

Mon, March 19, 2018

“A person’s a person, no matter how small.”

Pick up: none

Today you will:

1. Understand the components of the Cardiovascular system & how lifestyle affects it

Homework/Planner:

Study and complete any unfinished work.

Quiz Wednesday, 3/21, DIA Thursday, 3/23

Daily Science Question

Science students conducted an investigation to determine how enzymes affect apple juice production.

Procedure:

1. Place coffee filter in paper cone; cut off 2 cm of the bottom of the cone, leaving a small hole.
2. Place 30 mL of apple sauce into measuring cup, add 5 drops of enzyme A solution, and stir thoroughly.
3. Place a graduated cylinder under paper cone and add apple sauce to coffee filter, stirring every minute.
4. Measure volume of apple juice in cup after 5 minutes using graduated cylinder.
5. Repeat steps 1–4 for a second trial.
6. Repeat steps 1–5 using enzyme B solution.
7. Repeat steps 1–5 using water.

Amount of Juice Produced

Enzyme Solution	Trial 1 (mL)	Trial 2 (mL)	Average (mL)
A	14	15	14.5
B	6	5	5.5
Water	5	5	5.0

- a) Identify two variables that were held constant in the group's experiment.
- b) Explain why it is important for these variables to be held constant.

PRACTICE

1. What part of the brain is not functioning to its fullest if you cannot remember information?
2. If you get 'poked' in the arm by someone, what part of the brain is activated?
3. If you SEE your friend at a party having fun, smiling, laughing... OR... partaking in activities they should not be partaking in, YOU are using your --- lobe.
4. It is advisable that you keep an eye on your friend at the party, because his/her --- lobe will probably be adversely affected.

1.
2.
3.
4.

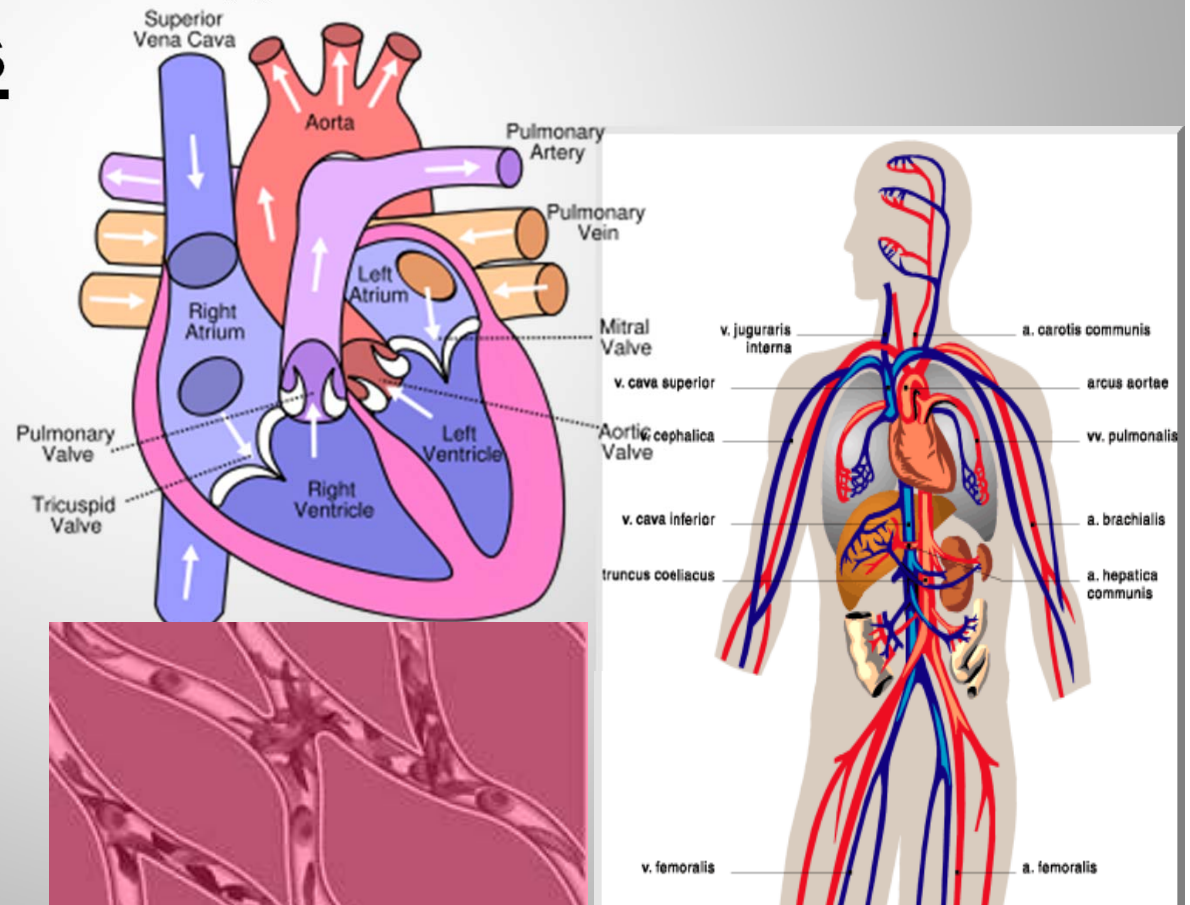
THE CIRCULATORY SYSTEM

Cornell Notes

1. What is moved through arteries & veins?

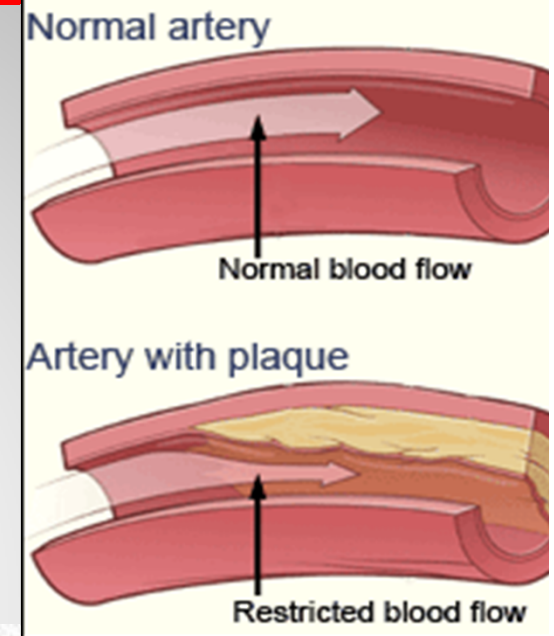
***Smaller blood
vessels = more
surface area!**

Oxygen, Carbon dioxide, nutrients, waste



Factors Affecting Blood Flow

1. **Arteriosclerosis = thickening & hardening of arteries = blood flow blocked by cholesterol, fat**
2. **Exercise, Don't smoke, Eat right → Fats increase blood VISCOCITY = thickness = can lead to stroke, heart attack!**



Cut-section of artery



Blood Pressure & Volume

1. Blood Pressure- force with which blood pushes against the wall of an artery

- **Healthy = 120/70**

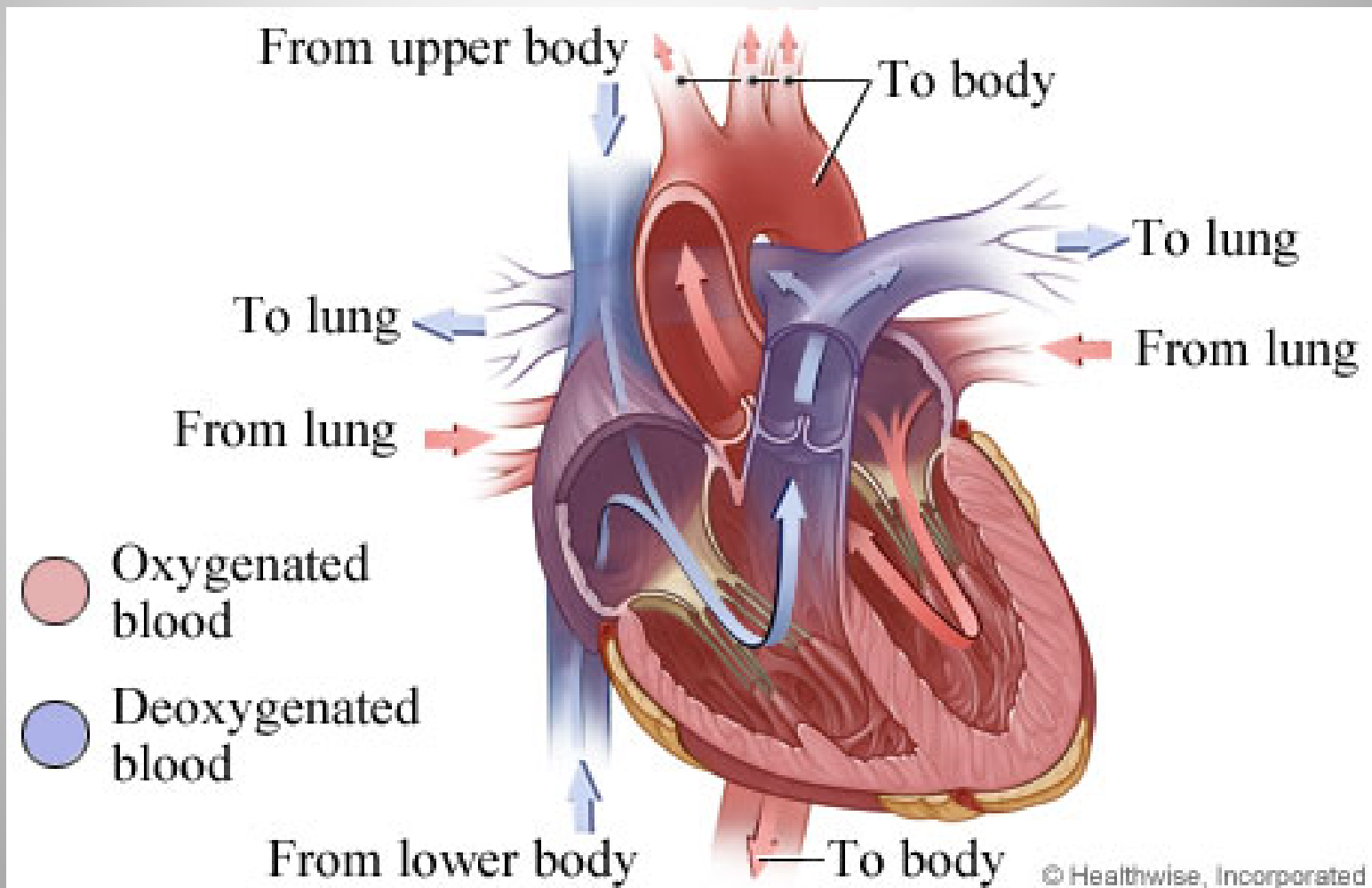
- 1) Systolic = top # = amt of pressure on artery walls when LV contracts to pump blood thru the body
- 2) Diastolic = bottom # = pressure in artery when LV relaxes

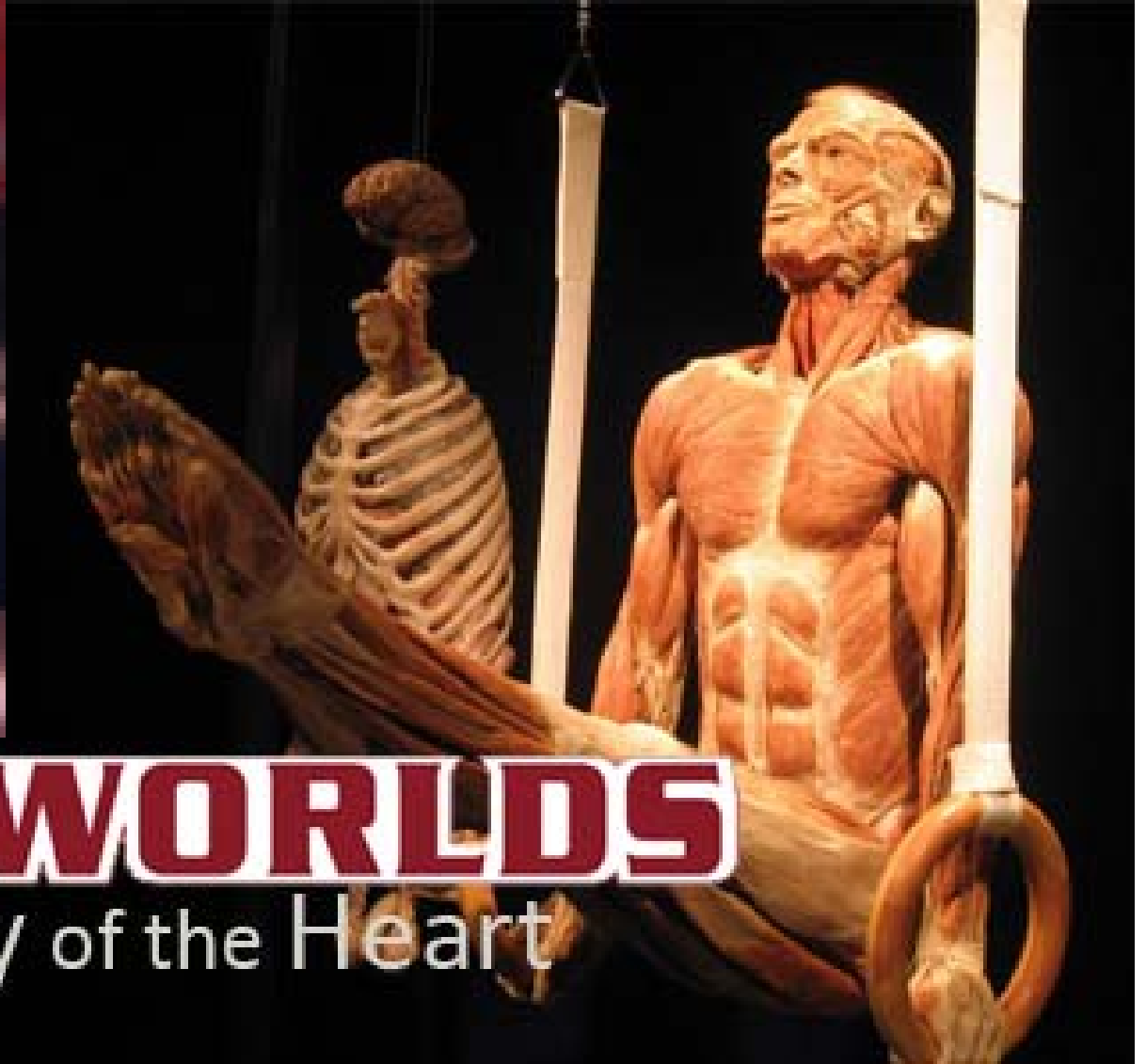
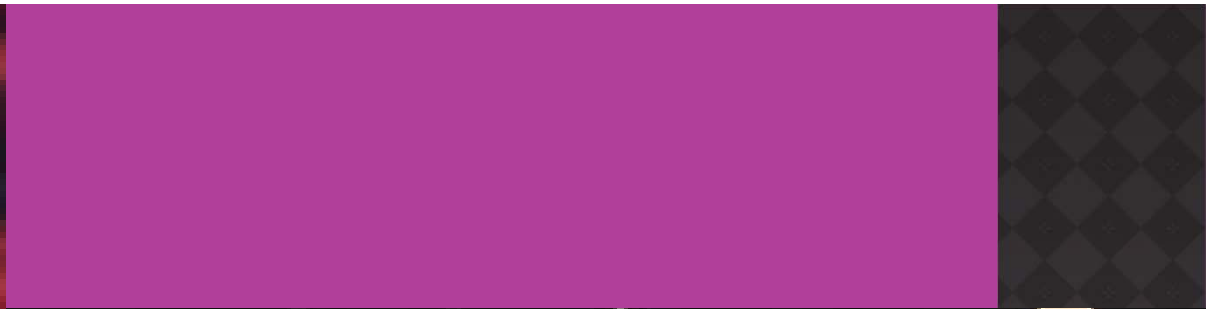
2. Blood Volume - how much blood in body

- a) based on gender, height and weight
- b) average adult : **5.2 and 6 liters** (5.5 to 6.5 quarts)

Blood Flow & Resistance

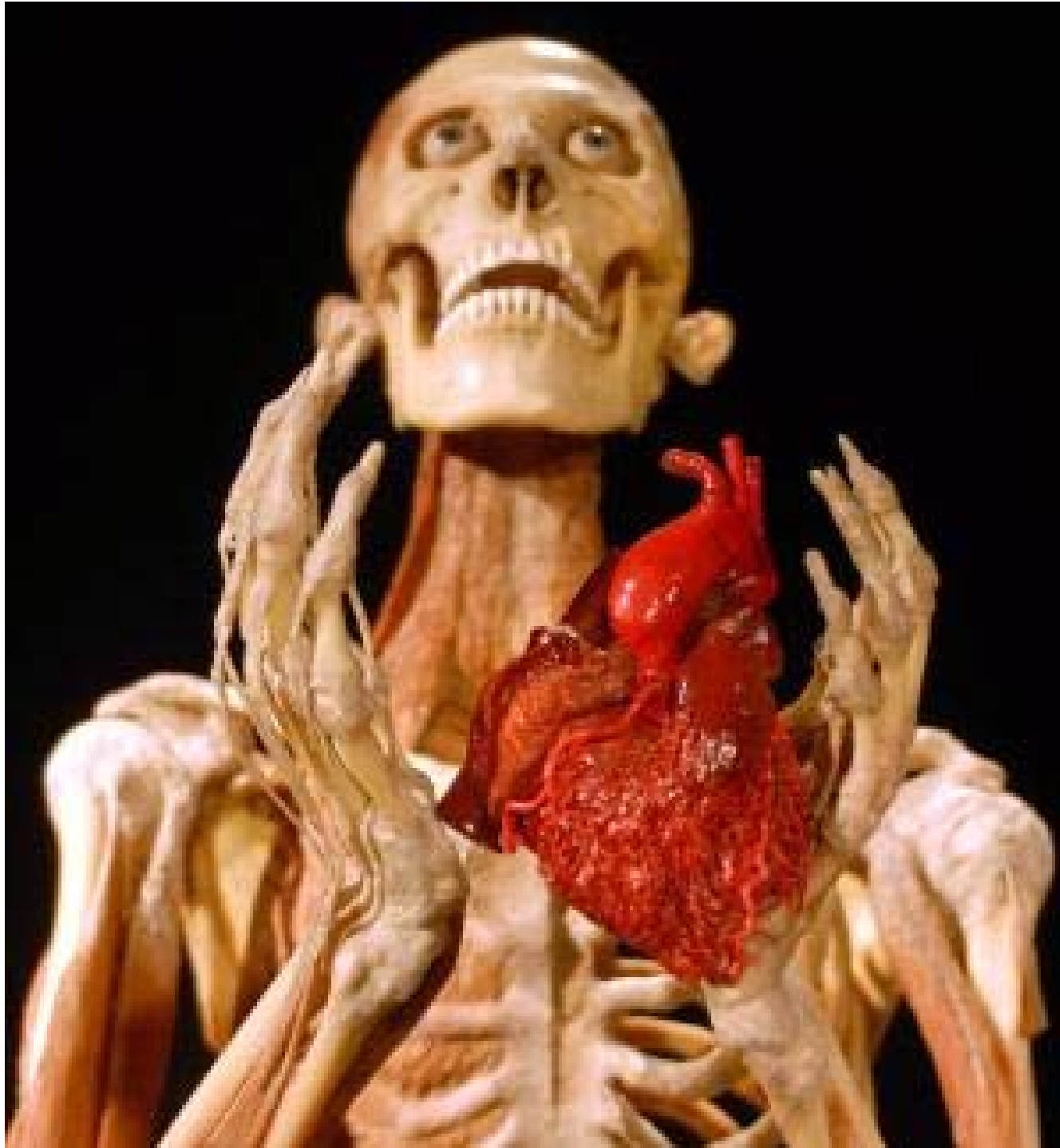
1. may be 5-6 times as great during heavy exercise
when the body needs more oxygen to fuel exercise
2. At rest = about 5000 ml/min

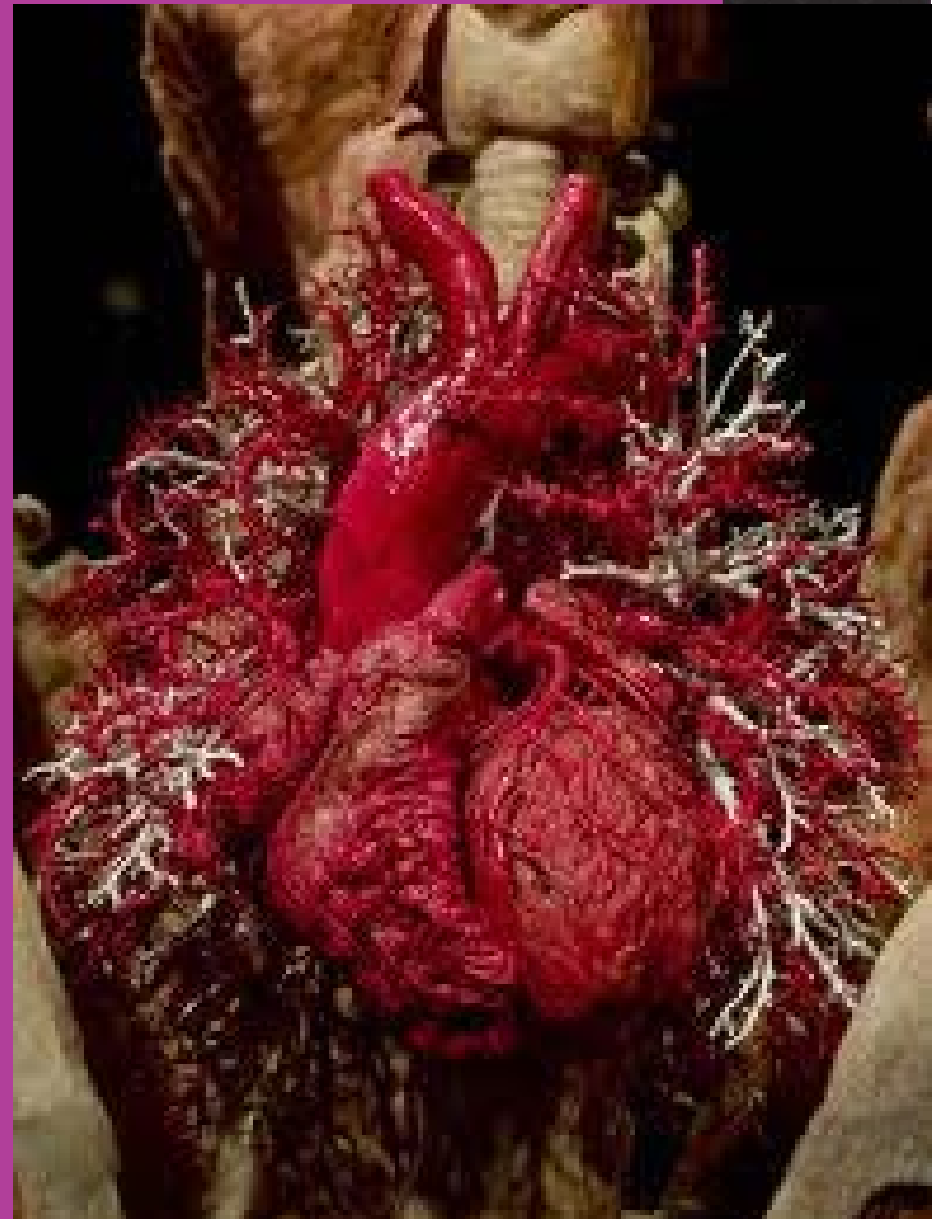




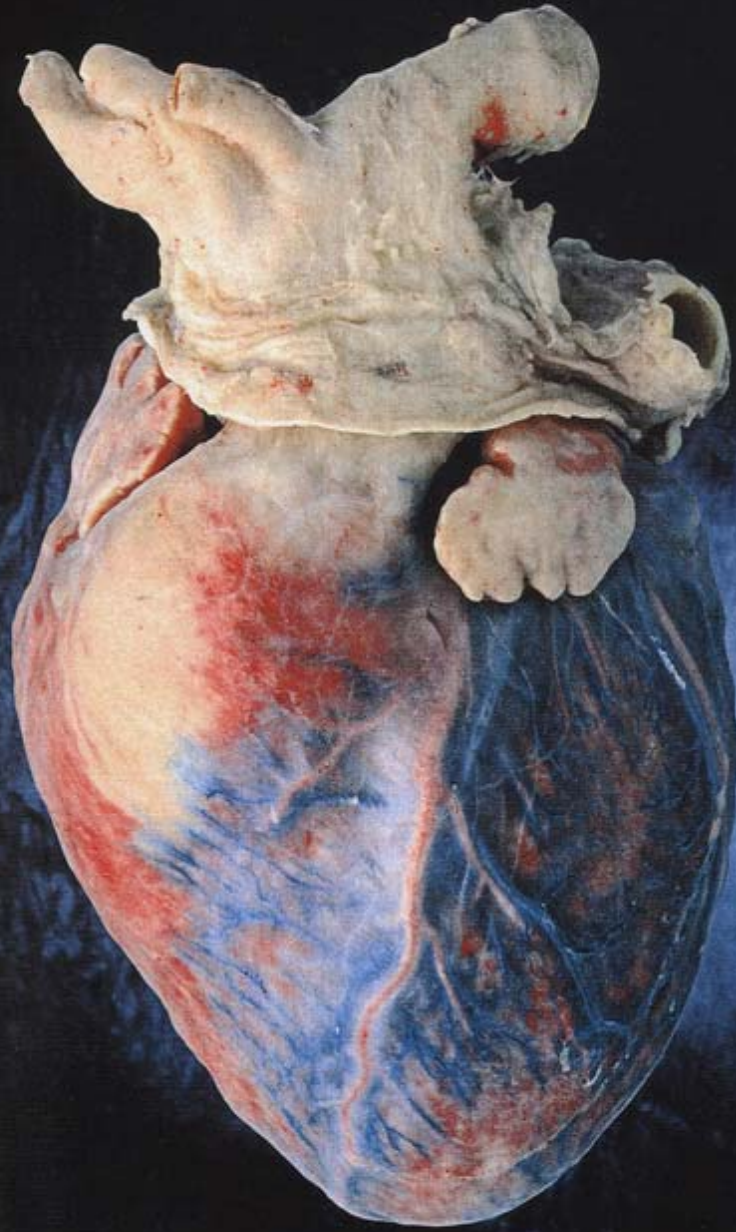
BODY WORLDS

& The Story of the Heart





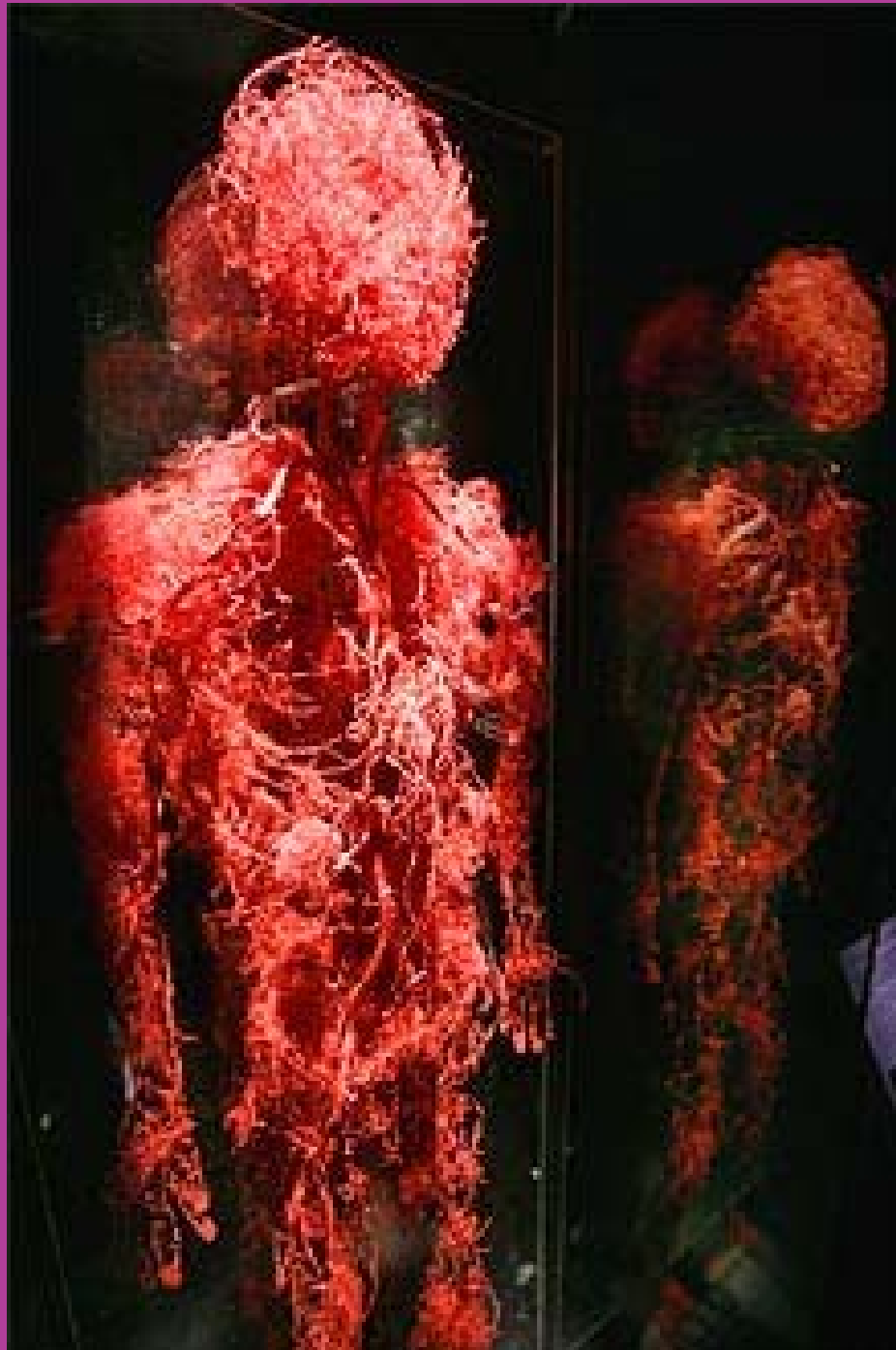










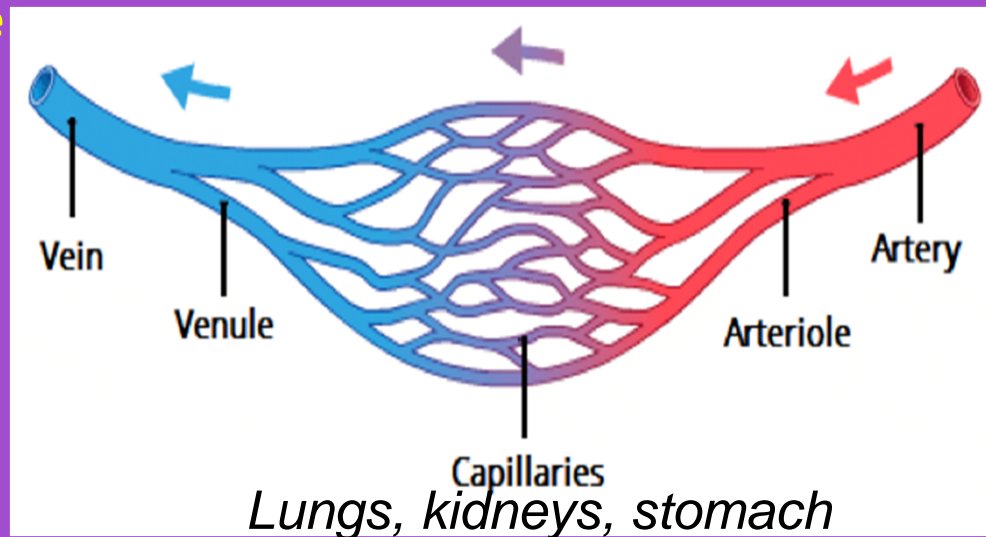


CardioVascular System

- Carbon Dioxide

Fx of VEINS?

- Blood TO heart
- *So heart can pump it to LUNGS to get O₂*



+ OXYGEN

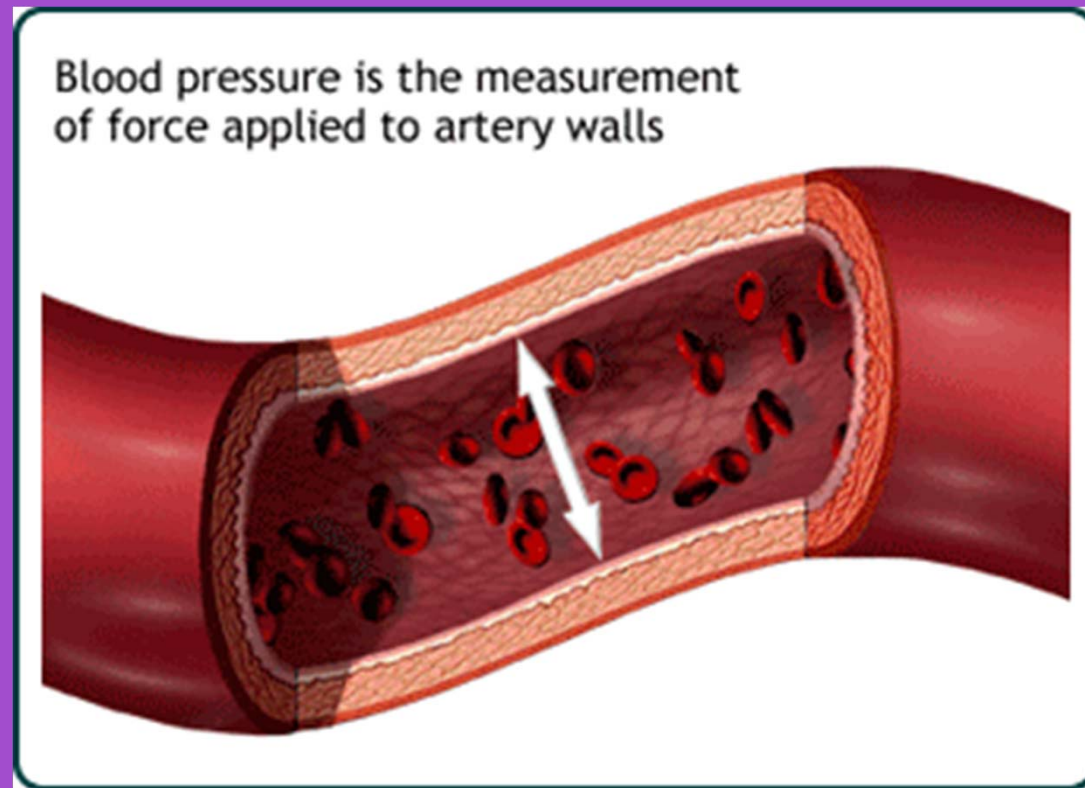
Fx of ARTERY?

- Blood AWAY from heart
- *To carry O₂ to body*

1. Function? EXCHANGE of O₂ & CO₂
2. Thin? So oxygen can pass through
3. So many? SURFACE AREA!

Symptoms of High Blood Pressure

Video Clip



<http://www.youtube.com/watch?v=swDIYYI3tmY&safe=active>

HEART ATTACK!

What happens during a Heart Attack