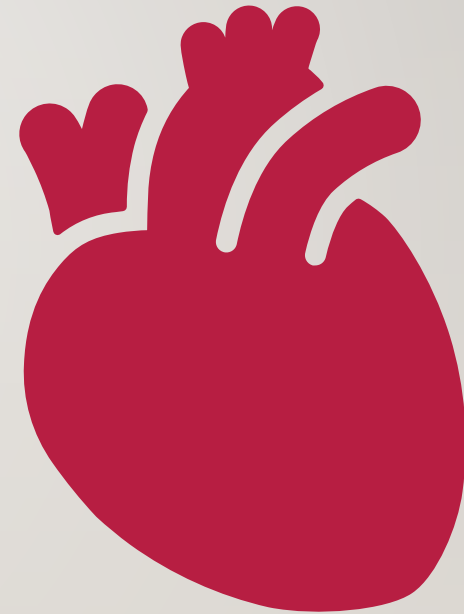


CARDIOVASCULAR SYSTEM



-
- The circulatory system is made up of the blood, heart, and blood vessels



THE BLOOD

- The blood consists of blood cells and plasma.
- Plasma is mostly water. It carries blood cells to other body cells. Plasma also carries substances (food, hormones, and chemicals) that cells need to function.

BLOOD CELLS

- Red blood cells
- White blood cells
- Platelets



RED BLOOD CELLS

- They transport oxygen to the body through the hemoglobin
- Red blood cells are also known as erythrocytes
- The normal red blood cell count is between 3.5 million to 4.5 million in one cubic mm

COMMON DISEASES OF RED BLOOD CELLS

Anemia is when a person too low red blood cells on their blood

Causes- blood loss

inadequate iron in take

pregnancy

Symptoms of anemia- dizziness

headache

fatigue

WHITE BLOOD CELLS

- This cells fight against infection
- They are also known as leukocytes
- The normal count is between 4000- 10000 cells in 1 cubic mm

COMMON DISEASES

- Leukemia- malignancy of the white blood cells
- Causes- genetics
- radiation
- infections

PLATELETS

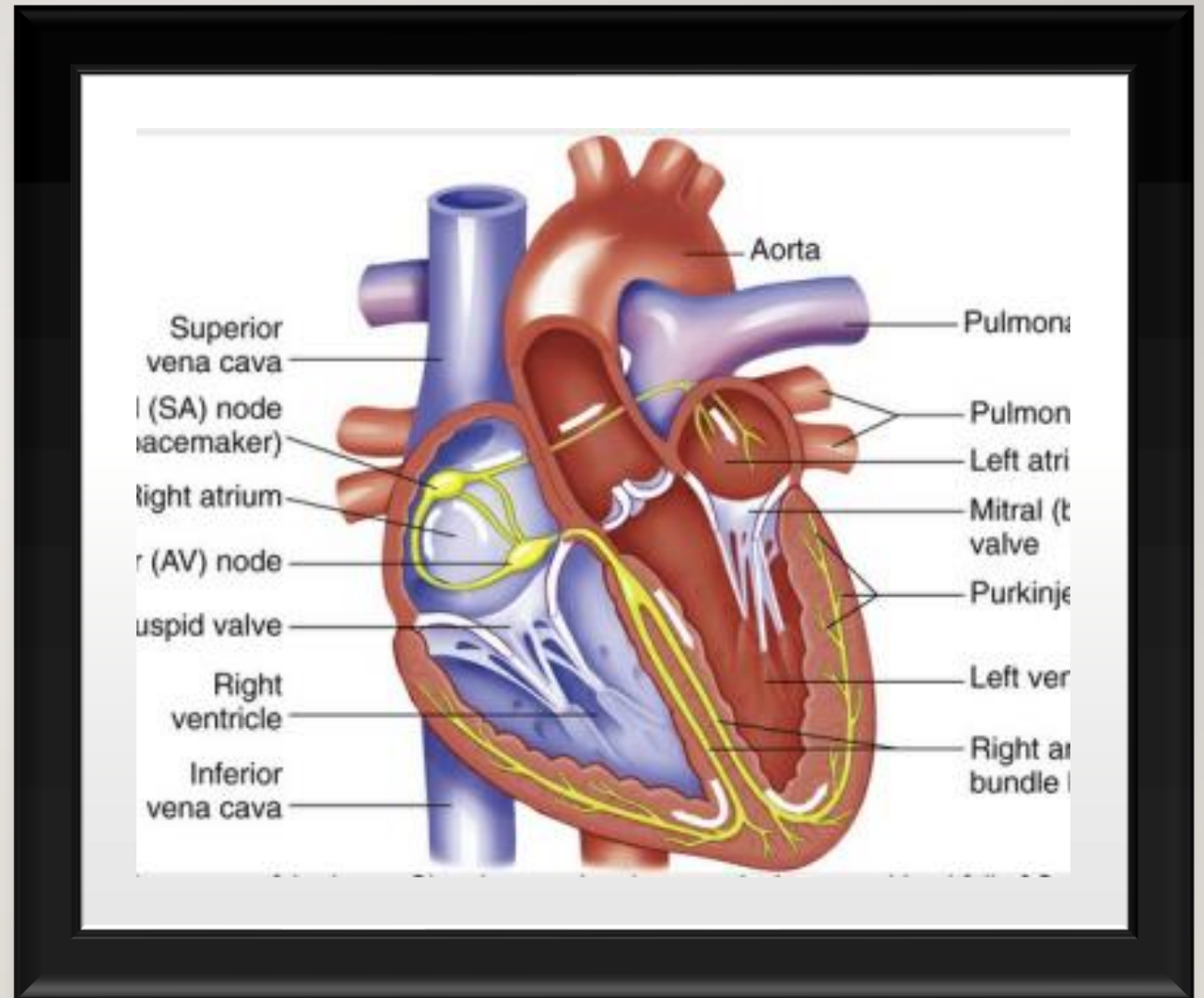
- The function of platelets is to stop bleeding by forming blood clot.
- A normal platelet count in adults ranges from 150,000 to 450,000 platelets per microliter of blood.

If the platelet count is too low the patient can bleed spontaneously

If the platelet count is too high the patient can form blood clots in the blood

THE HEART

- The heart is a muscle. It pumps blood through the blood vessels to the tissues and cells. The heart has 4 chambers



COMMON DISEASES OF THE HEART

HEART FAILURE

- When the heart is unable to pump blood properly

Symptoms- the patient will be weak

they have dyspnea

cough

edema

Causes- hypertension

diabetes

infection

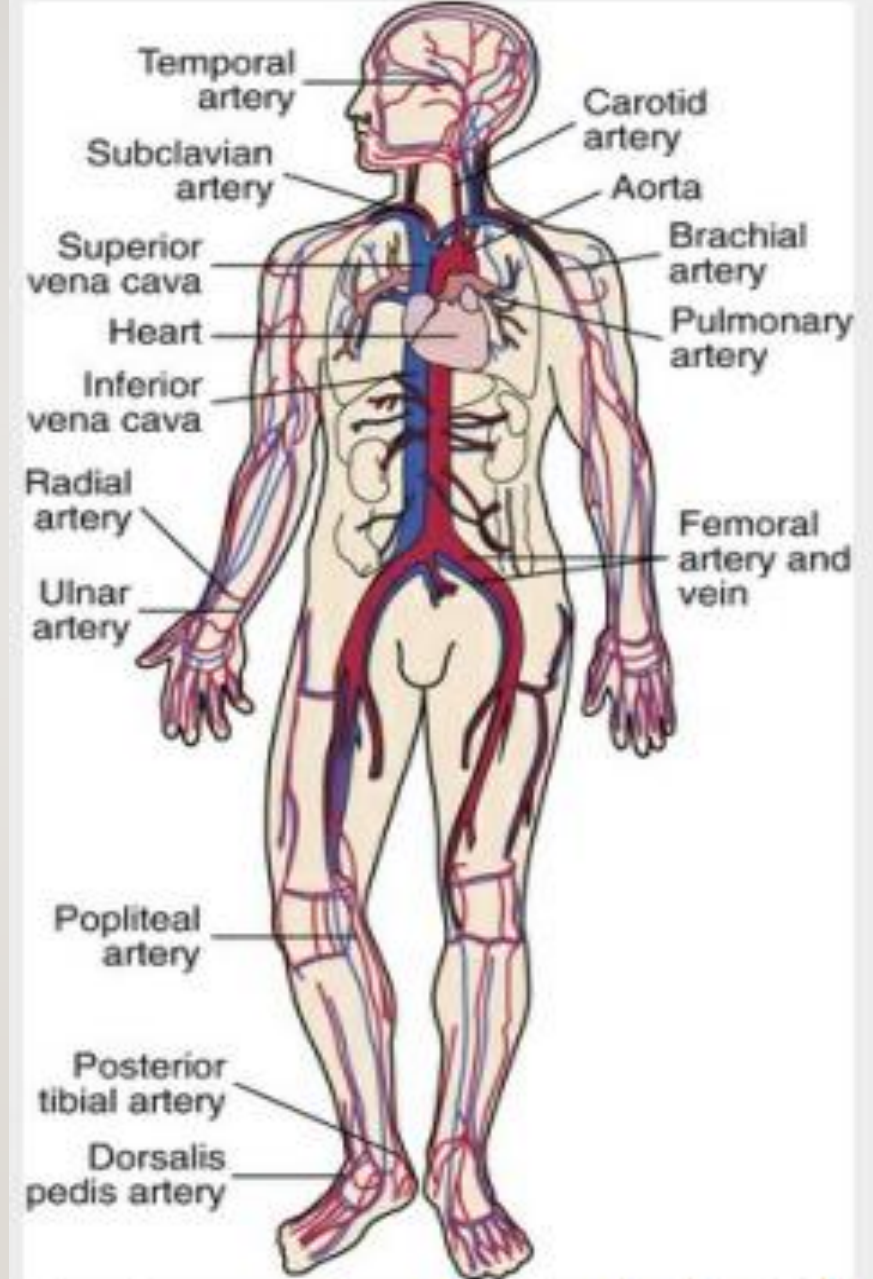
fluid overload

BLOOD VESSELS

- Blood flows to body tissues and cells through the blood vessels.
- There are 3 groups of blood vessels: arteries, capillaries, and veins

ARTERIES

- Carry blood away from the heart.
- Arterial blood is rich in O₂ .
- The aorta is the largest artery. It receives blood directly from the left ventricle.
- The aorta branches into other arteries that carry blood to all parts of the body.
- The smallest branch of an artery is an arteriole.

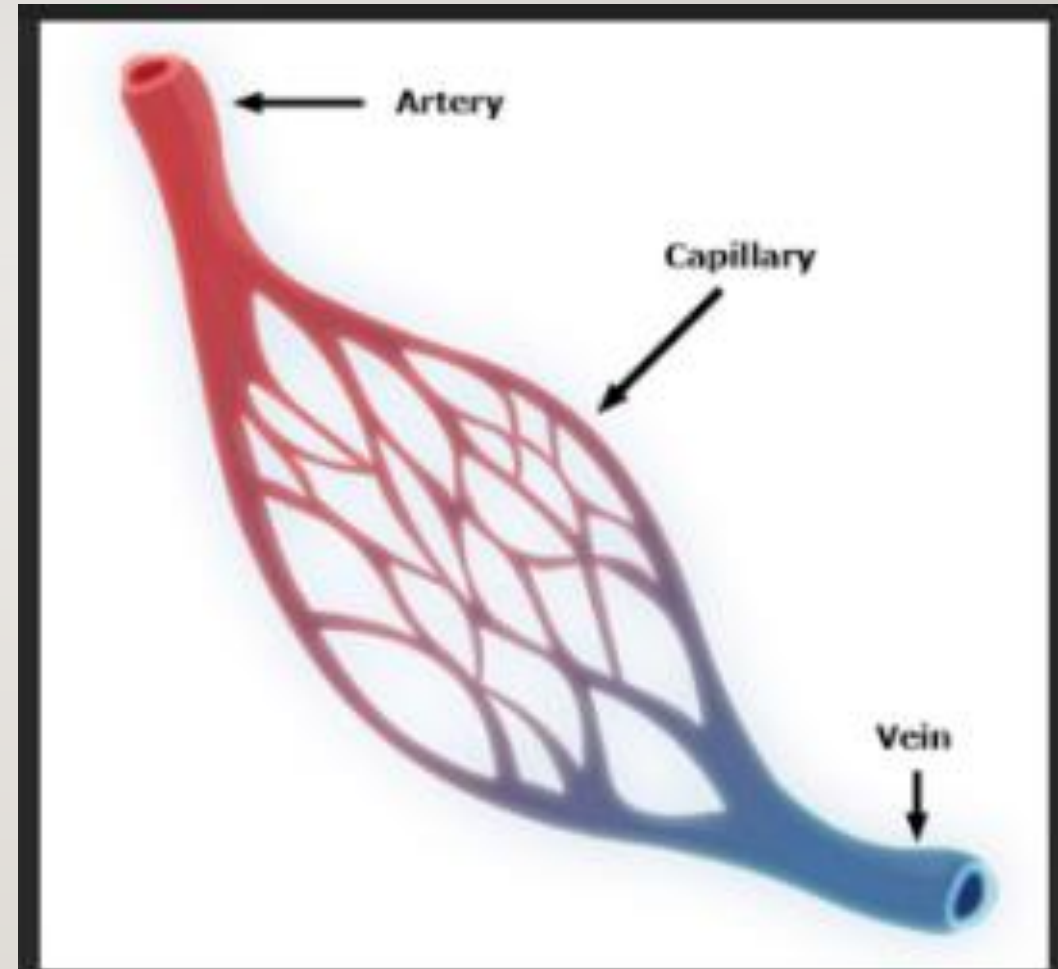


VEINS

- Veins return blood to the heart
- Venules are the smallest veins they connect with each other to form bigger veins and at the end they form the superior and inferior vena cava.
- All veins carry deoxygenated blood except the pulmonary vein.

CAPILLARY

- Capillaries are the smallest blood vessels in your vascular system.
- Oxygen and nutrients from the blood can move through the walls and get into organs and tissues.
- The capillaries also take waste products away from your tissues.
- Capillaries are where oxygen and nutrients are exchanged for carbon dioxide and waste.



A microscopic image of a blood vessel cross-section. The vessel lumen is filled with numerous dark purple, spherical structures, likely representing a pathological condition. The vessel wall is composed of several layers of cells, including a prominent layer of endothelial cells. A dark grey rectangular overlay is positioned in the center of the image, containing the text "DISEASES OF THE BLOOD VESSELS" in white, uppercase letters. A thin orange horizontal line is located below the text.

DISEASES OF THE BLOOD VESSELS

HYPERTENSION

- With hypertension the systolic pressure is 140 mm Hg or higher Or the diastolic pressure is 90 mm Hg or higher.
- Causes- hereditary
- smocking
- alcohol
- diet
- renal failure



QUESTIONS???
