DIABESITY COURSE AGENDA AND OBJECTIVES

DIABESITY: THE 21ST CENTURY PANDEMIC
- Insulin resistance, prediabetes, & metabolic syndrome: What role do they play in the development of diabesity?
- Key metabolic defects: How can we improve insulin sensitivity and preserve b-cell function?
- Diabesity: an inflammatory metabolic condition. Is this a greater risk factor for cardiovascular disease?

DIABETES AND OBESITY: WHY DO WE HAVE TWIN EPIDEMICS?
- Genetics: the role of heredity in determining risk. Interaction between genetics and environment.
  — Can we use genetics to target diabetes and obesity prevention? The Thrifty Gene Hypothesis.
- Thrifty phenotype hypothesis: Are we programmed for obesity and chronic disease during fetal life?
  — Key role of the brain in controlling body fat, glucose metabolism and appetite control.
  — Role of leptin, ghrelin, adiponectin. New and exciting targets for diabesity control.
  — Leptin and its relationship to obesity and insulin. Is leptin the drug of the future?
- Current guidelines for managing diabetes and obesity.
- Diabesity in American children: What can be done to stop the epidemic?

BODY FAT DISTRIBUTION: ITS ROLE IN DIABESITY
- Visceral adipose tissue (VAT): Can it cause metabolic disturbances such as insulin resistance and diabetes?
  — Metabolically obese normal weight vs. metabolically normal obese. Can we be fit and fat?
- Health risks associated with VAT: A new paradigm for the role of fat as an endocrine organ.
  — Fat cells and inflammation. The Role of Inflammation in the development of diabesity.
  — The ectopic fat storage syndrome – how it contributes to the pathogenesis of diabetes and CVD.

PHARMACOLOGIC INTERVENTIONS TO ADDRESS DIABESITY: PREVENTION AND MANAGEMENT
- Drug therapy: When is it appropriate and who are good candidates?
- Drugs on the horizon for diabesity. Agents that address diabetes and cardiovascular disease risks.
  — Byetta®, Exubera® (inhaled insulin), and the potential role of Dual Alpha-Gamma PPAR agonists.
- Drugs to prevent or delay diabesity: How do they work?
  — Role of thiazolidinediones in preserving and rejuvenating b-cells. Can and should they be used to prevent diabetes?
  — Use of antihypertensive and weight loss drugs to prevent diabetes and treat obesity.
  — Orlistat in the treatment of diabesity. Are weight loss medications effective?
  — How do weight loss medications effect VAT stores? Do they reduce inflammation?

LIFESTYLE INTERVENTIONS FOR DIABESITY: THE STATE OF THE SCIENCE
  Diet
  — Comparison of popular dietary approaches. Which are best for regulating glucose, insulin and weight loss?
  — The glycemic index: Amount and type of carbohydrate to prevent and manage diabesity.
  — Importance of dietary fiber. The new guidelines for dietary fiber intake. The secret potion to weight loss?
  Exercise
  — The biological basis of how physical inactivity leads to chronic disease.
  — Evidence that the human genome has been genetically designed to be physically active.
  — Relationship between sedentary lifestyle and increases in VAT (The STRRIDE Study).
  — Exercise guidelines for controlling diabesity.

SURGICAL INTERVENTIONS: CAN THEY PREVENT OR DELAY DIABESITY
- Liposuction: can it improve insulin action and reduce risk factors for coronary heart disease?
- Surgery as an effective early intervention for diabesity: Why the reluctance?

Course Objectives
- Define diabesity and its global implications.
- List current pharmaceutical therapies for the management of diabetes and obesity in both adults and children.
- Identify the role of the fat cell in the development of diabesity.
- List the health complications associated with diabesity and strategies to manage/prevent the adverse health consequences.
- List dietary and exercise strategies for the management/prevention of diabesity.