

# Course Agenda Inflammation: A Silent Killer

## Inflammation: What Happens When the Body Attacks Itself

### Understanding Inflammation

- The Inflammatory Response: How It Works To Defend The Body.
- Inflammatory Cytokines: What Are They And How Do They Work?
- How Chronic Inflammation Can Harm the Body.

## The Connection between Inflammation, Heart Disease, Diabetes, Alzheimer's, And Other Disease States

### Cardiovascular Disease

- C-Reactive Protein (CRP), Its Role In Inflammation And Cardiovascular Disease.
- CRP vs LDL-Cholesterol: Which Is A Better Predictor Of Risk Of A Heart Attack? Current Recommendations.
- The Role Of Inflammation In Destabilizing Plaque. Is This A Major Cause Of Cardiovascular Disease?

### Diabetes

- Relationship Between Adiponectin, Glycemic Control, Blood Lipids, And Inflammatory Markers With Type 2 Diabetes.
- The Connection Between Diabetes, Inflammation, And Fat Cells. Fat Cells: The Inflammation Link?
- Inflammation And Insulin Secretion. Fibrinogen And Fibrin Clot Structure In Diabetes.
- The Effects Of Treatment With The Insulin-Sensitizing Thiazolidinediones: Their Anti-inflammatory Properties.

### Prediabetes, Insulin Resistance & The Metabolic Syndrome

- C-Reactive Protein And The Development Of The Metabolic Syndrome And Diabetes.
- Endothelial Dysfunction, Inflammation, And Insulin Resistance: Increased Risk For Type 2 Diabetes?

### Obesity

- Distinguishing Between Visceral Adipose Tissue (VAT) And Subcutaneous Adipose Tissue (SCAT).
- The Role Of Insulin And Leptin On Appetite Regulation And Energy expenditure.
- Fat Cells: The New Endocrine Organ. Adipokines And Inflammation.

### Alzheimer's Disease

- Inflammation And Cognition.
- Inflammatory Cytokines And Beta-Amyloid Production. Memory Loss.
- Distinguishing Between Oxidative Stress And Inflammation.

## COMBATING INFLAMMATION: DIET, DRUGS, AND EXERCISE

### Dietary Intervention

- Effective Weight Loss Strategies. Combating Obesity By Fighting The Fat Cell.
  - Exercise Therapy For Combating Obesity. The Link Between Exercise, Fibrinogen And C-Reactive Protein.
- Diet And Inflammation. Can Dietary Manipulation Decrease Inflammatory Markers?
  - The Antiinflammatory Diet: Fighting Inflammation With The Right Diet And Supplements.
  - Antioxidants: Fighting The Free Radicals Produced From The Inflammatory Process.
  - Natural Phenolic Compounds As Cardiovascular Therapeutics: Potential Antiinflammatory Effects.
- Effect Of A Mediterranean-Style Diet On Endothelial Dysfunction And Markers Of Vascular Inflammation.

### Pharmacological Interventions

- Pharmacological Therapy For Fighting Inflammation: Aspirin, Statins, Thiazolidinediones, Beta Blockers And ACE Inhibitors.
- The Potential Of Antiinflammatory Agents In Controlling Inflammation In The Brains Of Alzheimer's Patients.
- The Ability Of Aspirin To Cool Reactions From Occurring In Heart Arteries And The Colon.
- The Latest Research On Statin Therapy For Lowering C-Reactive Protein - A Potent Inflammatory Agent.
- Can Blood Pressure Be Controlled In Part By Lowering Inflammatory Markers?

### Exercise Strategies

- The Effect Of Aerobic Exercise And Strength Training On VAT Fat And Metabolic Disorders.
- Effectiveness Of Exercise Intervention On Disease Prevention.
- Guidelines For Exercise Therapy To Reduce The Inflammatory Response.

## Course Objectives

- Discuss the research on inflammation and its role in cardiovascular disease, Alzheimer's, diabetes, insulin resistance, metabolic syndrome and other disease states.
- Discuss the latest research on fat cells, obesity and inflammation.
- List dietary and exercise strategies to reduce inflammation.
- Discuss current pharmacological therapies for fighting inflammation and their proposed mechanisms of action.