

Terminology in Health Care and Public Health Settings

Unit 5 Cardiovascular System

Component 3/Unit 5

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Cardiovascular System

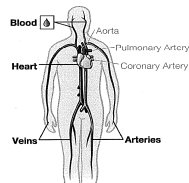
- Also referred to as the Circulatory system
- Functions
 - Distribute blood to all areas of body
 - Delivery of needed substances to cells
 - Removal of wastes

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Cardiovascular System

- Organs of Cardiovascular System
 - Heart
 - Arteries
 - Capillaries
 - Veins



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Heart

- Located in the mediastinum
 - More to left side of chest
 - Directly behind sternum
- About size of a fist
- Shaped like upside-down pear



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Heart Chambers

- Divided into four chambers
 - **Two atria**
 - Left and right upper chambers
 - Receiving chambers
 - Blood returns to atria in veins
 - **Two ventricles**
 - Left and right lower chambers
 - Pumping chambers
 - Blood exits ventricles into arteries
- Heart is divided into right and left sides by a wall called the **septum**

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Blood Vessels

- Pipes that circulate blood through body
- Three types:
 - Arteries
 - Large thick-walled vessels which can dilate or constrict
 - Carry blood away from heart
 - Capillaries
 - Network of tiny, thin-walled blood vessels
 - Connecting unit between arteries and veins
 - Location for oxygen and nutrients to diffuse out of the blood and carbon dioxide and wastes to diffuse into the blood
 - Veins
 - Carry blood towards the heart
 - From either the lungs or the cells and tissues of body

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Atherosclerosis

- Is a disease in which plaque builds up inside your arteries.
- Plaque is a sticky substance made up of fat, cholesterol, calcium, and other substances found in the blood.
- Can lead
 - Coronary artery disease. These arteries supply blood to your heart. When they are blocked, you can suffer angina or a heart attack.
 - Carotid artery disease. These arteries supply blood to your brain. When they are blocked you can suffer a stroke.
 - Peripheral arterial disease. These arteries are in your arms, legs and pelvis. When they are blocked, you can suffer from numbness, pain and sometimes infections.

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Atherosclerosis

- Atherosclerosis usually doesn't cause symptoms until it severely narrows or totally blocks an artery.
- A physical examination, imaging and other diagnostic tests can tell if you have it.
- Treatments include medicines, and medical procedures or surgery.
- Lifestyle changes can also help.

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Stroke

- Strokes happen when blood flow to your brain stops.
- There are two kinds of stroke.
 - Ischemic stroke, is caused by a blood clot that blocks or plugs a blood vessel in the brain.
 - Hemorrhagic stroke, is caused by a blood vessel that breaks and bleeds into the brain.
- "Mini-strokes" or transient ischemic attacks (TIAs), occur when the blood supply to the brain is briefly interrupted.

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Stroke

- Symptoms of stroke are
 - Sudden numbness or weakness of the face, arm or leg (especially on one side of the body)
 - Sudden confusion, trouble speaking or understanding speech
 - Sudden trouble seeing in one or both eyes
 - Sudden trouble walking, dizziness, loss of balance or coordination
 - Sudden severe headache with no known cause
- Rehabilitation helps overcome disabilities that result from stroke damage.
- Drug therapy with blood thinners is the most common treatment for stroke.

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Hypertension

- Often called a "silent killer"
- Can cause life-threatening illnesses like kidney problems, stroke, heart failure, blindness, and heart attacks.
- You can control high blood pressure through healthy lifestyle habits and taking medication, if needed.

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Hypertension

- Blood pressure reading uses two numbers, the systolic and diastolic pressures.
 - Systolic blood pressure is the pressure when the heart beats while pumping blood.
 - Diastolic blood pressure is the pressure when the heart is at rest between beats.
- Usually written one above the other.
 - A reading of
 - 120/80 or lower is normal blood pressure
 - 140/90 or higher is high blood pressure
 - 120 and 139 for the top number, or between 80 and 89 for the bottom number is prehypertension

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Myocardial infarction

- Those symptoms include
 - Chest discomfort
 - Shortness of breath
 - Discomfort in the upper body
 - Nausea, vomiting, dizziness, lightheadedness, sweating
- Happens when a clot in the coronary artery blocks the supply of blood and oxygen to the heart.
- Often leads to arrhythmia - that causes a severe decrease in the pumping function of the heart

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Cardiovascular Combining Forms

- | | | |
|------------|-----------------|--------------|
| • angi/o | vessel | angioplasty |
| • aort/o | aorta | aortic |
| • arteri/o | artery | arterial |
| • ather/o | fatty substance | atherectomy |
| • atri/o | atrium | interatrial |
| • cardi/o | heart | cardiomegaly |
| • phleb/o | vein | phlebitis |

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