

Circulatory System

Test will be on Thursday, March 31

<https://www.youtube.com/watch?v=rguztY8aqpk&list=PLFE17F192E765B02A&index=1>

<http://www.mayoclinic.org/diseases-conditions/heart-disease/multimedia/circulatory-system/video/084745>

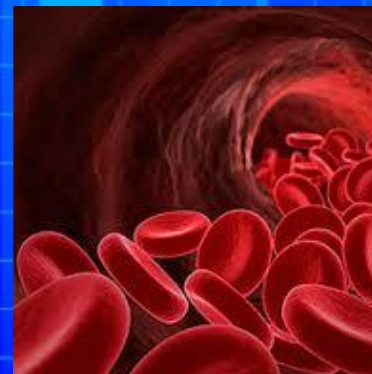
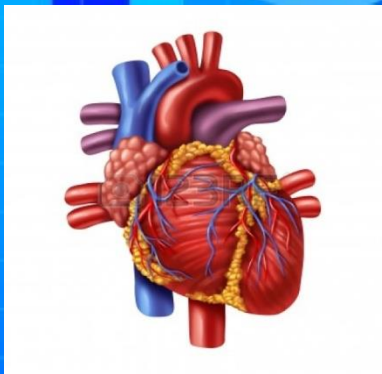
http://kidshhealth.org/parent/general/body_basics/blood.html



Tuesday, March 15, 2016

Circulatory System – Also known as the **cardiovascular system** is often referred to as the “transportation” system of the body.

It consists of: heart, blood vessels, and blood.
(transports O_2 & nutrients to the body cells, and CO_2 & metabolic materials away from the body cells.)

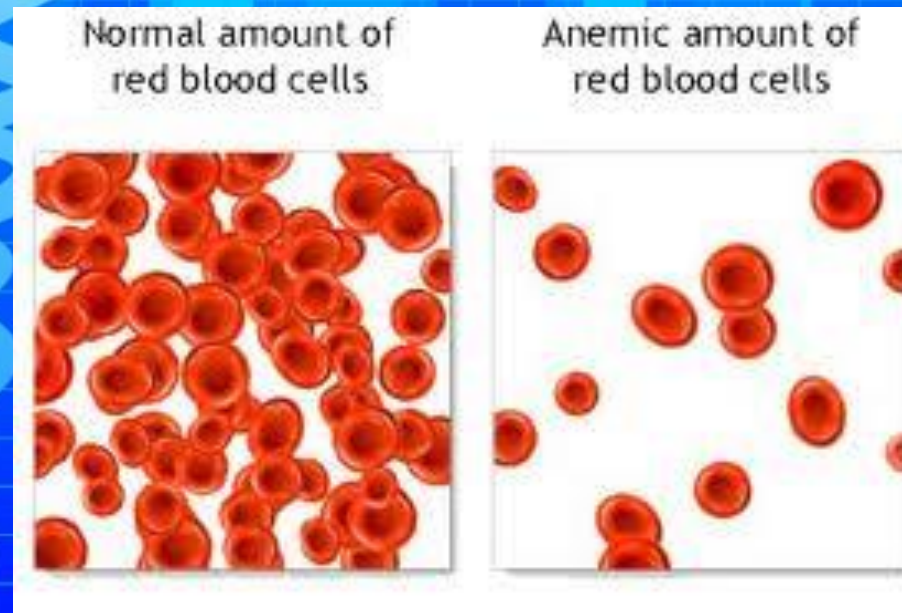


Wednesday, March 16, 2016

Anemia - a decrease in number of red blood cells or less than the normal quantity of hemoglobin in the blood.

For men, 13.5 to 17.5 grams per deciliter (135 to 175 grams per liter)

For women, 12.0 to 15.5 grams per deciliter (120 to 155 grams per liter)

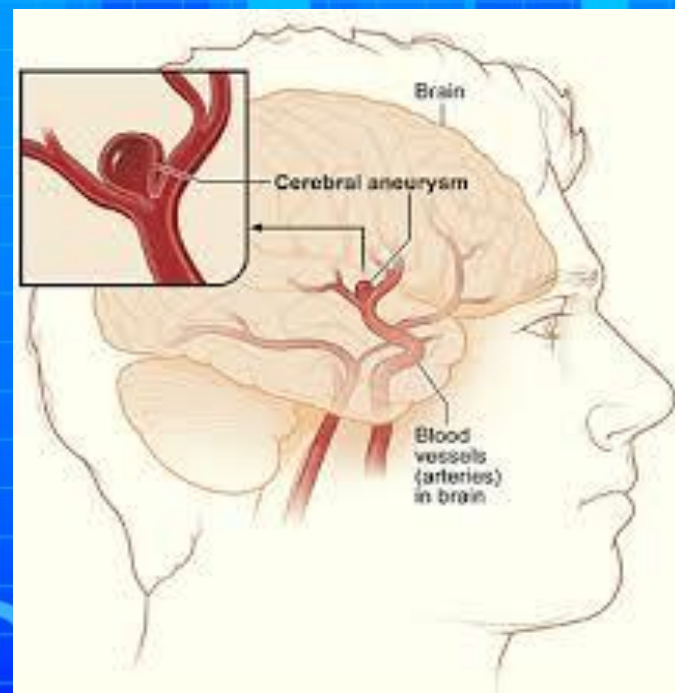
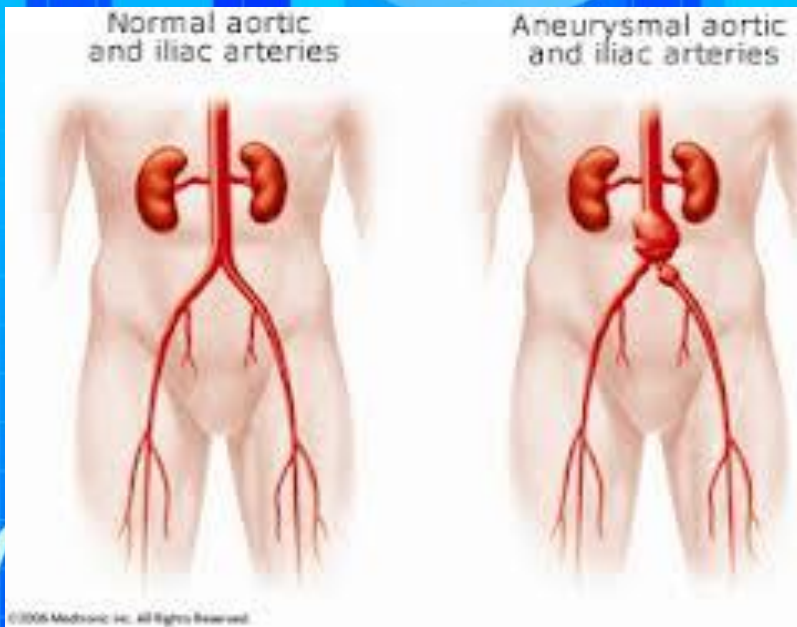


- Iron deficiency anemia
- Aplastic anemia
- Pernicious anemia
- Sickle cell anemia

Thursday, March 17, 2016

Aneurysm - an abnormal widening or ballooning out of a portion of an artery due to weakness in the wall of the blood vessel.

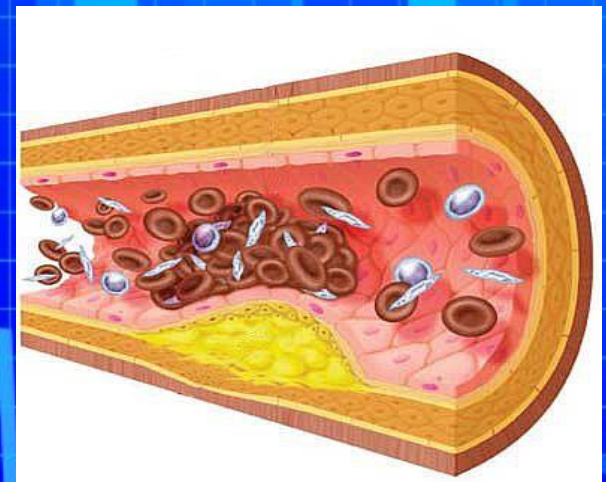
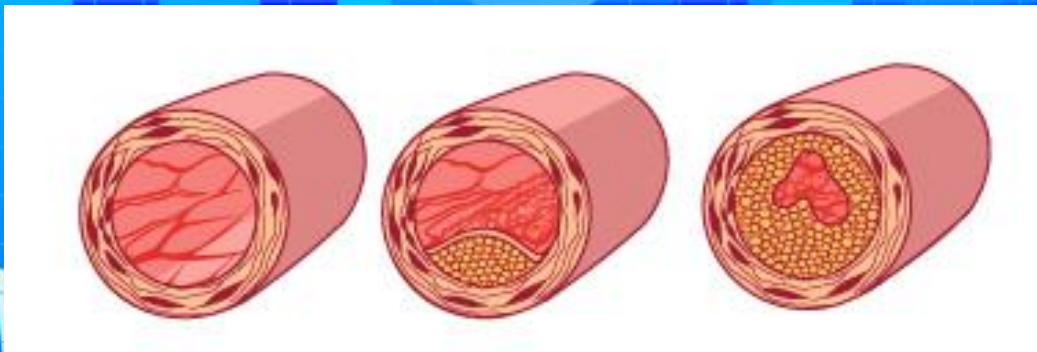
- Disease, congenital defects, and injuries can lead to weakening of arterial walls
- Some aneurysms cause pain & pressure and others generate no symptoms
- Common sites include the **cerebral aorta** & **abdominal arteries**
- Treatment involves surgically removing damaged area and replacing with a plastic graft or another blood vessel.



Friday, March 18, 2016

Arteriosclerosis - hardening or thickening of the arteries, resulting in a loss of elasticity and contractility. Commonly occurs as a result of aging.

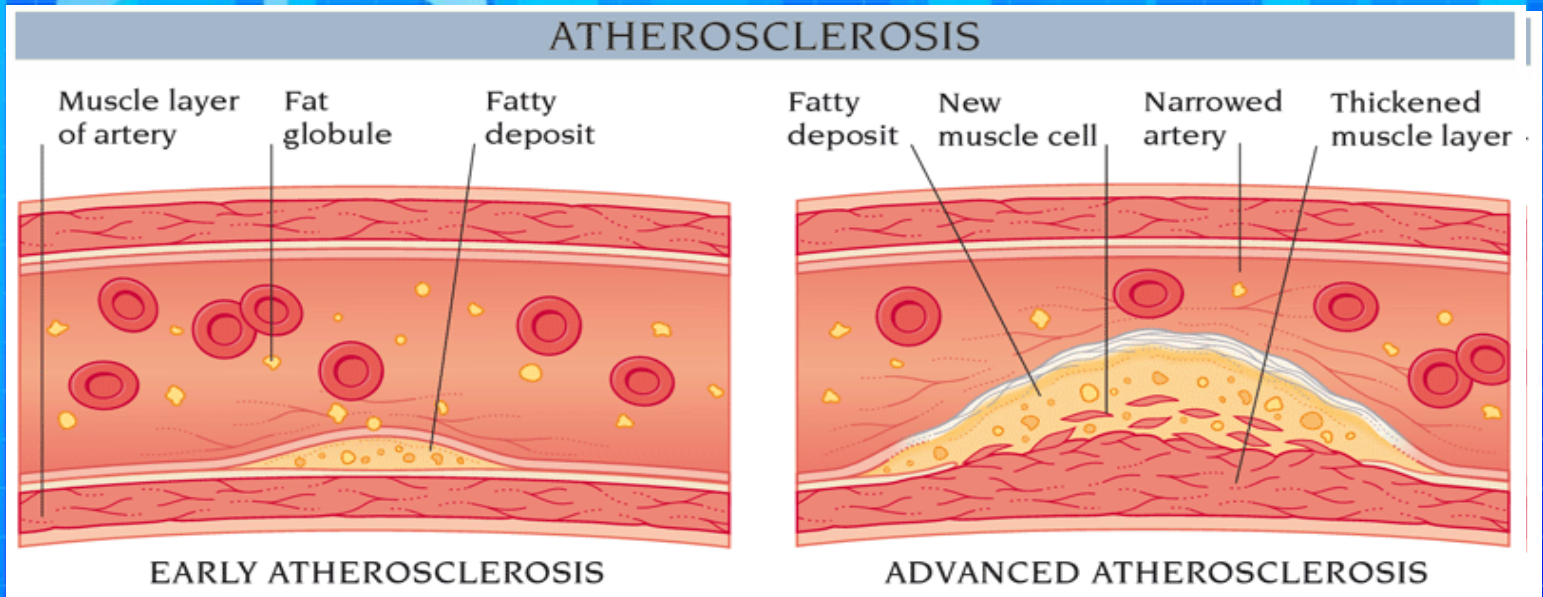
- causes hypertension and can lead to an aneurysm or cerebral hemorrhage.
- can treat with changing diet, taking meds, or both



Monday, March 21, 2016

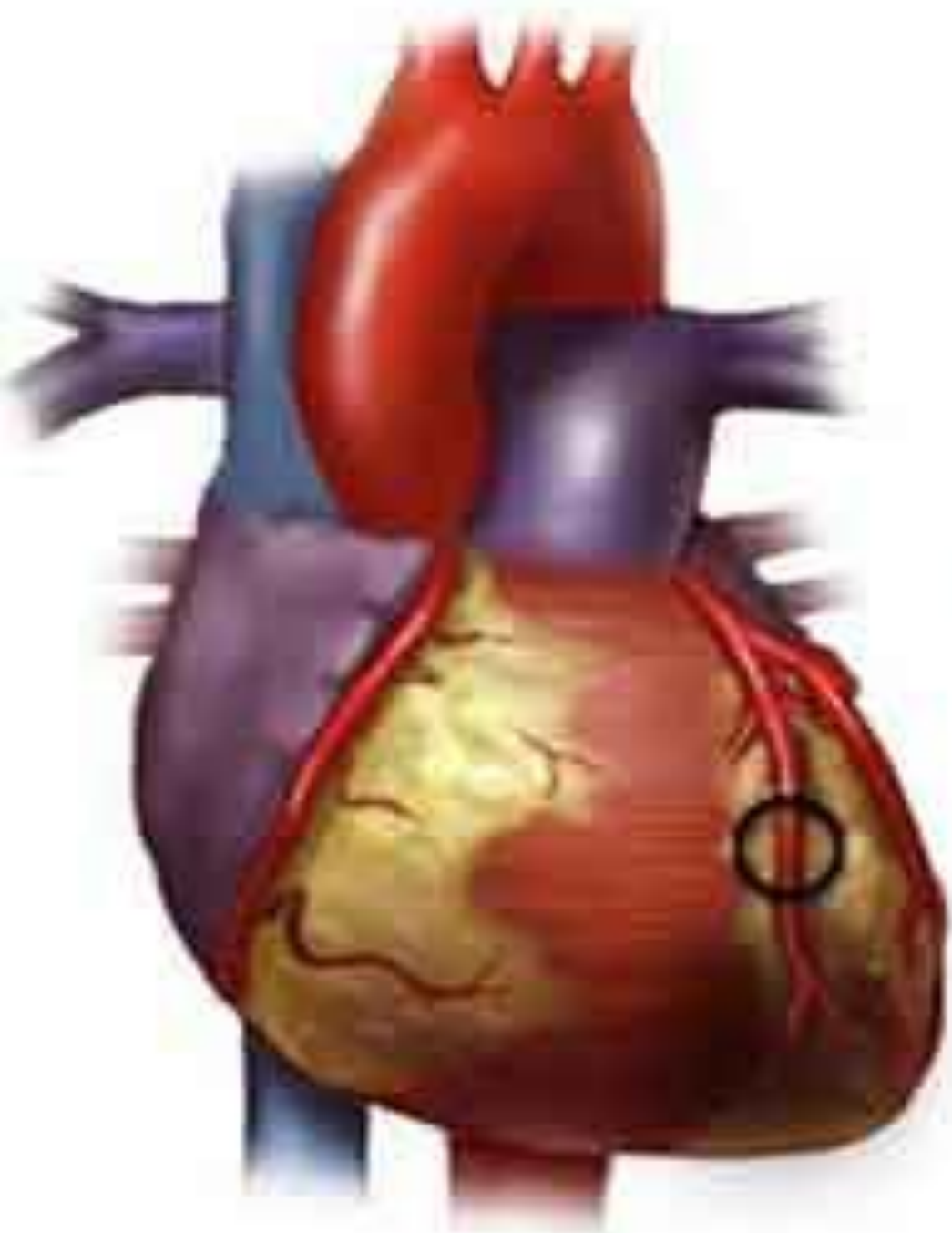
Atherosclerosis – (“**ather**” – lipids; fats / “**sclerosis**” – hardness or dryness) when fatty plaques (frequently cholesterol) are deposited on the walls of the arteries.

- This narrows the arterial opening, which reduces or eliminates blood flow.



<http://www.youtube.com/watch?v=3DNF2ODfd9E>

http://www.painmedicine.org/encyclopedia/em_Display_animation.aspx?id=000006&ptid=17



Normal coronary artery



Atherosclerosis



Atherosclerosis with blood clot

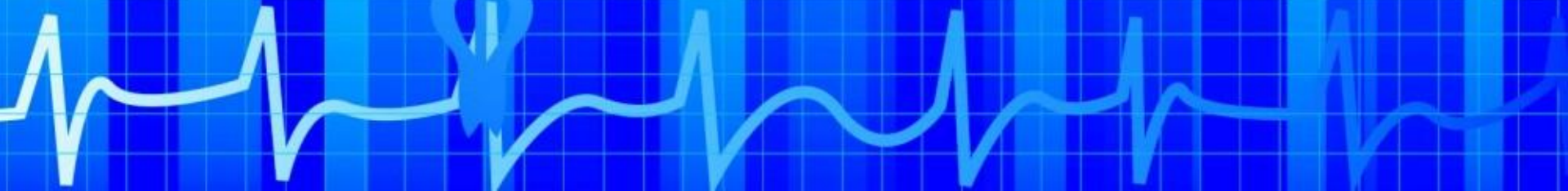


<https://www.youtube.com/watch?v=fLonh7ZesKs>

Treatments include:

- angioplasty
- coronary atherectomy
- coronary stent

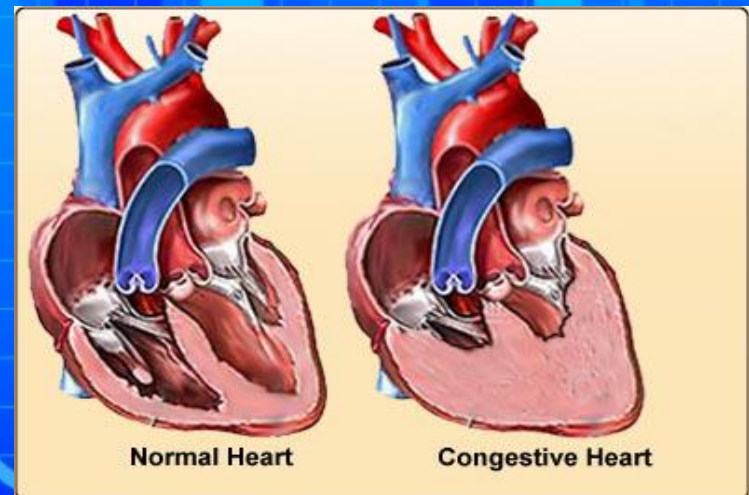
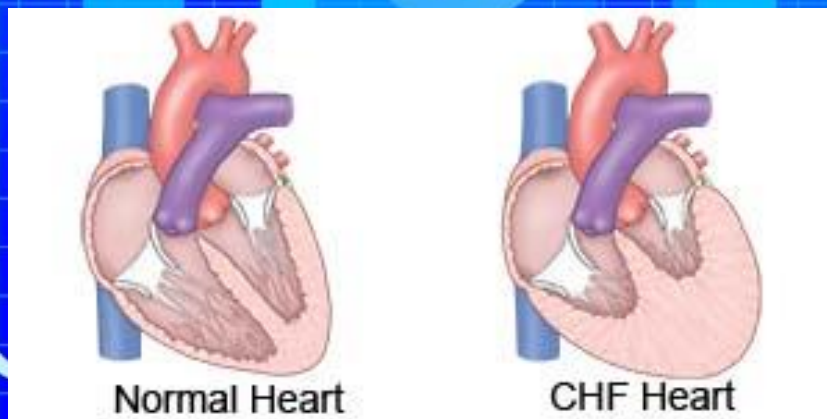
http://www.heart.org/HEARTORG/Conditions/Cholesterol/AboutCholesterol/Good-vs-Bad-Cholesterol_UCM_305561_Article.jsp



Tuesday, March 22, 2016

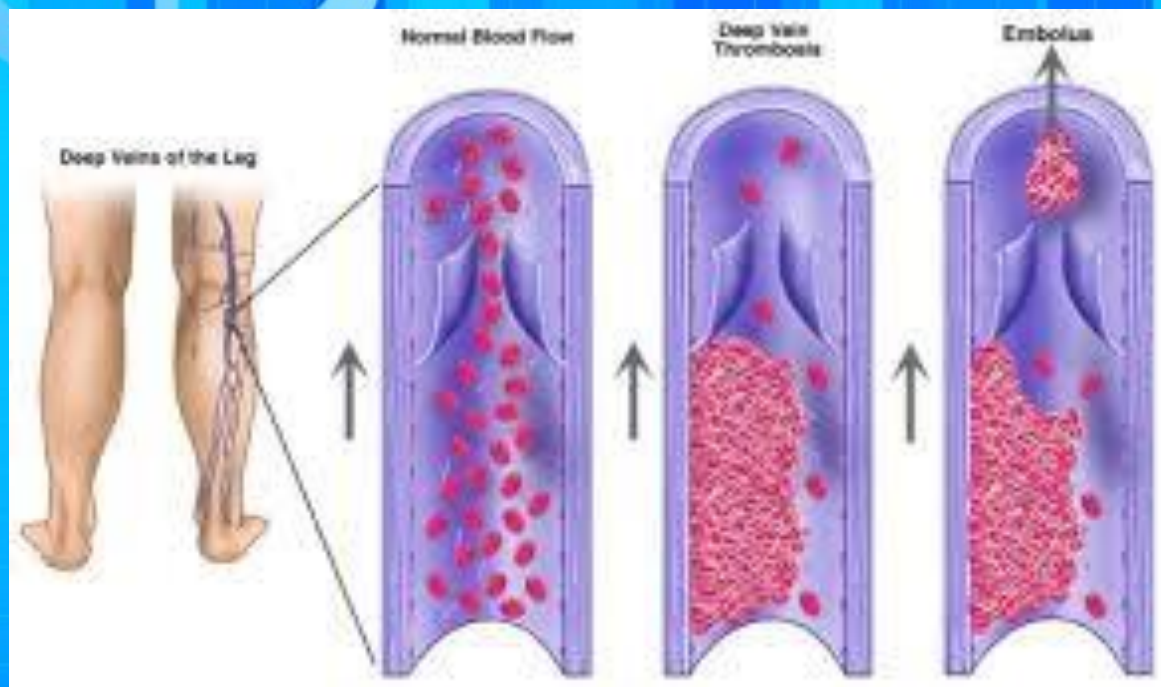
Congestive Heart Failure (CHF) - is a condition in which the heart cannot pump enough blood to the rest of the body. The heart muscles do not beat adequately to supply the blood needs of the body. (*Cardiomegaly*)

- Symptoms include: edema; dyspnea; cyanosis; rapid pulse; distention of the neck veins; a cough with pink, frothy sputum.



Wednesday, March 23, 2016

Embolus - is any detached, **traveling** intravascular **mass** carried by circulation, which is capable of clogging arterial capillary bed at a site distant from its point of origin.



Thursday, March 24, 2016

Hemophilia - is a rare inherited bleeding disorder in which the blood doesn't clot normally. This disease occurs almost exclusively in **male** individuals. Due to a lack of a plasma protein required for the clotting process, the blood is unable to clot.

- A minor cut can lead to prolonged bleeding
- A minor bump can cause internal bleeding.

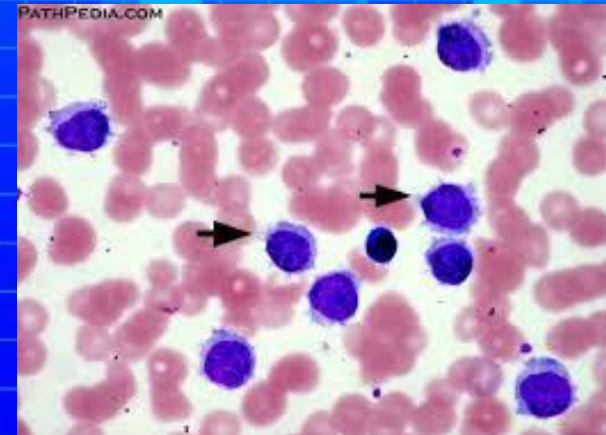
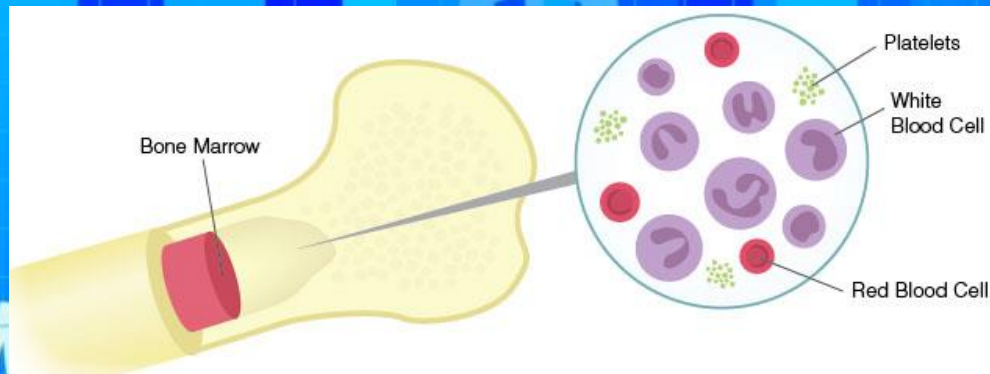


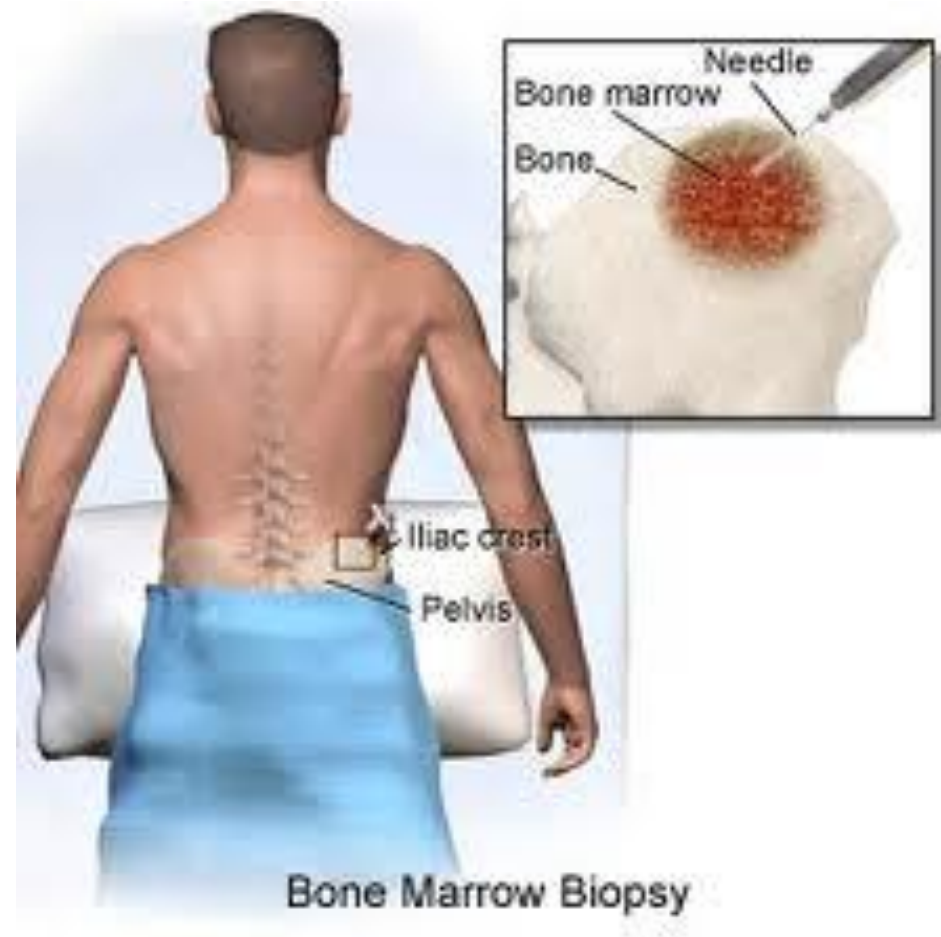
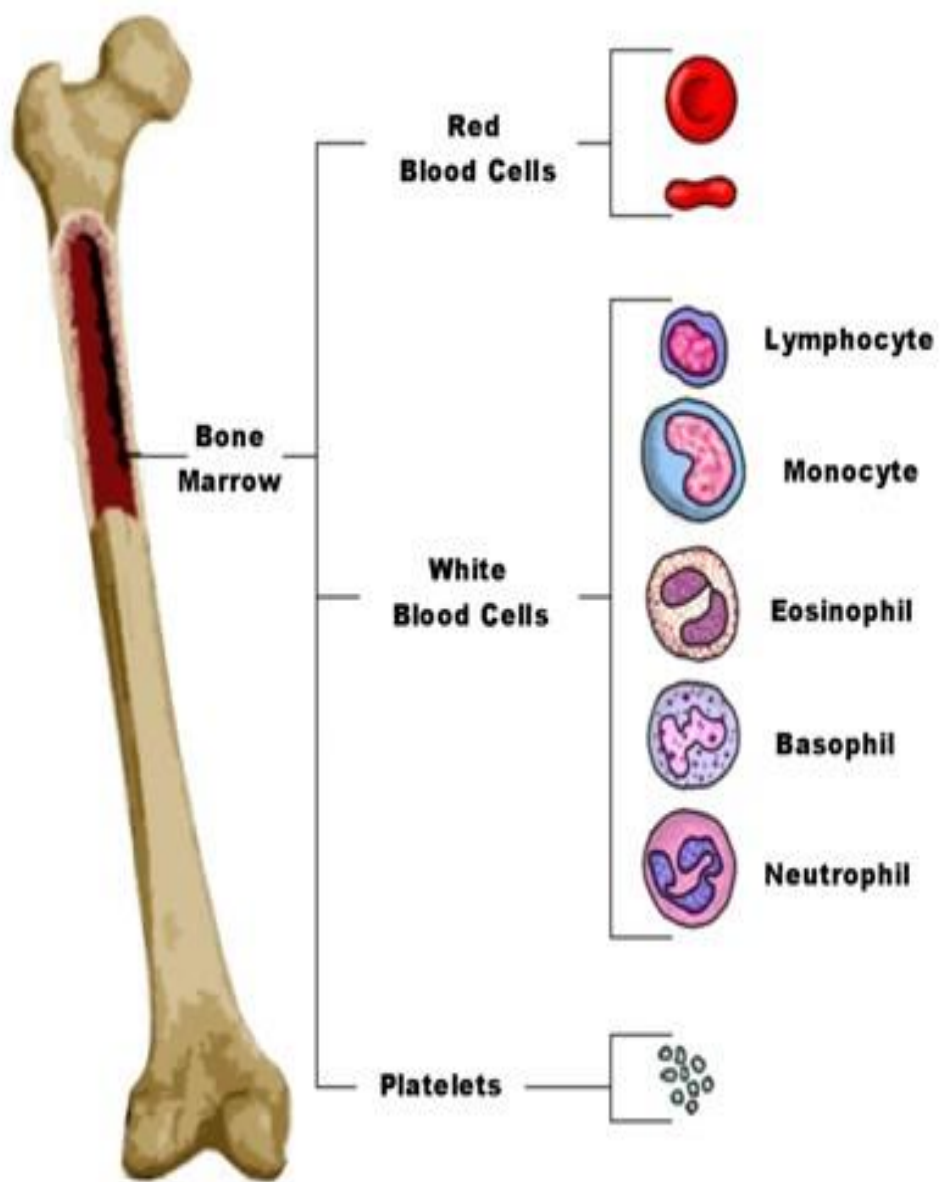
Friday, March 25, 2016

Leukemia - is a type of blood cancer (malignant disease) that begins in the bone marrow. It results in a high number of immature white blood cells.

(Bone marrow is the soft tissue in the center of the bones, where blood cells are produced.)

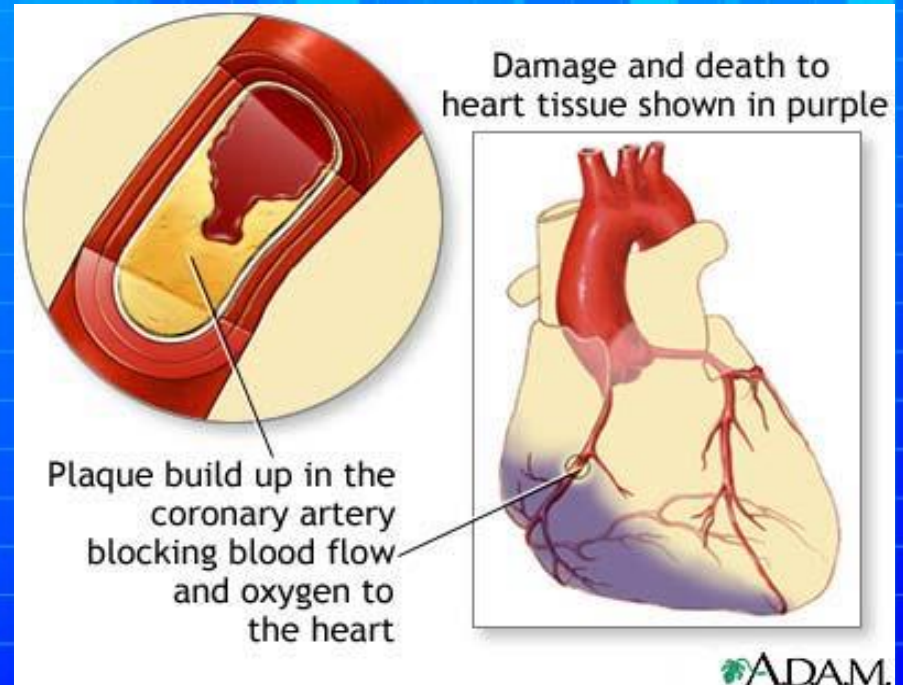
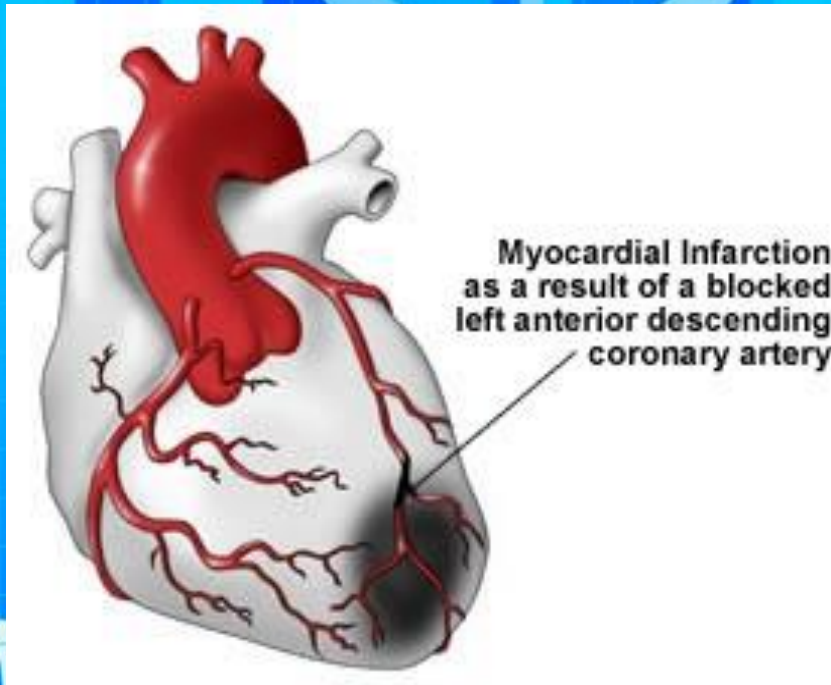
- There are different types of Leukemia. *acute* & *chronic*
- Symptoms: *fever, pallor (paleness), swelling of lymphoid tissues, fatigue, anemia, bleeding gums, excessive bruising, and joint pain.*
- Treatment: chemotherapy, radiation, and/or bone marrow transplant.





Monday, March 28, 2016

Myocardial Infarction “heart attack” - occurs when a blockage in the coronary arteries cuts off the supply of blood to the heart. The affected heart tissue dies and is known as an *infarct*. Death can occur immediately.
“clot busting drug” - “*streptokinase*” (TPA)



ADAM.

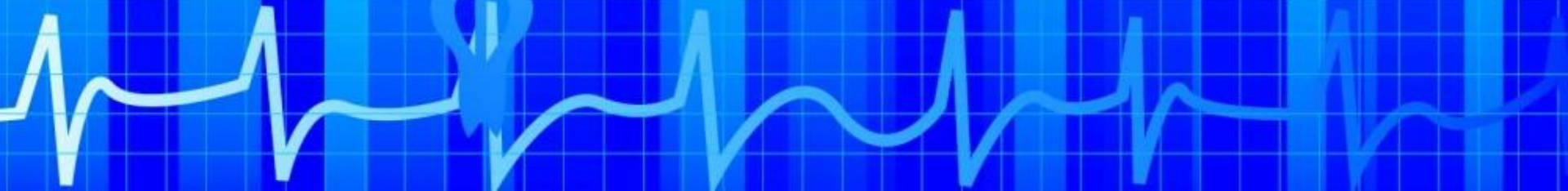
Can the heart heal itself?

Game-changing study by Michigan scientist may lead the way

[Blood Cells Transformed Into Heart Muscle Cells](#)

http://www.mlive.com/news/grand-rapids/index.ssf/2015/06/can_the_heart_heal_itself_game.html

<http://newsroom.ucla.edu/releases/heart-muscle-can-regenerate-itself-in-very-limited-amounts-scientists-find>



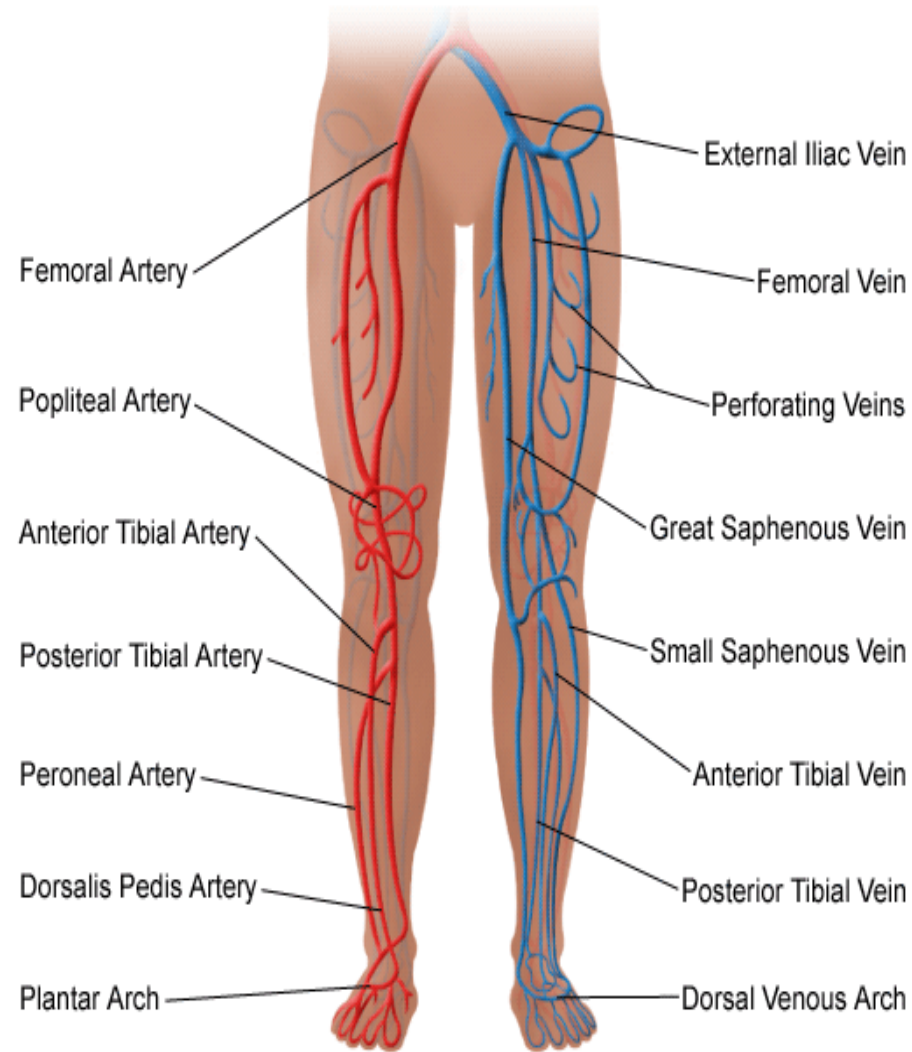
Tuesday, March 29, 2016

Phlebitis - an inflammation of a vein, frequently in the leg. If a thrombus, or clot, forms, the condition is termed *thrombophlebitis*. and thrombosis of a superficial vein, usually in the legs.

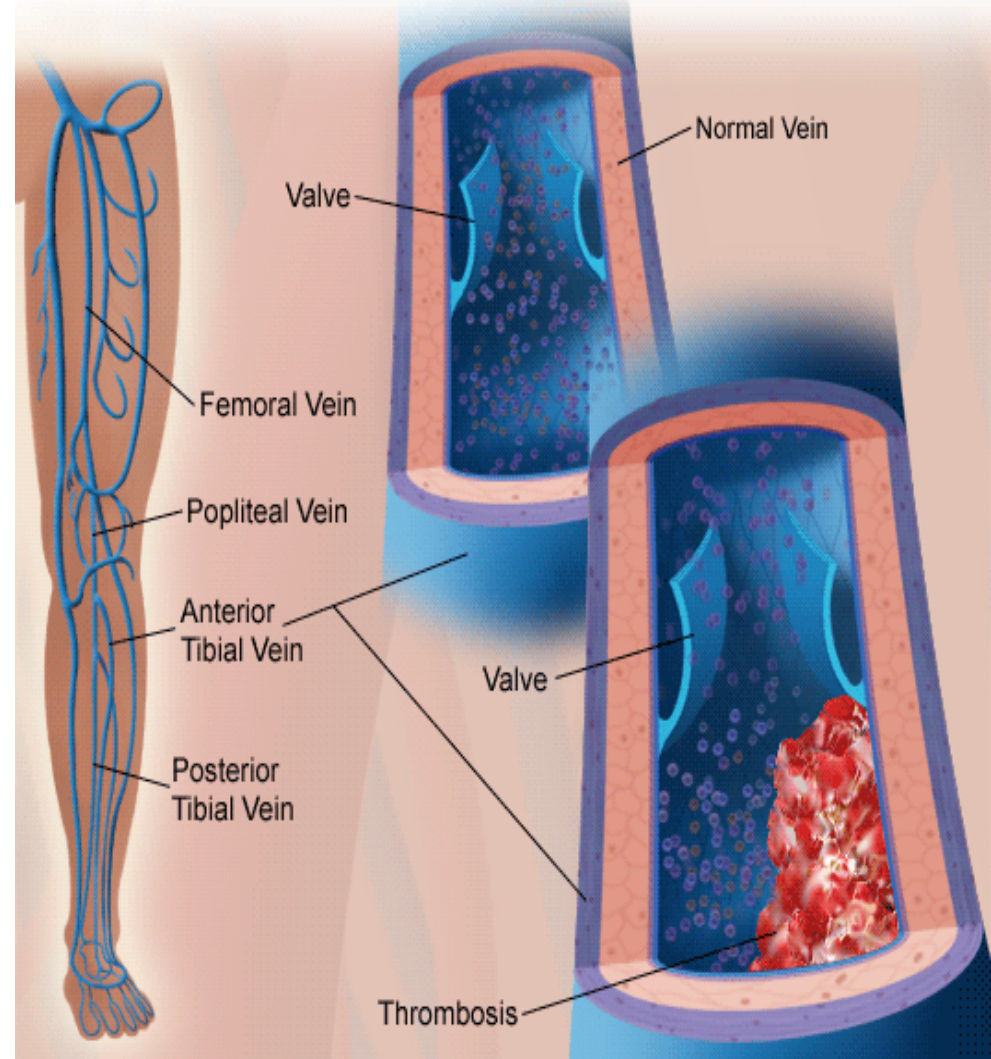
- Symptoms: pain, edema, redness, & discoloration at the site.
- Treatment: anticoagulants, pain medication, elevation of the affected area, antiembolism or support hose, and if possible surgery to remove the clot.



Arterial and Venous Circulation of the Legs



Deep Vein Thrombosis (DVT) of the Leg



Tuesday, March 29, 2016

Varicose veins – dilated, swollen, twisted, and sometimes painful veins that have lost elasticity and cause stasis, or decreased blood flow.

- Frequently occur in the legs and result from pregnancy, prolonged sitting or standing, and hereditary factors.

(surgery can be performed to remove the vein.)

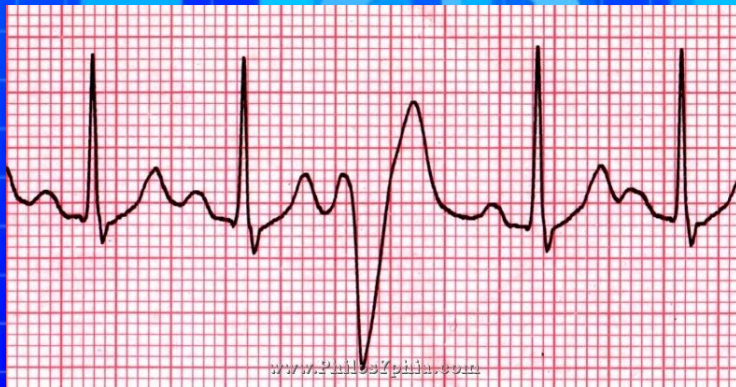
<http://www.miamiveincenter.com/varicose-vein-disease/>



Wednesday, March 30, 2016

Arrhythmia – abnormal heart rhythms; problem with the rate or rhythm of the heartbeat. Can be mild or life threatening.

- Early contraction of the atria, or premature atrial contraction (PAC); can occur in anyone and usually goes unnoticed.
- Ventricle fibrillation, in which the ventricles contract at random without coordination. (eliminates blood output)



http://watchlearnlive.heart.org/CVML_Playe_r.php?moduleSelect=arrhyt

http://www.heart.org/HEARTORG/Conditions/Conditions_UCM_001087_SubHomePage.jsp

Sinus Node

Atrium

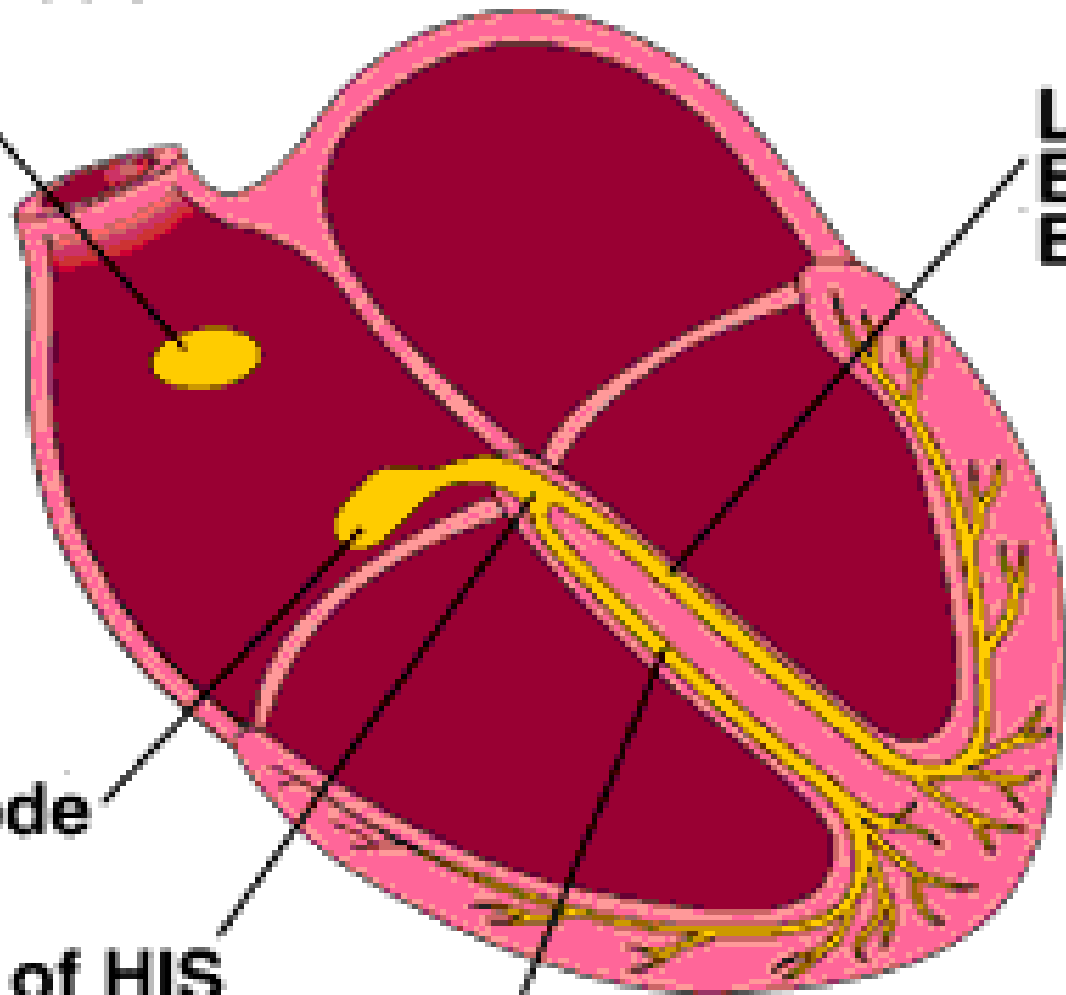
**Left
Bundle
Branch**

AV Node

Bundle of HIS

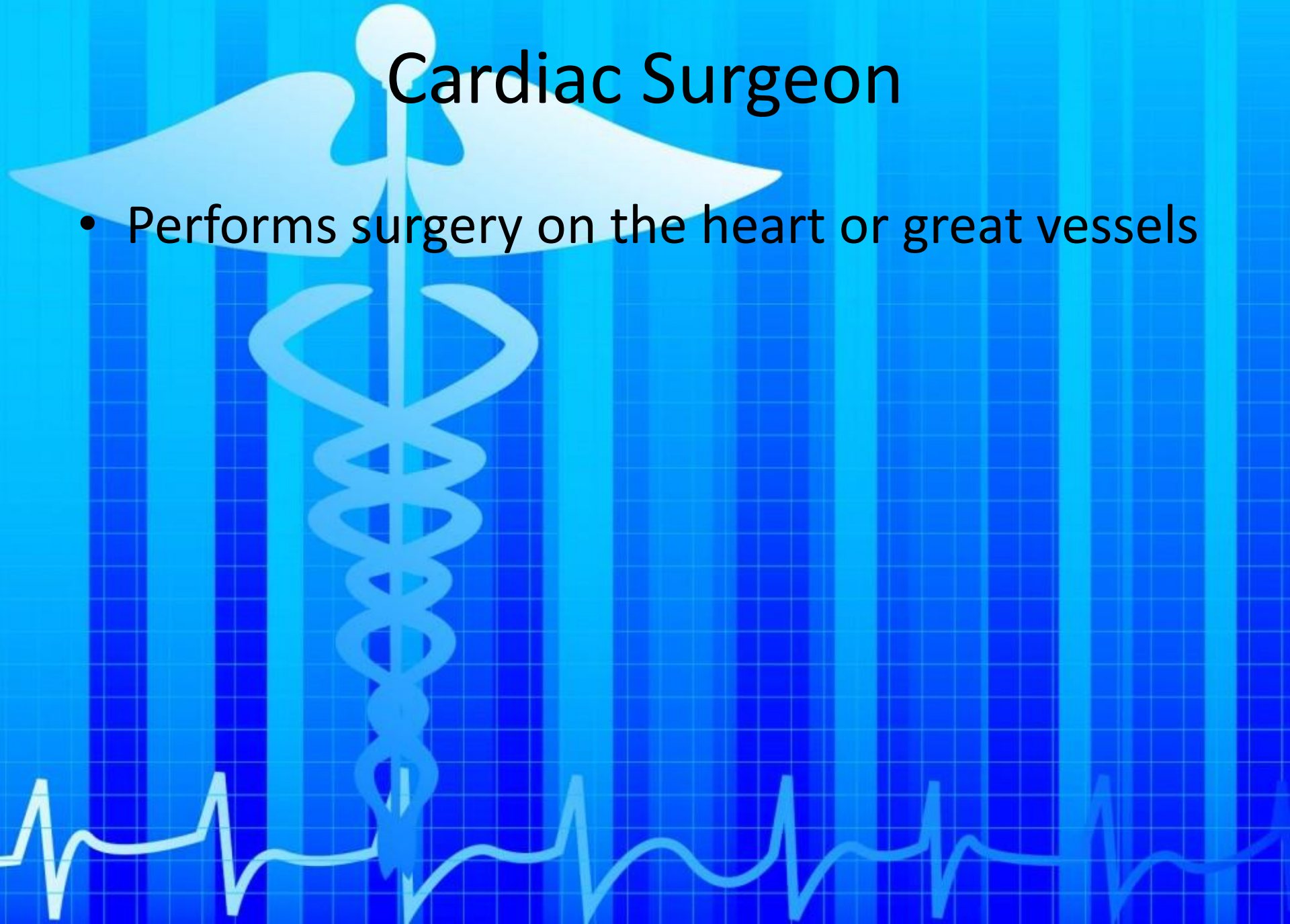
Ventricles

Right Bundle Branch



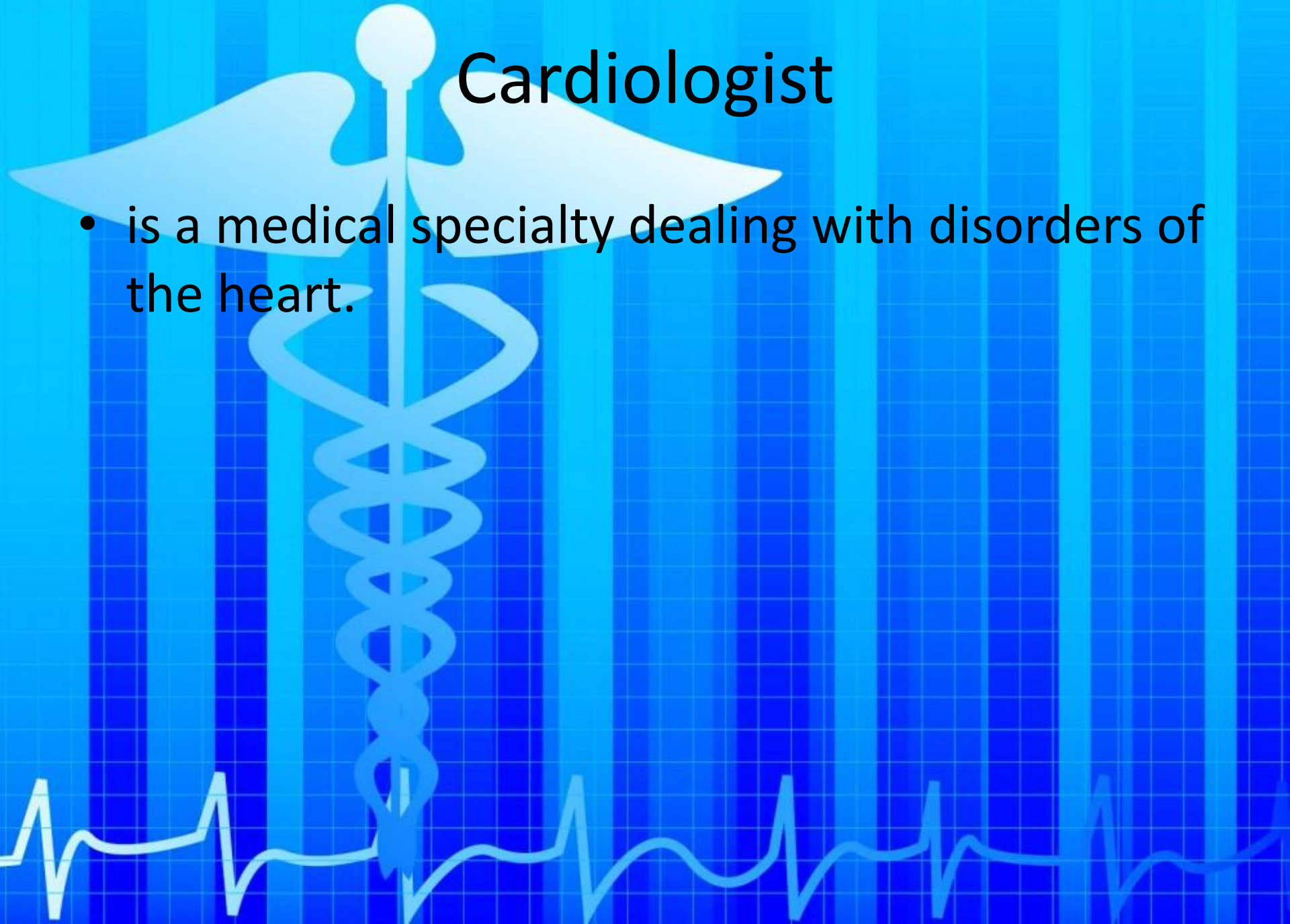
Cardiac Surgeon

- Performs surgery on the heart or great vessels



Cardiologist

- is a medical specialty dealing with disorders of the heart.



Echocardiography (EKG)



- Often referred to cardiac echo or simply an echo is a sonogram of the heart.

http://www.youtube.com/watch?v=9U_eyck0pKY



Erythrocytes

- Are the most common type of blood cell and the vertebrate organism's principal means of delivering oxygen (O_2) to the body

Leukocytes



- Are cells of the immune system involved in defending against infectious disease

Thrombocytes

- Are cells lacking major organelles that play a key role in blood clotting, aggregating with thrombin.

