetes Management

- **Comprehensive Program of Lifestyle and Medication Management**
  - Low Starch/Low Fat/High Fiber diet/Lean Protein Diet (yuch!)
    - "Sugar Busters"
    - Mediterranean Diet
    - Multiple Small feedings

- **Exercise and Physical Fitness, When Feasible**
  - Minimum of 150 minutes per week
  - Combination of cardiovascular and resistance training

- **Appropriate Institution of Pharmaceutical Agents**
  - Individualized and mechanism based choices
  - Timely titration and reassessment

Principles of Type 2 Diabetes Management

- **Screening**
  - Often overlooked
  - Not a fasting phenomenon!

- **Factors to observe**
  - Family History
  - Post Prandial glucose
  - HgbA1c
  - Body Habitus
  - Lifestyle

- **“Pre-Diabetes” Lifestyle Intervention**
  - Dietary modification
  - Physical Fitness
  - Weight Loss
Type 2 Diabetes Treatment Goals

- **HgbA1c**
  - 7.0% or less, overall
  - 6.5% or less, in less complicated and "healthy" individuals
  - 6.5% - 7.0% in patients with cardiovascular comorbidities
  - 7.0 - 8.0% in patients who are elderly, hypoglycemia prone or have CRF/CHD

- **Lipids**
  - LDL less than 100 mg%
  - Triglycerides less than 150 mg%
  - TC/HDL ratio less than 3.5
  - Apo-B less than 90 mg%
  - LDL-P less than 1200 nmol/L

- **Blood Pressure**
  - Less than 130/80 mmHg
  - Start with an ACEi or ARB
  - Avoid aggressive overtreatment in at risk patients (elderly, chronic renal failure, cerebrovascular disease)