Individuals With Cardiovascular Pump Dysfunction

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CHAPTER OBJECTIVES

- Review the statistics and physiologic processes that make it likely that a physical therapist (PT) will encounter a patient with primary or secondary cardiovascular pump dysfunction.
- List the survival prognostic factors identified in the study by Proudfit et al.1
- Answer the question, “What is known about the effect risk factors have on vessel tissues that lead to the development of coronary artery disease (CAD)?”
- Outline the sequence of events that can occur in an artery that can lead to an eventual occlusion or thrombosis.
- Describe the mechanical and metabolic factors, as well as the neural influences, that determine coronary artery blood flow.
- Outline the sequence of events during exercise that may lead to cardiac ischemia in a patient with an obstructive lesion.
- Discuss the sequence of events that lead to an acute myocardial infarction (MI) and the findings that confirm that an infarction has occurred.
- Identify the evidence that suggests risk factor reduction may favorably alter arterial lesions.
- Compare and contrast the sequence of events, signs, and symptoms for right vs left congestive heart failure.

CHAPTER OUTLINE

- Epidemiology
- Pathology/Pathophysiology
- Coronary Artery Disease
  - Atherosclerosis
  - Mechanisms of Atherogenesis: Relationship to Risk Factors
  - Hemodynamics of Coronary Artery Flow in Normal and Diseased States
- Cardiac Pump Ischemia
  - Pathophysiology of Ischemia
  - Acute Myocardial Infarction
  - Reversal and Retardation of Progression of Atherosclerosis
- Heart Failure
  - Congestive Heart Failure
  - Differences Between Left- and Right-Sided Heart Failure
  - Distinguishing Between Left- and Right-Sided Failure
  - Summary of Cardiac Pump Disorder Pathophysiology
- Patient Examination: History, Systems Review, Tests, and Measures
  - History and Interview
  - Systems Review
  - Test and Measures