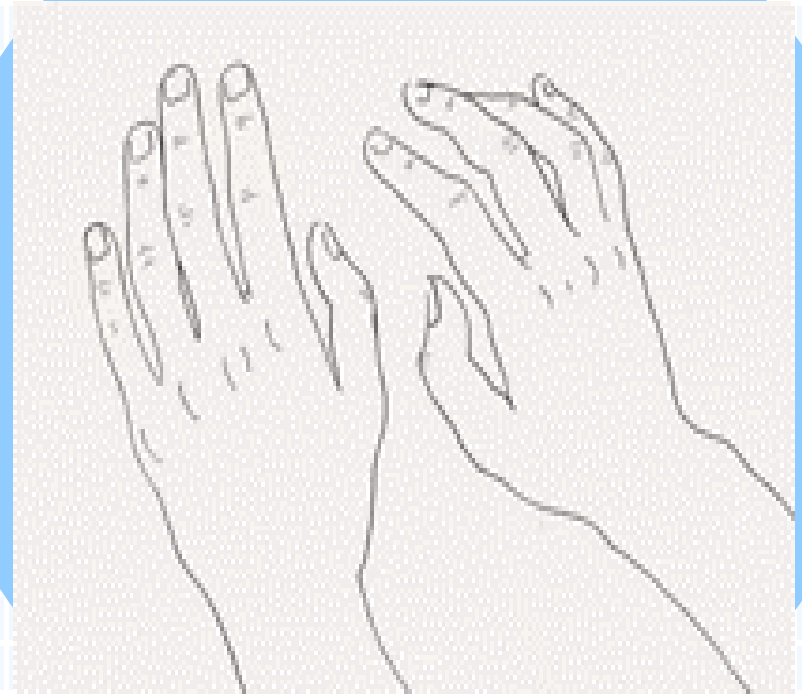**Faculty of Pharmacy**
كلية الصيدلة

Arteries and veins

By: Ayah Bugazia3238,
 Nadia Benghrbia 3537 ,
Monya Jalal 3054,
Mohammed Alasadi3562

Objectives

01 **Define Arteries**

02 **Define Veins**

03 **Discuss types of Arteries and veins**

04 **Explain systemic circulation**

05 **Compare Arteries and Veins**

06 **Recognize the Structure of arteries and veins**

**07** **Expound ways to keep blood vessels healthy**

What are arteries

❑ The arteries are the blood vessels that deliver oxygen-rich blood(except pulmonary and umbilical arteries), from the heart to the tissues of the body.

❑ The largest artery is the aorta, the main high-pressure pipeline connected to the heart's left ventricle.

❑ The aorta branches into a network of smaller arteries that extend throughout the body. The arteries' smaller branches are called arterioles.
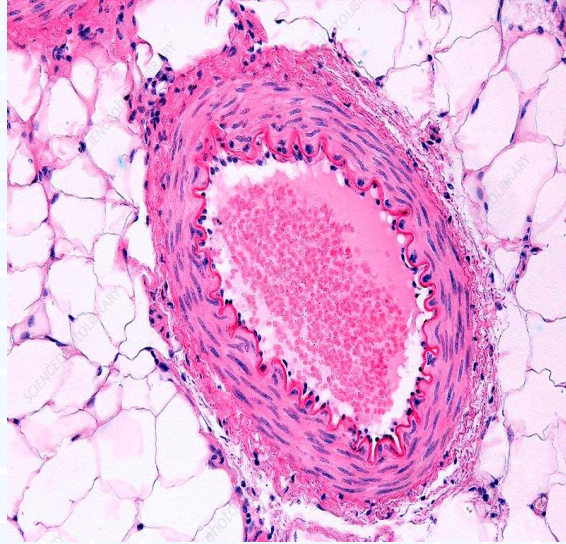
What are veins

❑Veins carry deoxygenated blood(except the pulmonary and umbilical veins towards your heart.

❑Veins start as tiny blood vessels called venules, which become full-size veins as they come closer to your heart.

❑The largest veins in the human body are the venae cavae (superior and inferior)
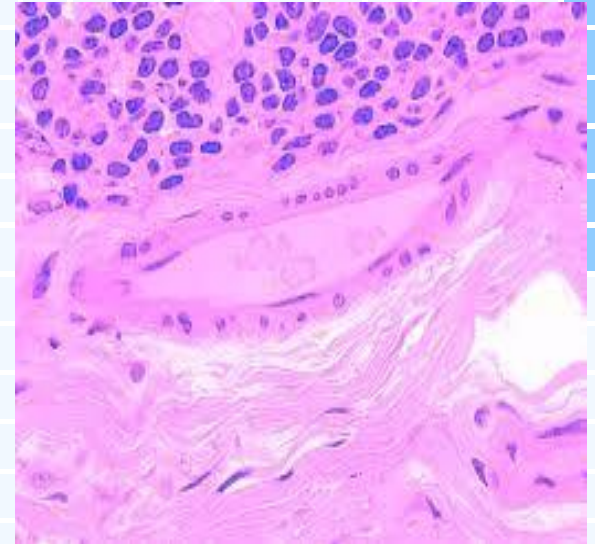
Types of arteries
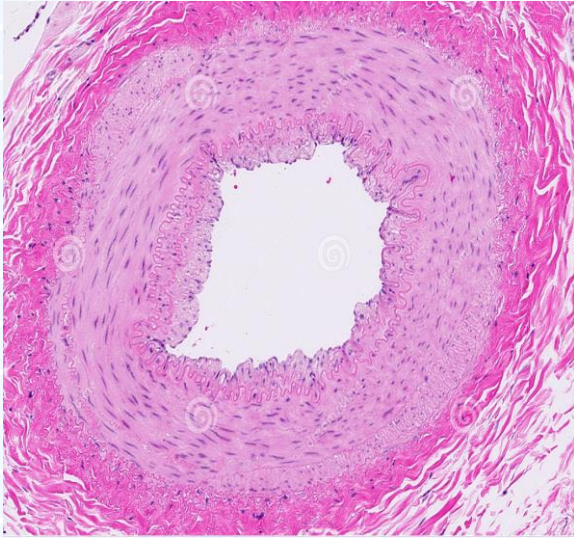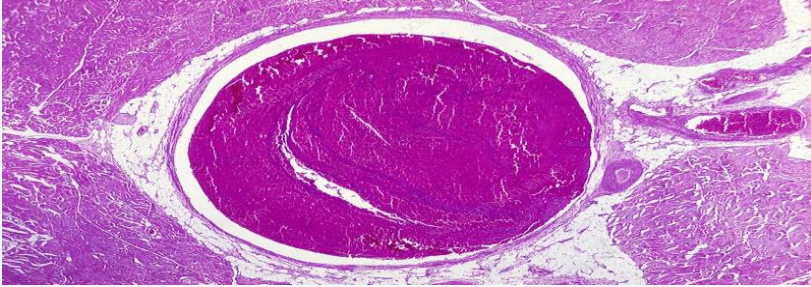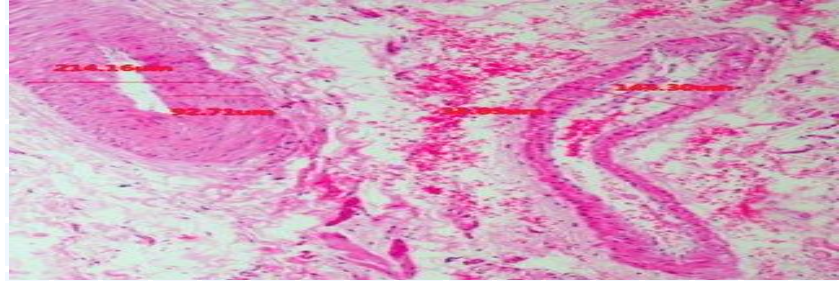
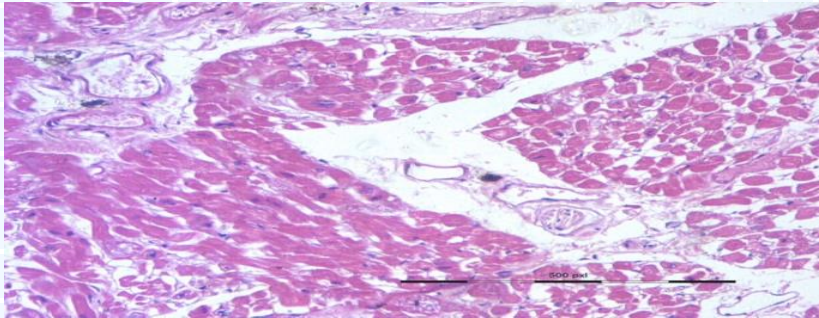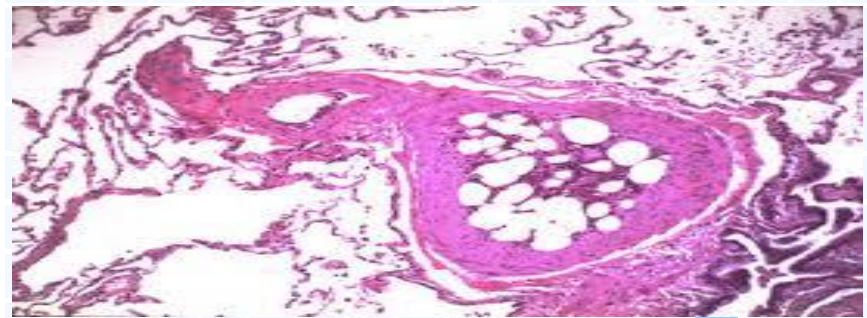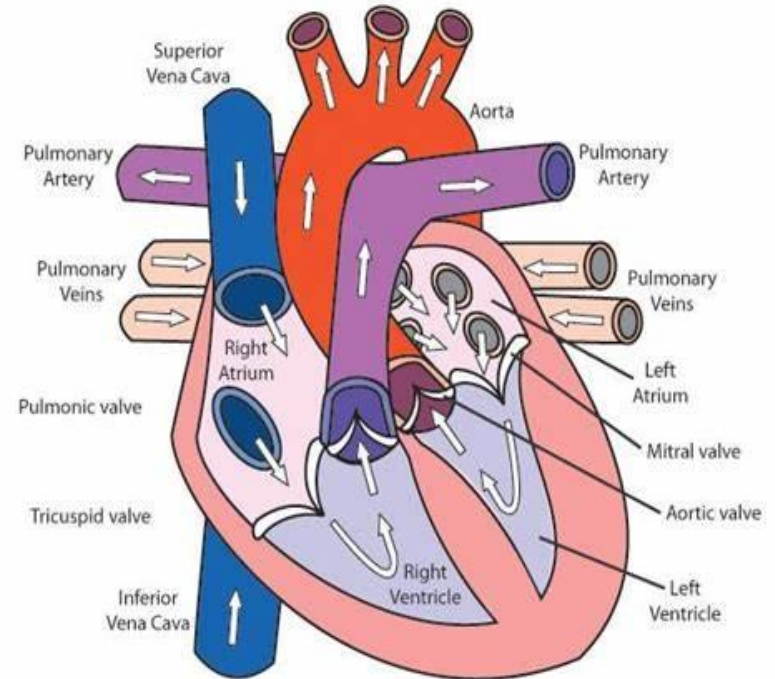| Elastic artery	Muscular artery	Arterioles

Types of veins

Deep veins

Superficial veins

Pulmonary veins

Systemic veins

Systemic circulation
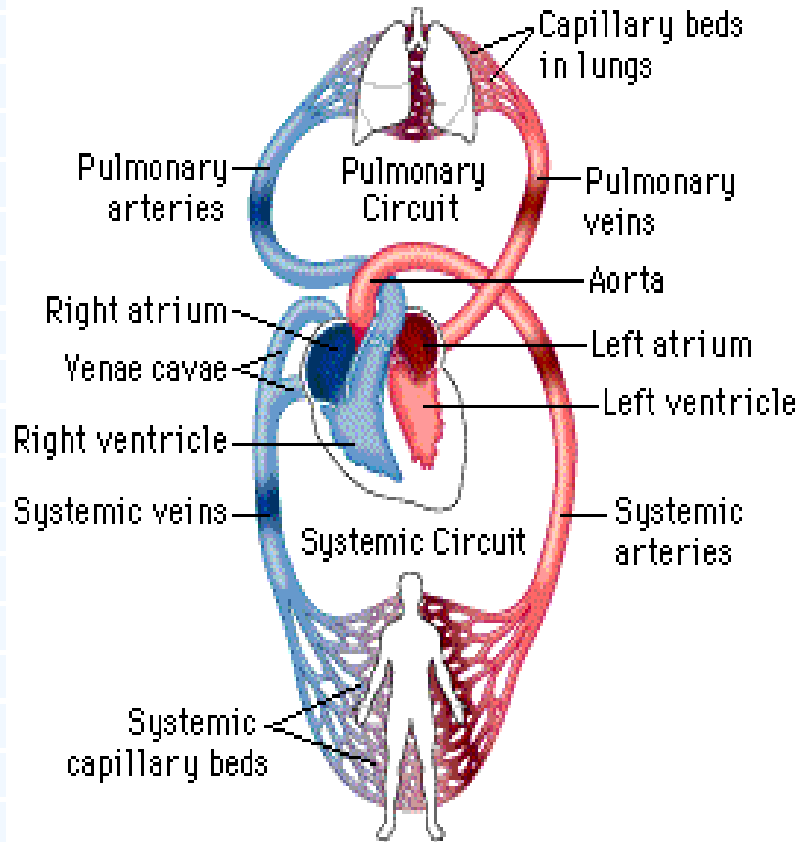
Arteries vs veins

Arteries	Veins
Carry oxygenated blood	Carry deoxygenated blood
Red in colour	Blue in colour
Located deep in the muscle	Located closer to the surface of the body
Have no valves except pulmonary arteries	Have valves except pulmonary vein
They are thick walled	They are thin walled
More muscular than veins	Less muscular than arteries
Blood under high pressure	Blood under low pressure
Size of larger arteries >10mm in diameter while smaller ones from 0.1 to 10mm	Size from 1mm to 1.5cm in diameter

Structure of Artery
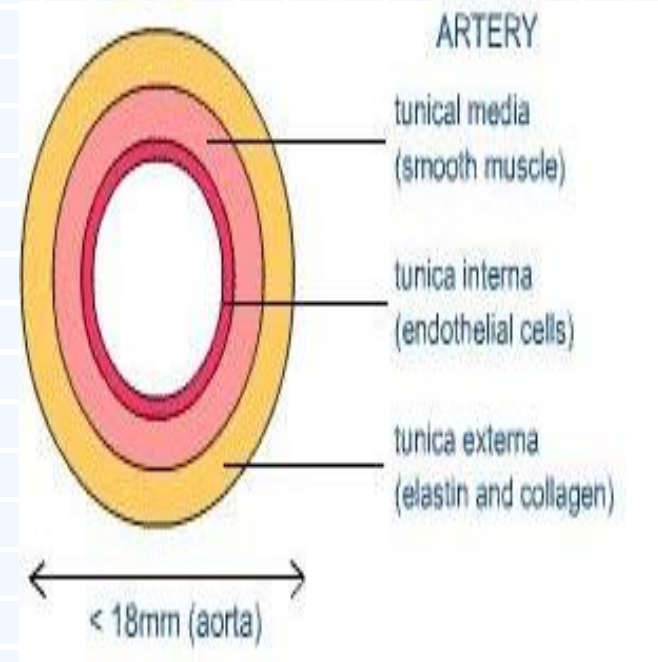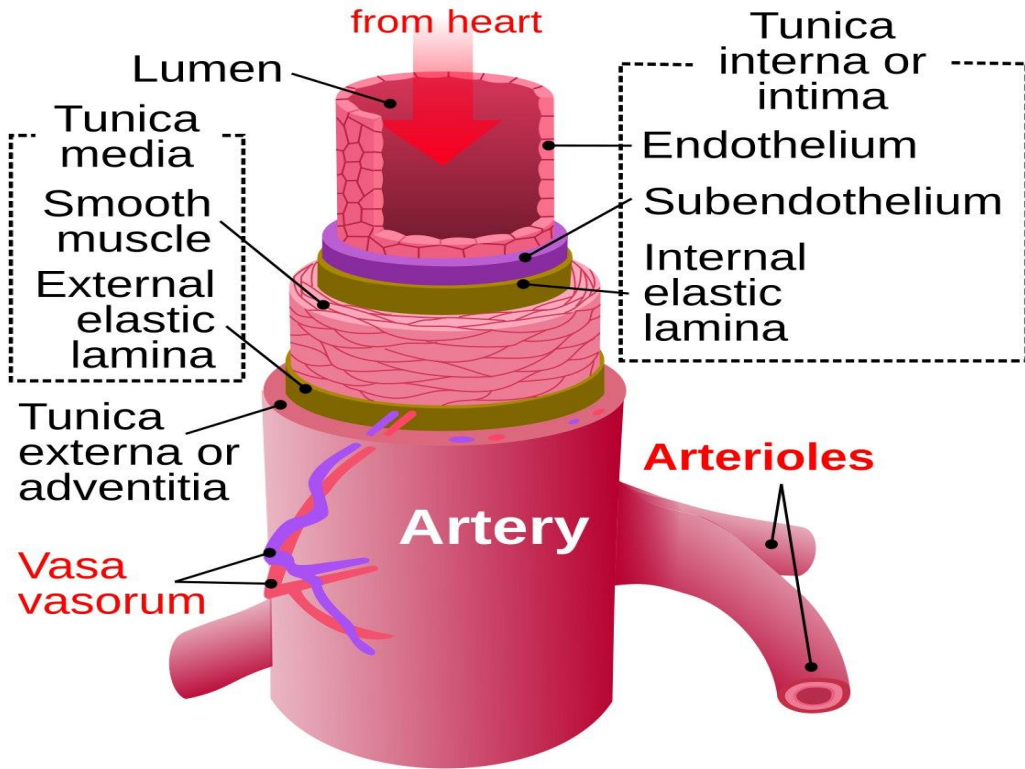
Structure of vein
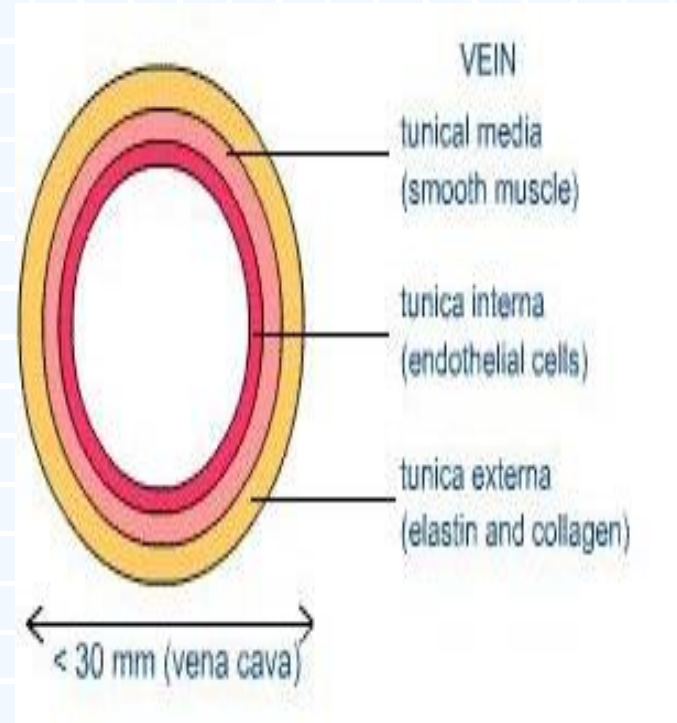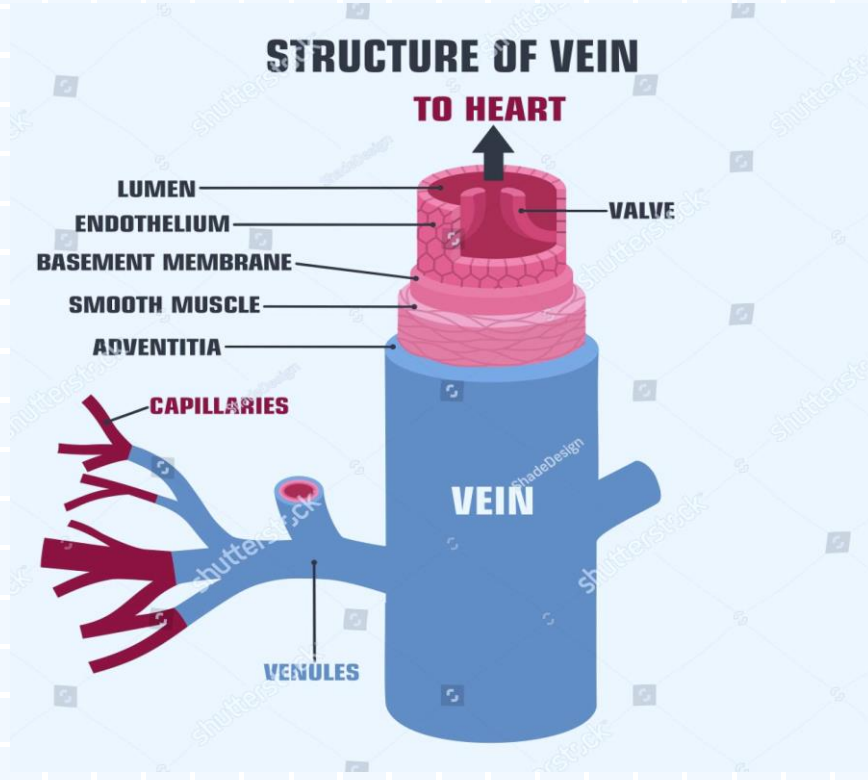
How to keep Blood vessels healthy ?

❑ Maintain a healthy body weight

❑ Don't smoke

❑ Limit alcohol intake

❑ Eat a diet low in sodium, cholesterol, and saturated fat

❑ Manage your blood pressure

❑ Exercise regularly

Summary

- ✓ Blood vessels form a closed loop, like a circuit, that carry blood throughout your body.
- ✓ Arteries carry oxygenated blood away from the heart while veins carry deoxygenated blood towards the heart.
- ✓ **There are three types of arteries:** Elastic artery , Muscular artery and Arterioles
- ✓ **There are four types of veins:** Deep veins, Superficial veins, Pulmonary veins and Systemic veins
- ✓ Veins and arteries are connected by capillaries.
- ✓ Arteries and Veins are composed of three tunics known as the tunica intima, tunica media, and tunica externa
- ✓ Its important to keep your blood vessels strong with healthy lifestyle choices

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Thank you for listening ☺