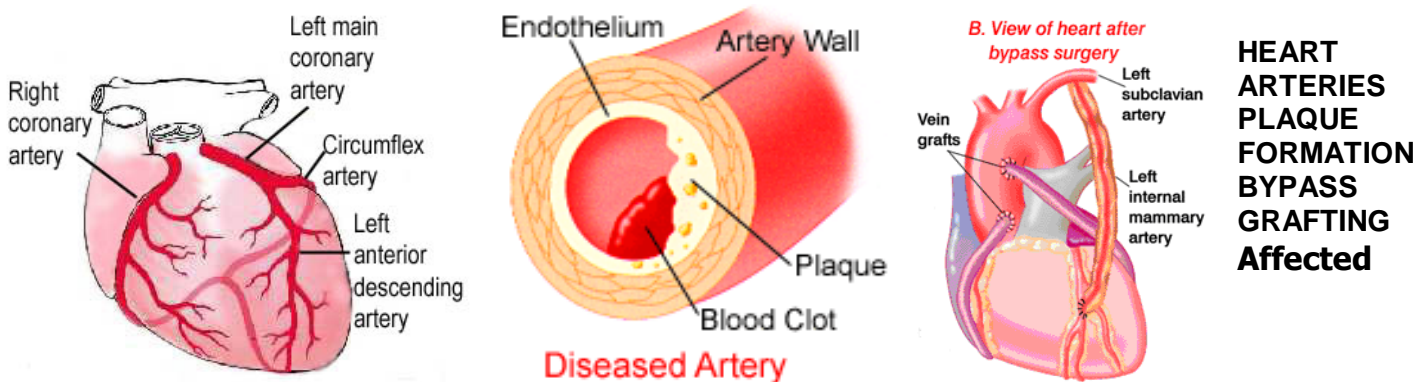


# HEART DISEASE

**Definition:** Includes a variety of clinical diagnoses including myocardial infarction, angina, heart failure, arrhythmias, sudden death and valvular dysfunction.<sup>2,4,7,8</sup>

**Pathophysiology:** The primary impairment in **Coronary artery disease** is an imbalance of heart muscle oxygen supply to meet the heart muscle oxygen demand. The decrease in the supply is because of the narrowing of the diameter of the blood vessel that supplies blood to the heart muscle. The narrowing is caused by accumulation of platelets, lipids (fats), monocytes, plaques and other debris.<sup>1,2,4,8</sup>



**People/Population:** Risk factors includes: smoking, high cholesterol, hypertension, diabetes, emotional stress, and family history. Beyond 65 years of age, females are as vulnerable to cardiovascular mortality as men.<sup>1,2,4,7,8</sup>

**Medications:** Cardiovascular pharmacological agents are critical in the medical management of patients with coronary artery disease. The drugs are designed to reestablish the balance of myocardial supply and demand. Examples of such are: Beta blockers that decrease heart rate and contraction, Calcium channel blockers that reduce blood pressure and Nitrates that increase the diameter of the blood vessels.<sup>2,3,4,8</sup>

**Surgery:** Several surgical procedures may be indicated depending on individual patients needs. Examples of such are: Intra-aortic balloon pump, Coronary artery bypass grafting and angioplasty.<sup>1,2,4</sup>

**Physical Therapy:** Cardiac rehabilitation is subdivided into 4 phases starting from inpatient lasting indefinitely as the patient maintains heart healthy lifestyle and dietary habits. Exercise range from bedside activities, leg exercises, personal care, sitting balance/tolerance, standing and eventually to walking and home exercises. Eventually when the patient reaches acceptable levels that permit more challenging exercises, aerobic and strengthening exercises are given.<sup>1,2,4,7</sup>

## References:

1. Krusen's Handbook of Physical Medicine and Rehabilitation by Kottke and Lehman, 4<sup>th</sup> Ed.
2. Physical Rehabilitation Assessment and Treatment by O'Sullivan and Schmitz 4<sup>th</sup> Ed.
3. Pharmacology by Jacob 2<sup>nd</sup> Ed.
4. Rehabilitation Medicine by De Lisa and Ganz 3<sup>rd</sup> Ed.
5. Orthopedic Physical Assessment by Magee, 3<sup>rd</sup> Ed.
6. Merriam-Webster's Medical Dictionary 1995
7. Therapeutic Exercises by Kissner and Colby 4<sup>th</sup> Ed.
8. Robbin's Pathologic Basis of Disease by Cotran, Kumar, Robbins 4<sup>th</sup> Ed.

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