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HEART ANATOMY & BASIC FUNCTION

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(1) Cardiovascular Function

- **Cardiovascular** = Heart, Arteries, Veins, Blood
- **Function:**
 - Transportation
 - Blood = transport vehicle
 - Carries oxygen, nutrients, wastes, and hormones
 - Movement provided by pumping of heart



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(2) Cardiac Tissues

Outermost = Pericardium & Epicardium

Pericardium is a membrane anchoring heart to diaphragm and sternum

Pericardium secretes lubricant (serous fluid)

Epicardium is outermost muscle tissue

Middle = Myocardium

Contains contractile muscle fibers

Innermost = Endocardium

Lines Cardiac Chambers



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(3) Cardiac Chambers

Human heart has 4 chambers

2 Atria

Superior = primary receiving chambers, do not actually pump

Blood flows into atria

2 Ventricles

Pump blood

Contraction = blood sent out of heart + circulated

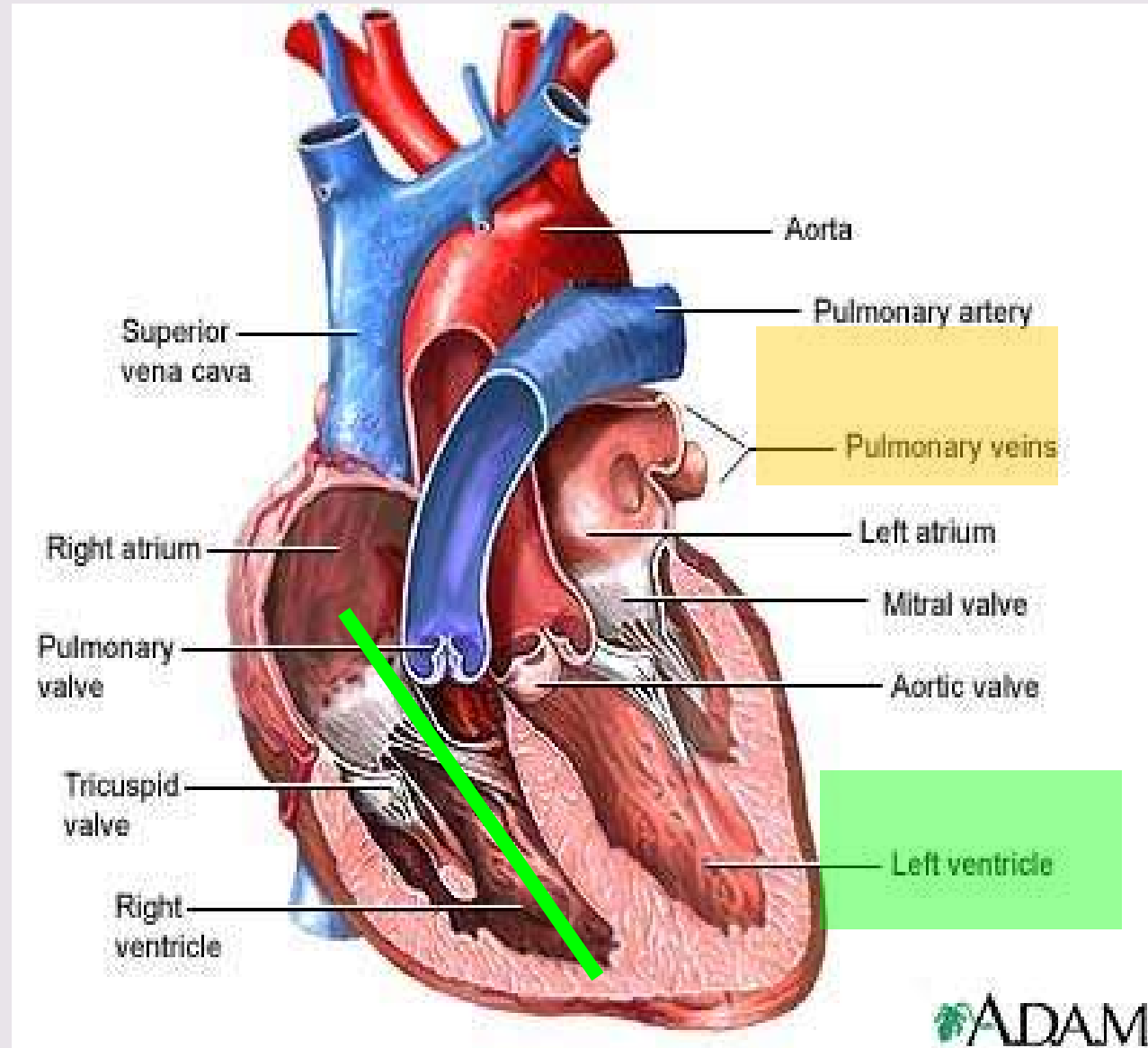
Chambers are separated by septum...

Due to separate chambers, heart functions as double pump



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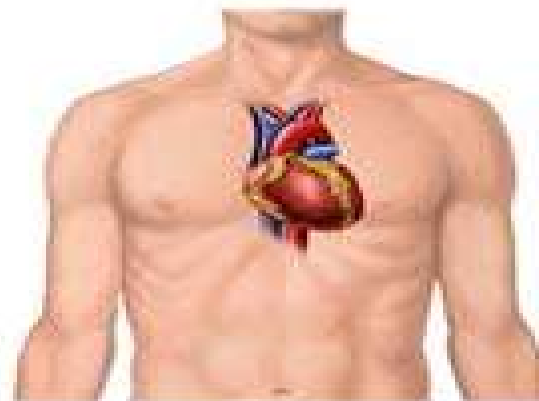
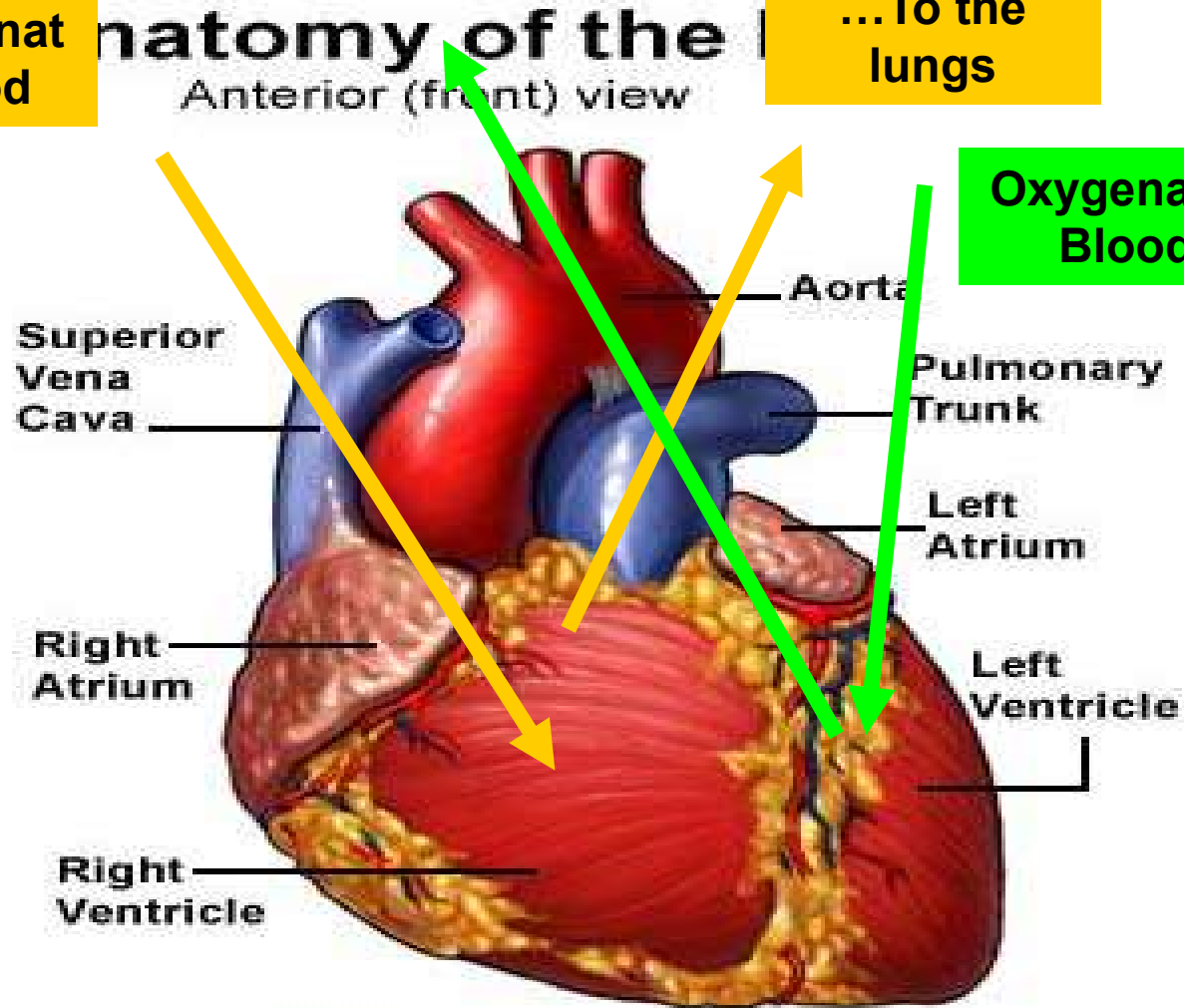
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**Deoxygenat
ed Blood**

**...To the rest
of the body**

**...To the
lungs**

**Oxygenated
Blood**



**Location of heart
within the body**



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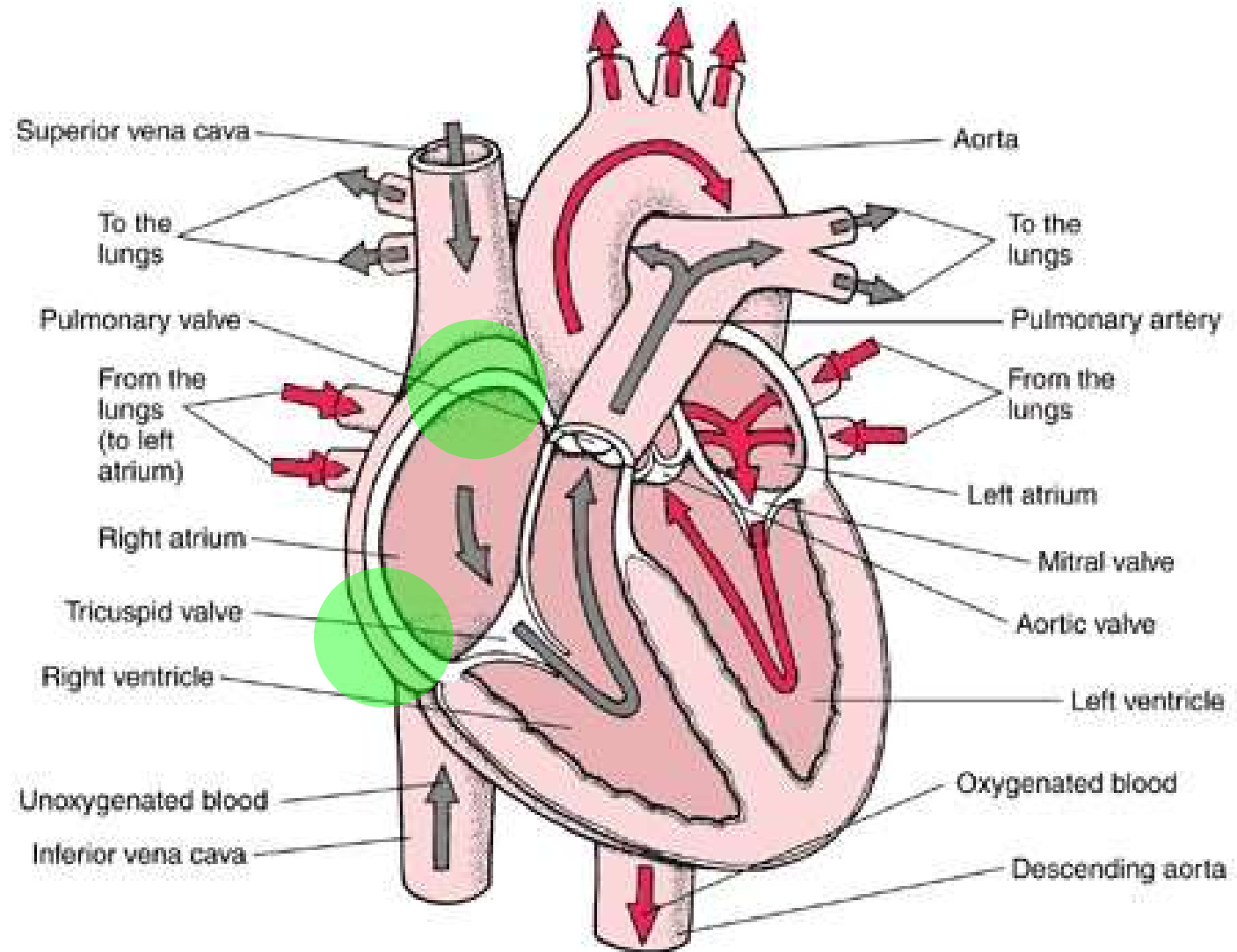
(4) Pulmonary Circulation

- Pulmonary = Deoxygenated Blood
- Involves Right Side of Heart
- Pathway:
 1. Superior / Inferior Vena Cava
 2. Right Atrium → Tricuspid Valve
 3. Right Ventricle → Pulmonary Semilunar Valve
 4. Left Pulmonary Artery
 5. Lungs



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(5) Systemic Circulation

- **Systemic** = Oxygenated Blood
- Involves Left Side of Heart
- **Pathway:**
 1. Left Pulmonary Vein
 2. Left Atrium → Bicuspid Valve
 3. Left Ventricle → Aortic Semilunar Valve
 4. Aorta
 5. All Other Tissues



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