



Cardiology

Cardiology

Overview

Cardiology is the branch of medicine that specializes in the study, diagnosis, and management of pathologies affecting the heart. Dysfunction of the cardiac pump can manifest in several ways depending on the underlying cause. Respiratory signs and symptoms are common in the case of poor cardiac performance or inadequate oxygenation of blood.

In this course, the student will be given overview of heart failure, congenital heart diseases, valvular diseases, coronary artery disease, the different types of cardiomyopathies, cardiac dysrhythmias, and hypertension.

For optimal understanding, the student should be familiar with the anatomy of the heart, with special emphasis on coronary circulation and the conduction system, and cardiac physiology, with special attention to the cardiac cycle and membrane potential, and embryology of the heart and major vessels.

Dysfunction of the cardiac pump can manifest in several ways depending on the underlying cause. Respiratory signs and symptoms are common in the case of poor cardiac performance or inadequate oxygenation of blood. Cardiovascular disease is one of the major public health concerns in the western world, and its associated morbidity can severely impair functionality and the quality of life of the affected individual.

A good clinician should be able to identify the most common signs and symptoms associated with cardiac anomalies and also be proficient in analyzing ecg tracings. Coronary artery disease and conduction abnormalities are of special interest for general practitioners and other physicians. For students, their importance cannot be understated.

Cardiology

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Cardiac Diseases

- Definition – Heart Failure
- Pathophysiology – Heart Failure
- Types – Heart Failure
- Causes and Symptoms – Heart Failure
- Testing on Patients and Therapy – Heart Failure
- Classification – Congenital Heart Disease
- Obstructive Congenital Heart Lesions – Congenital Heart Disease
- Congenital Heart Lesions – Congenital Heart Disease
- Conclusion – Congenital Heart Disease
- Anomalous Coronary Arteries – Congenital Heart Disease
- Changing Concepts – Valvular Heart Disease
- Aortic Stenosis – Valvular Heart Disease
- Bicuspid Aortic Valve – Valvular Heart Disease
- Aortic Sclerosis – Valvular Heart Disease
- Aortic Regurgitation – Valvular Heart Disease
- Mitral Stenosis and Mitral Regurgitation – Valvular Heart Disease
- Tricuspid Regurgitation – Valvular Heart Disease
- Plaque – Coronary Artery Disease
- Acute Coronary Syndrome – Coronary Artery Disease
- Six Areas of Consensus – Coronary Artery Disease
- Four Areas of Controversy – Coronary Artery Disease
- Diseases of the Heart Muscle – Cardiomyopathy
- Dilated Cardiomyopathy – Cardiomyopathy
- Secondary Dilated Cardiomyopathy – Cardiomyopathy
- Hypertrophic Cardiomyopathy – Cardiomyopathy
- Restrictive Cardiomyopathy – Cardiomyopathy
- Therapy – Cardiomyopathy
- Reading ECGs and Identifying Arrhythmias – Cardiac Dysrhythmia

- Conduction System – Cardiac Dysrhythmia
- ECG Trace – Cardiac Dysrhythmia
- Sinus, Atrial and Ventricular Rhythm – Cardiac Dysrhythmia
- Reading ECGs – Cardiac Dysrhythmia
- Complications of Hypertension – Hypertension
- Therapy – Hypertension
- Diuretics – Hypertension
- Renin Angiotensin Aldosterone System – Hypertension
- Beta and Calcium Channel Blockers – Hypertension
- Other Forms of Therapy – Hypertension
- Cardiac Trauma
- Cardiac Tumors

Electrocardiogram (ECG) Interpretation

- How to Read an Electrocardiogram (ECG): Introduction
- Cardiac Action Potential
- Standard 12 Lead ECG
- Systematic ECG Interpretation
- ECG Case: 22-year-old Man with Anterior Chest Pain
- Review of Normal ECG
- ECG of Myocardial Infarction (MI): STEMI vs. NSTEMI
- ECG of Inferior Myocardial Infarction (MI)
- ECG of Anterior Myocardial Infarction (MI)
- Abnormal Q Waves: ECGs of Healed Myocardial Infarction (MI)
- Abnormal T Waves: Differentiating Pericarditis from Myocardial Infarction (MI)
- ECG Case: 67-year-old Diabetic Man with Low Blood Pressure
- ECG Case: 17-year-old Man with Pressure Feeling under Sternum
- ECG of Ventricular Hypertrophy

- ECG of Atrial Enlargement
- ECG Case: 52-year-old Man with Shortness of Breath
- ECG Case: 44-year-old Woman with Shortness of Breath and Fatigue
- Review of Cardiac Conduction System
- Bundle Branch and Fascicular Blocks
- ECG Case: 70-year-old Man with Acute Anterior MI
- Sick Sinus Syndrome and Sinus Exit Block
- First-degree AV Blocks
- Second-degree AV Blocks
- Third-degree AV Blocks
- ECG Case: 88-year-old Man with Syncope
- Supraventricular Arrhythmias: Introduction
- ECG of Atrial Premature Beats
- ECG of Supraventricular Tachycardia
- ECG of Atrial Flutter and Fibrillation
- ECG of Nodale Extra Systoles
- ECG Case: 80-year-old Woman with Palpitations and Shortness of Breath
- Types of Pacemaker
- How to Read a Pacemaker ECG
- Implantable Cardiac Defibrillator (ICD) Pacemaker
- ECG Case: 77-year-old Man with Pacemaker
- ECG of Premature Ventricular Contraction (PVC)
- ECG of Ventricular Tachycardia and Cardiac Arrest
- ECG of Torsades de Pointes
- ECG Case: 40-year-old Woman with 'Extra Heart Beats'
- Effects of Electrolyte Abnormalities on the ECG
- Effects of Drugs on the ECG
- ECG Case: 65-year-old Man with CRF Misses Dialysis
- How to Read an ECG: Conclusion
- Power ECG Case Session

Cardiovascular Cases

- Cardiac Case: 57-year-old Man with Substernal Chest Pain
- Cardiac Case: 62-year-old Woman with Fever and Epigastric Discomfort
- Cardiac Case: 44-year-old Man with Indigestion during Exertion
- Cardiac Case: 46-year-old Woman with Shortness of Breath when Walking
- Cardiac Case: 77-year-old Man with Shortness of Breath and Palpitations
- Cardiac Case: 76-year-old Man with COPD and Sudden Increase in Shortness of Breath
- Cardiac Case: 19-year-old Man with Central Chest Pain Worsening when Breathing
- Cardiac Case: 55-year-old Man with Sudden Anterior Chest Pain Radiating to Back
- Cardiac Case: 82-year-old Man with Syncope
- Cardiac Case: 54-year-old Woman with Breast Cancer and Dyspnea
- Cardiac Case: 45-year-old Man with Alcohol Intake after Minor Traffic Accident
- Cardiac Case: 21-year-old Woman with Fatigue and Shortness of Breath when Exercising
- Cardiac Case: 56-year-old Man with Dyspnea and Ankle Edema
- Cardiac Case: 86-year-old Woman with Shortness of Breath during Annual Checkup
- Cardiac Case: 72-year-old Man with Dyspnea at Rest and Inability to Lie Flat
- Cardiac Case: 18-year-old Woman with Murmur
- Cardiac Case: 68-year-old Woman with Murmur and Abnormal Heart Valve
- Cardiac Case: 24-year-old Man with Asymptomatic Murmur

- Cardiac Case: 67-year-old Woman with Cardiac Arrest
- Cardiac Case: 18-year-old Woman with Fast Heart Beat and Shortness of Breath
- Cardiac Case: 79-year-old Man with Pacemaker and Recent Dental Procedure
- Cardiac Case: 22-year-old Woman with Fever and Ankle Edema after Long-term Heroin Abuse
- Cardiac Case: 61-year-old Man with Substernal Chest Discomfort, Shortness of Breath and Diffuse Sweating
- Cardiac Case: 17-year-old Man with High Blood Pressure
- Cardiac Case: 42-year-old Woman with Joint Discomfort, Low Grade Fever, and Dyspnea
- Cardiac Case: 62-year-old Man with Shortness of Breath and Peripheral Edema
- Cardiac Case: 22-year-old Woman with Leg Edema, Dyspnea and Fatigue
- Cardiac Case: 38-year-old Woman with Shortness of Breath and Inability to Lie Flat after Childbirth
- Vascular Case: 72-year-old Man with Foot Pain and Gangrenous Left Hallux
- Vascular Case: 37-year-old Man with Elevated Blood Pressure after Motor Vehicle Accident

Vascular Medicine

Arterial Diseases

- Atherosclerosis: Definition
- Atherosclerosis: Etiology
- Atherosclerosis: Pathogenesis
- Atherosclerosis: Histopathologic Consequences
- Atherosclerosis: Diagnosis
- Atherosclerosis: Therapy
- Atherosclerosis: Summary
- Buerger's Disease: Definition and Etiology
- Buerger's Disease: Symptoms and Therapy
- Raynaud's Disease: Case, Definition & Pathogenesis
- Raynaud's Disease: Symptoms, Diagnosis and Therapy
- Buerger's and Raynaud's Disease: Summary
- Peripheral Artery Disease: Definition
- Peripheral Artery Disease: Pathogenesis
- Peripheral Artery Disease: Summary
- Aortic Aneurysm: Example
- Aortic Aneurysm: Definition
- Aortic Aneurysm: Etiology
- Aortic Aneurysm: Diagnosis
- Aortic Aneurysms: Summary
- Dissection of the Aorta: Etiology
- Dissection of the Aorta: Symptoms
- Dissection of the Aorta: Therapy
- Renal Stenosis and Fibromuscular Dysplasia
- Dissection and Renal Artery Stenosis: Summary
- Hypertension: Example

- Hypertension: Definition & Forms
- Hypertension: Pathogenesis and Symptoms
- Hypertension: Etiology (Neural Blood Pressure Control Mechanisms)
- Hypertension: Etiology (Humoral Blood Pressure Control Mechanisms)
- Hypertension: Etiology (Risk Factors)
- Hypertension: Symptoms
- Hypertension: Epidemiology
- Hypertension: Summary
- Hypotension and Shock: Definition
- Hypotension and Shock: Pathogenesis
- Hypotension and Shock: Therapy
- Hypotension and Shock: Summary

Venous Diseases

- Venous Diseases: Overview
- Thrombosis: Examples
- Thrombosis: Consequences of Venous Thromboembolism
- Thrombosis: Summary
- Varicose Veins: Definition
- Varicose Veins: Etiology
- Varicose Veins: Pathogenesis
- Varicose Veins: Symptoms
- Varicose Veins: Diagnosis
- Varicose Veins: Summary
- Deep Vein Thrombosis: Definition
- Deep Vein Thrombosis: Epidemiology
- Deep Vein Thrombosis: Etiology
- Deep Vein Thrombosis: Risk Factors
- Deep Vein Thrombosis: Pathogenesis
- Deep Vein Thrombosis: Symptoms

- Deep Vein Thrombosis: Therapy
- Deep Vein Thrombosis: Summary
- Pulmonary Embolism: Definition
- Pulmonary Embolism: Diagnosis
- Pulmonary Embolism: Pulmonary Contrast Angiogram
- Pulmonary Embolism: Summary

Inflammatory Vascular Diseases

- Inflammatory Vascular Diseases: Definition
- Inflammatory Vascular Diseases: Classification
- Polyarteritis Nodosa
- Kawasaki Disease
- Giant Cell Arteritis
- Inflammatory Vascular Diseases: Summary

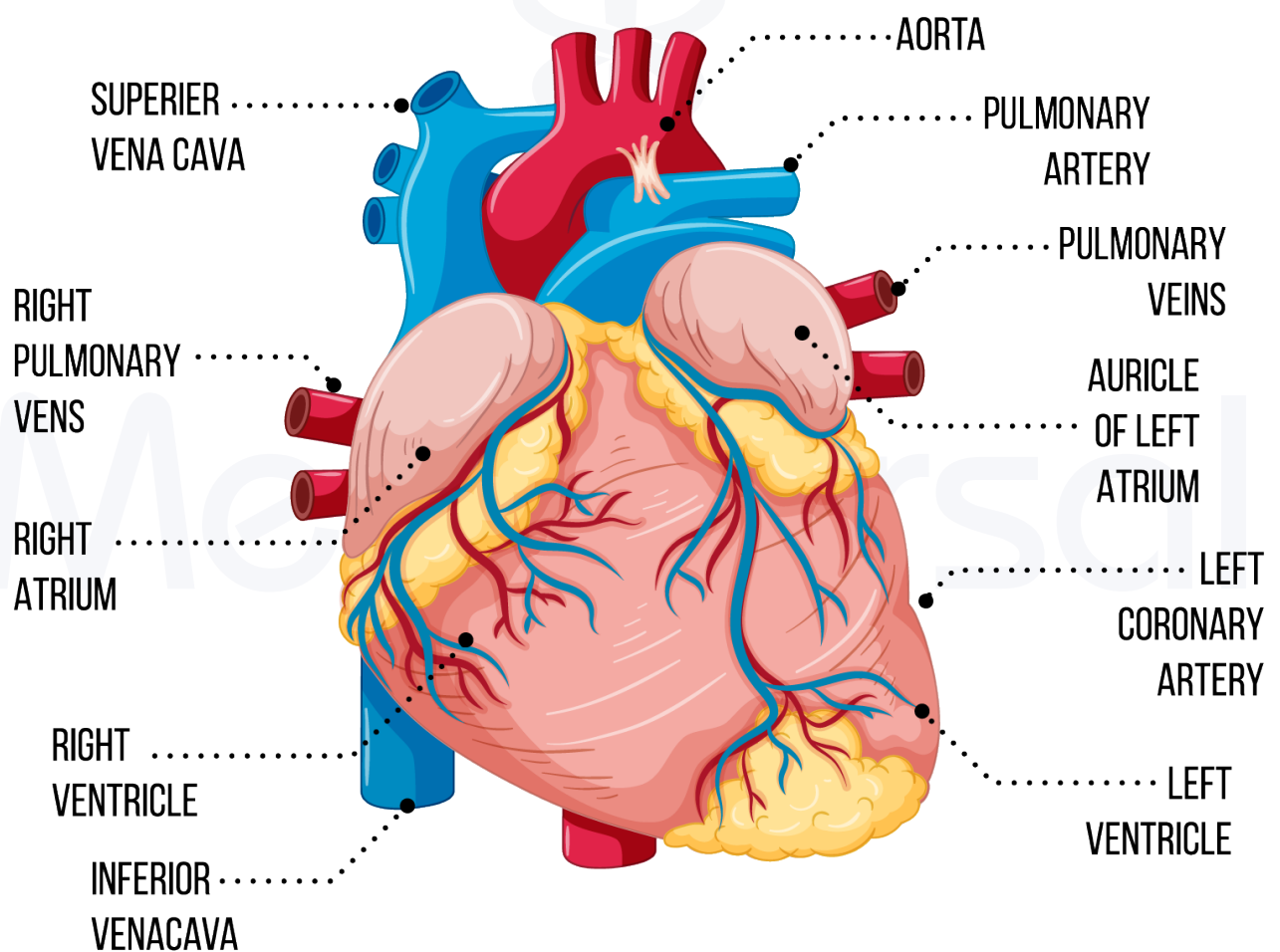
Vascular Malformations

- Vascular Malformations: Definition
- Non-neoplastic Vascular Malformations – Vascular Malformations
- Cavernomas – Vascular Malformations
- Congenital Vascular Malfunctions of the Aorta – Vascular Malformations
- Vascular Malformations: Summary

Diseases of the Lymphatic System

- Diseases of the Lymphatic System: Definition
- Starling's Law of the Capillary
- Components of the Lymphatic System
- Structure of Lymphatic Vessels

- Congenital Lymphatic Malformations
- Conditions with Tissue Edema
- Diseases of the Lymphatic System: Summary



Why Mediversal?

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Case based learning	✓ Yes	✗ No
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Alumni Support	✓ Yes	⚠ Only a few
e-Certification	✓ Yes	✓ Yes
Physical Certification	✓ Yes	⚠ Only a few
Lifetime certificate validity	✓ Yes	✓ Yes
Digital Marketing and Business Support for your hospital/clinic	✓ Yes	✗ No
Admission process	✓ Smooth, Transparent & all details provided	⚠ Spamming through multiple channels.
Data and privacy protection	✓ Yes	✗ No
CME access	✓ Yes (Lifetime)	✗ No
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