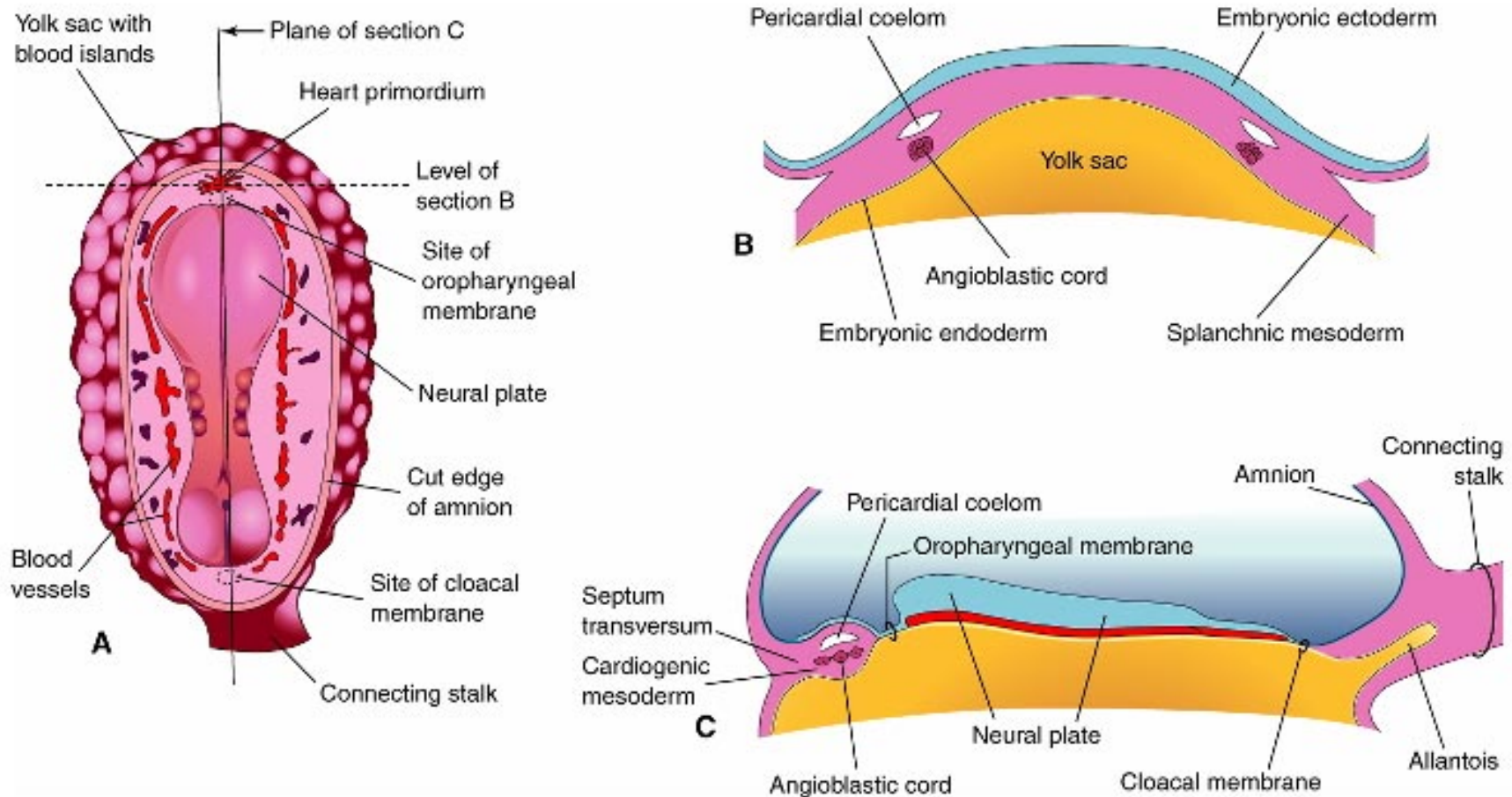
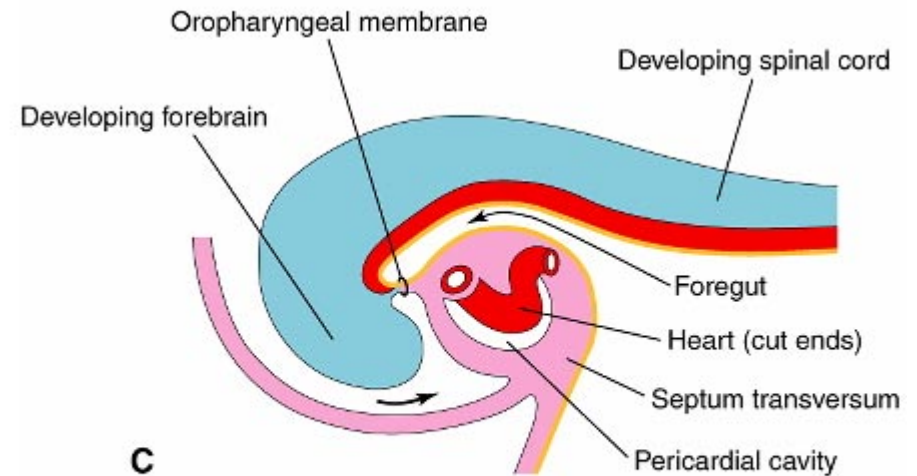
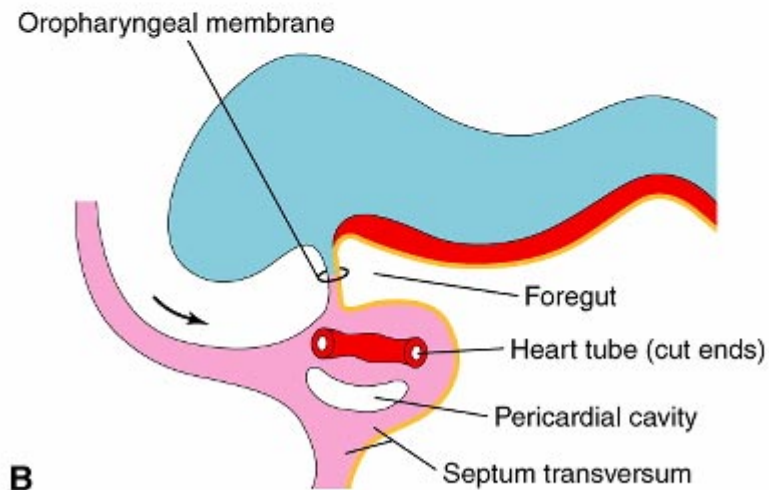
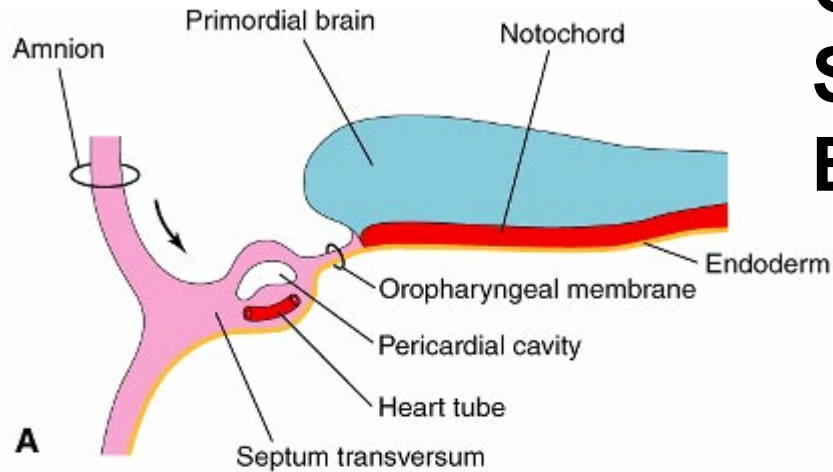


# CARDIOVASCULAR SYSTEM: EARLY DEVELOPMENT - I

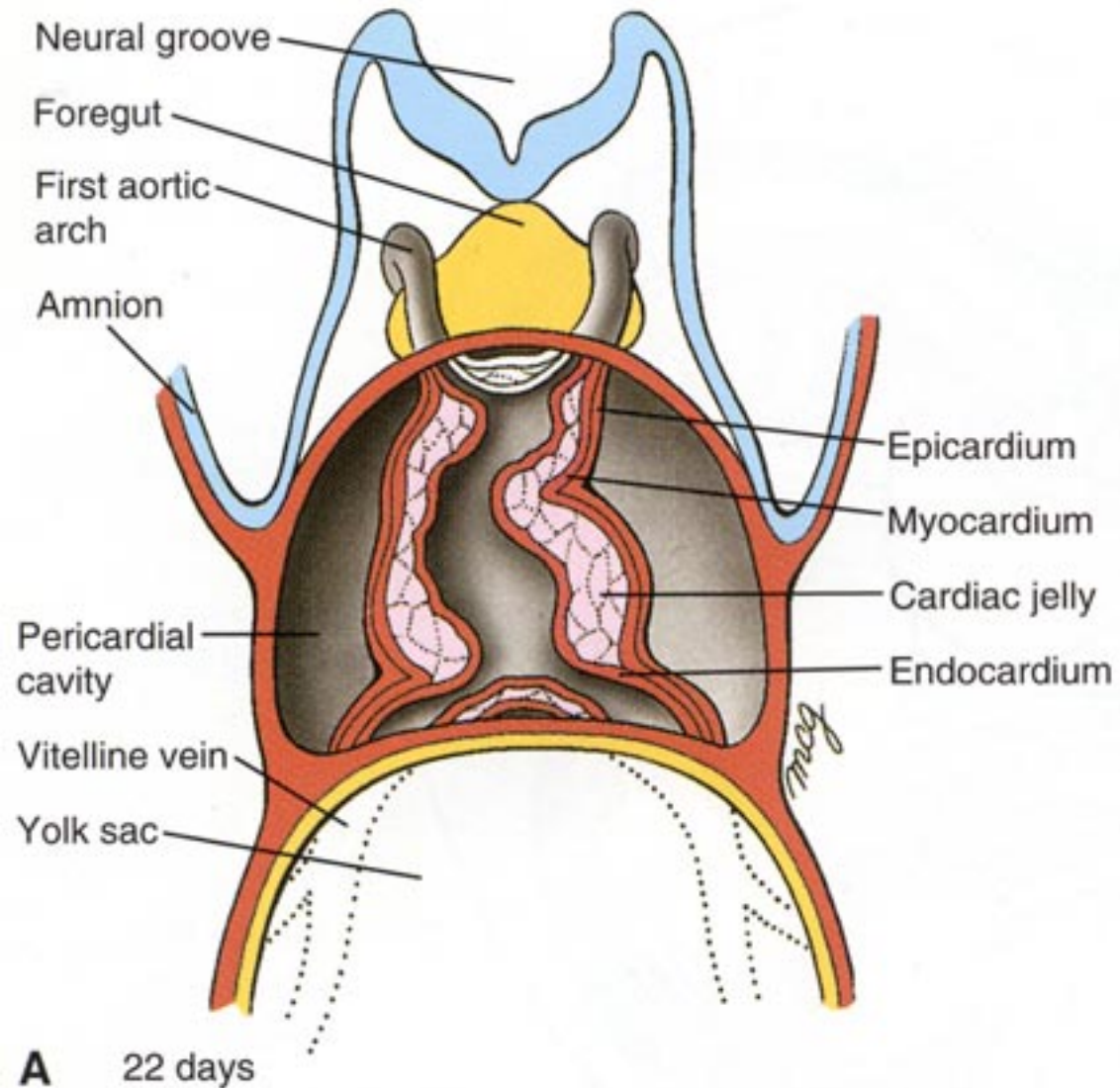


# CARDIOVASCULAR SYSTEM: EARLY DEVELOPMENT - II

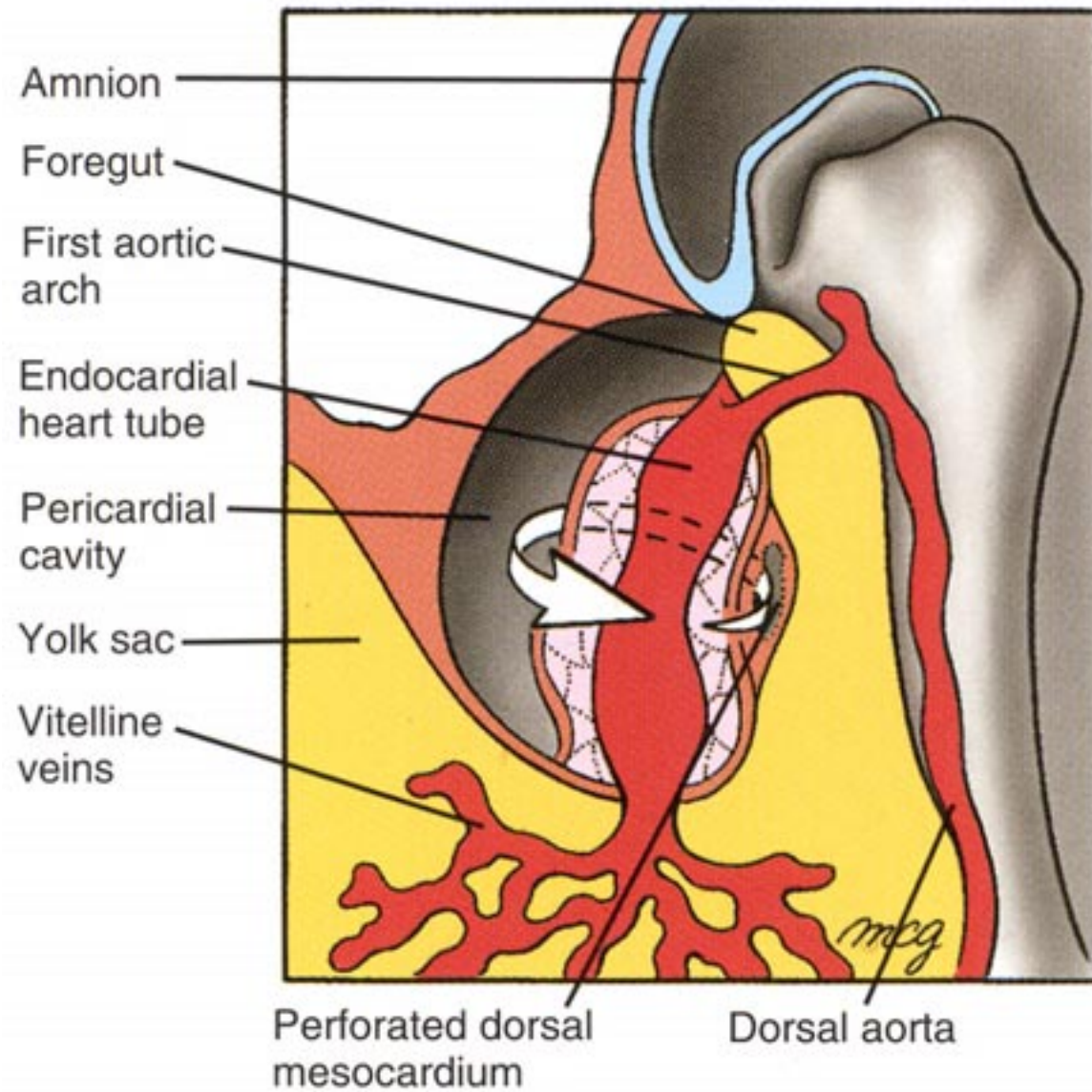


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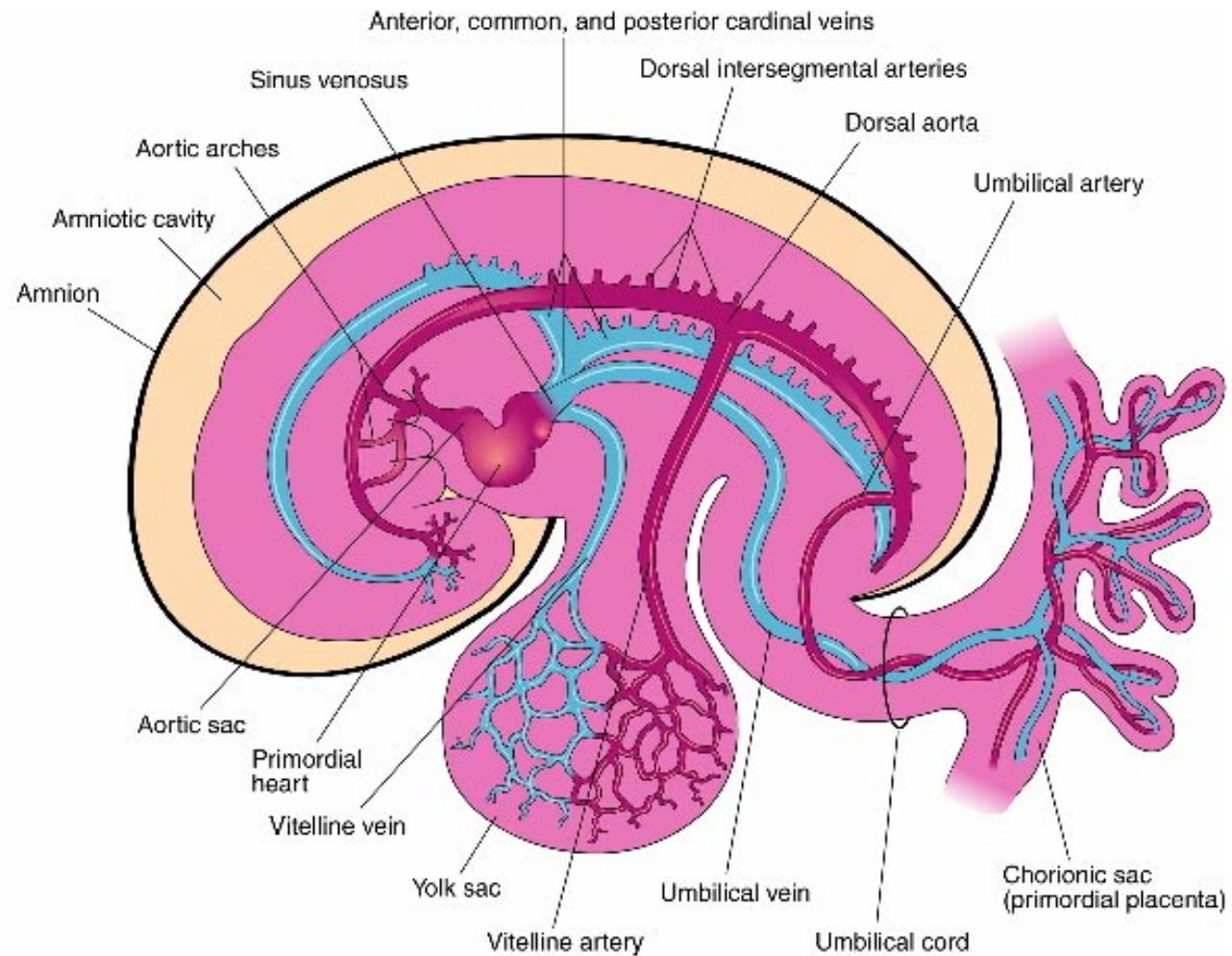
# HEART AND ITS NEIGHBORHOOD- I



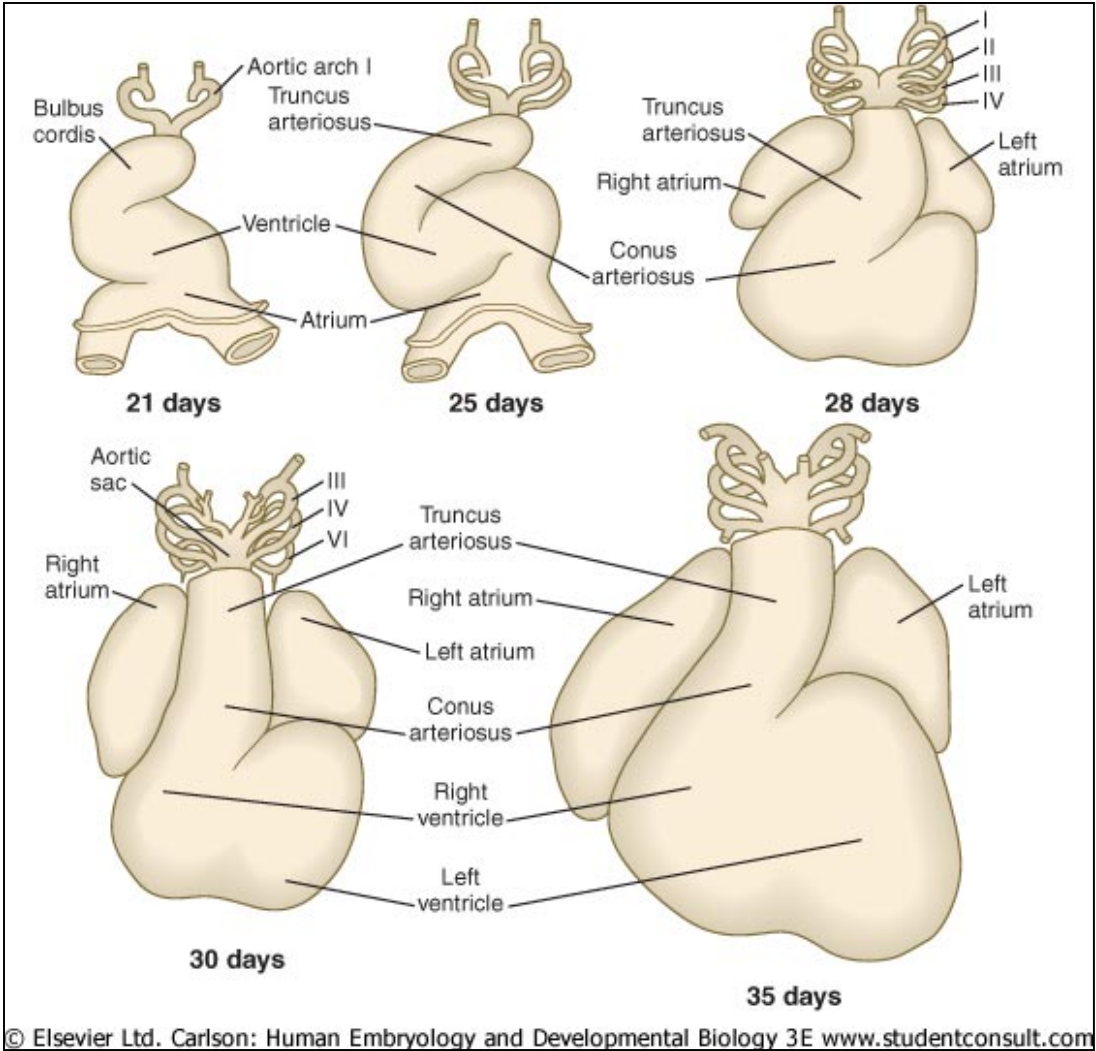
# HEART AND ITS NEIGHBORHOOD- II



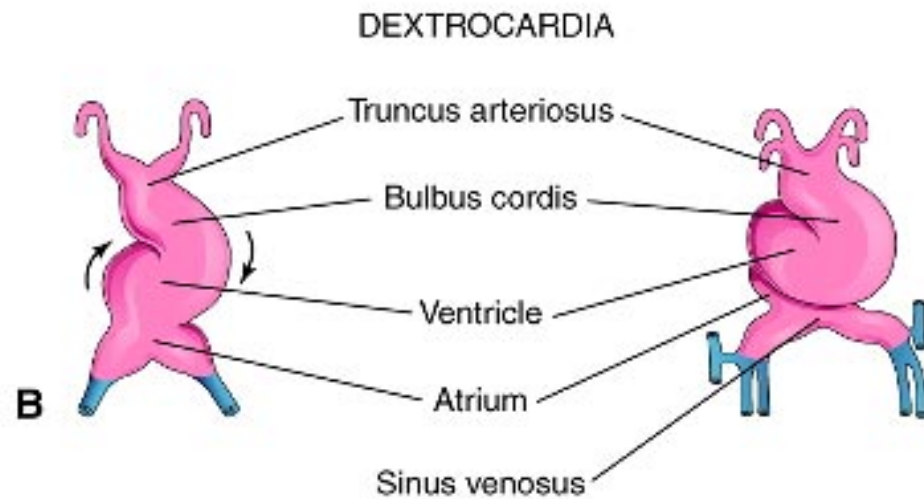
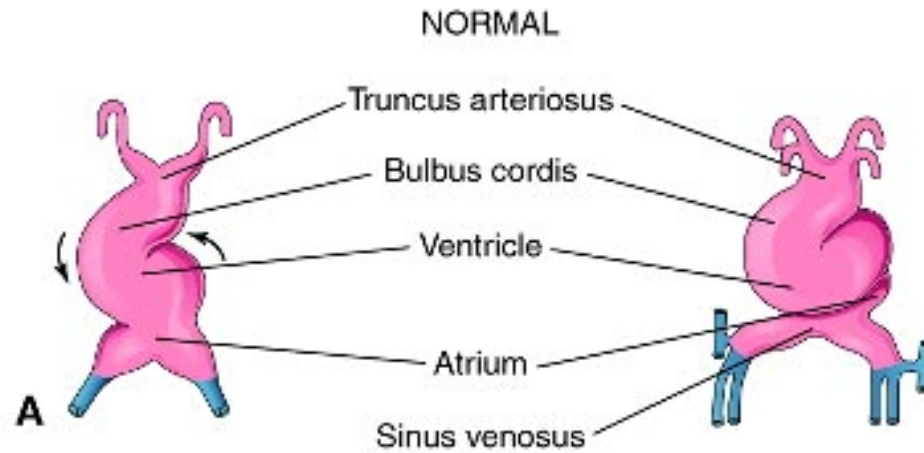
# BLOOD VESSELS OF THE EMBRYO (at 26 days)



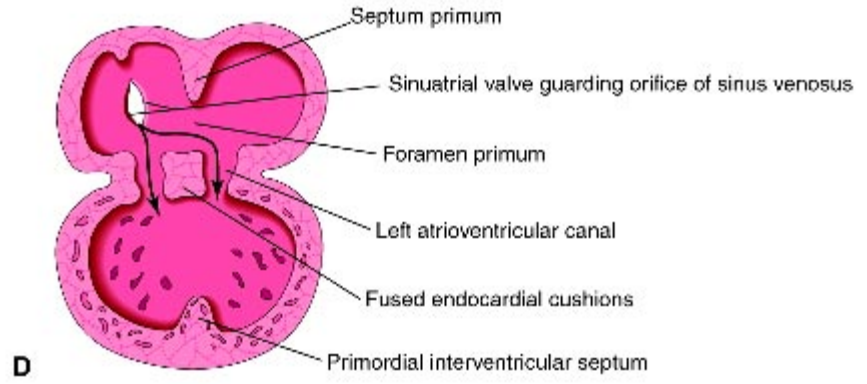
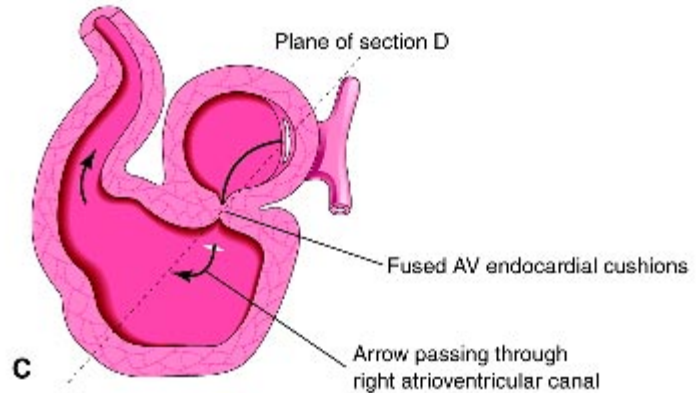
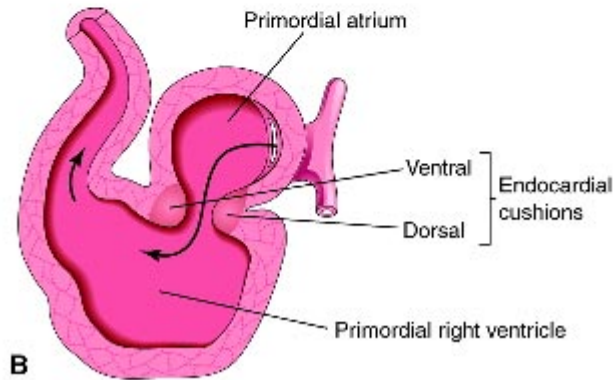
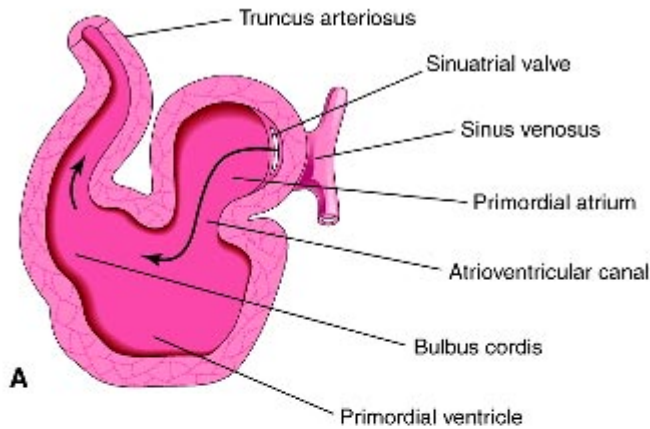
# FROM TUBE TO FOUR CHAMBERS EXTERNAL VIEW



**NORMAL : Loop to the RIGHT: Levocardia!**  
**ABNORMAL: Loop to the LEFT: Dextrocardia!**

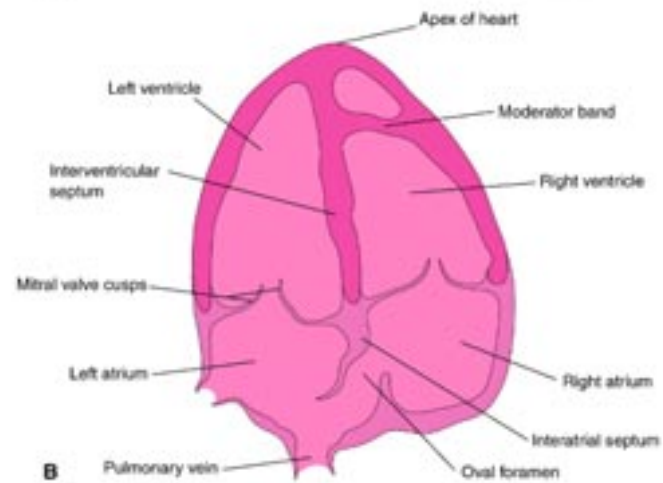


# FROM TUBE TO FOUR CHAMBERS INTERNAL VIEW

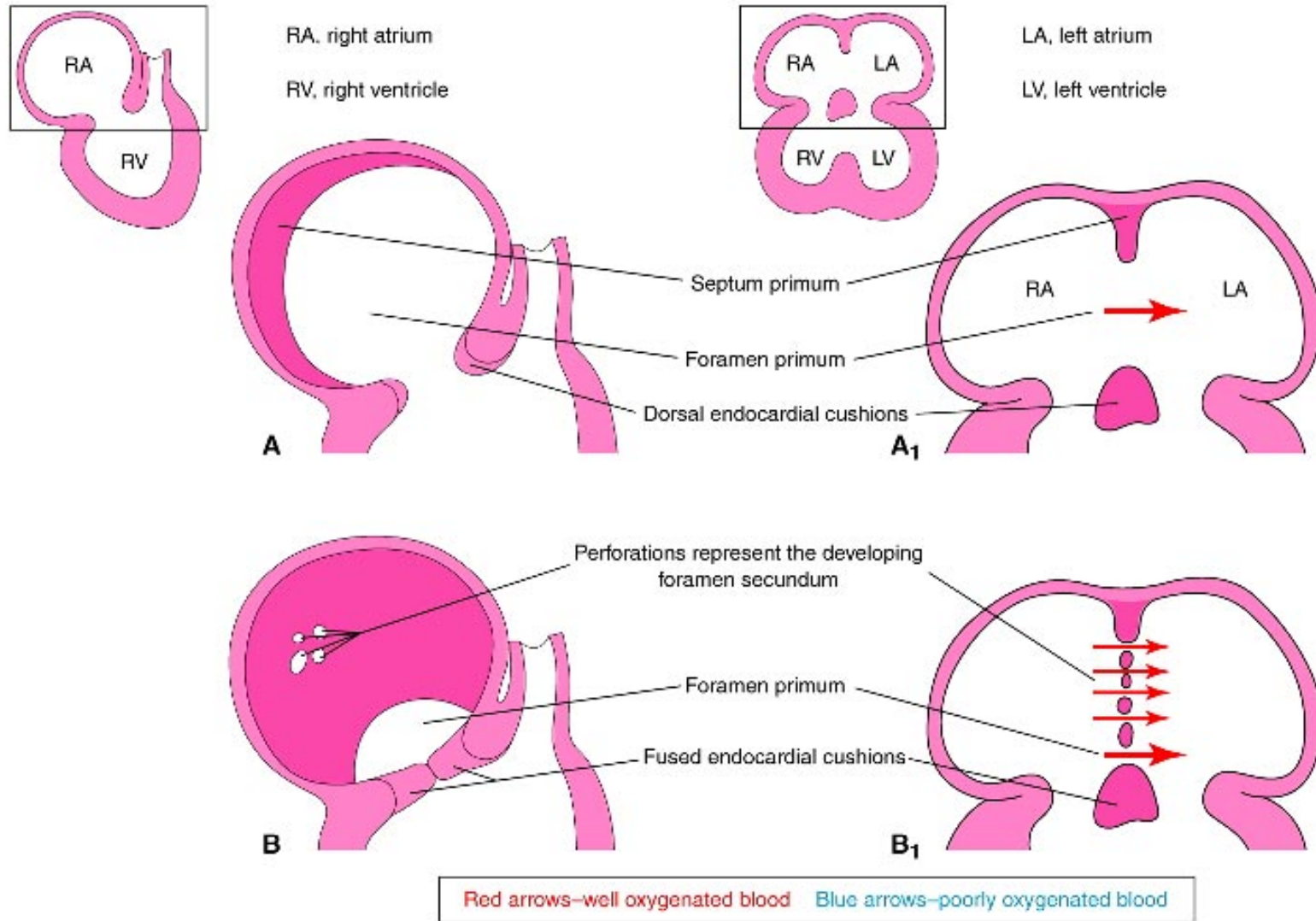


# FOUR CHAMBERS- ULTRASOUND VIEW

## @ 20 wks

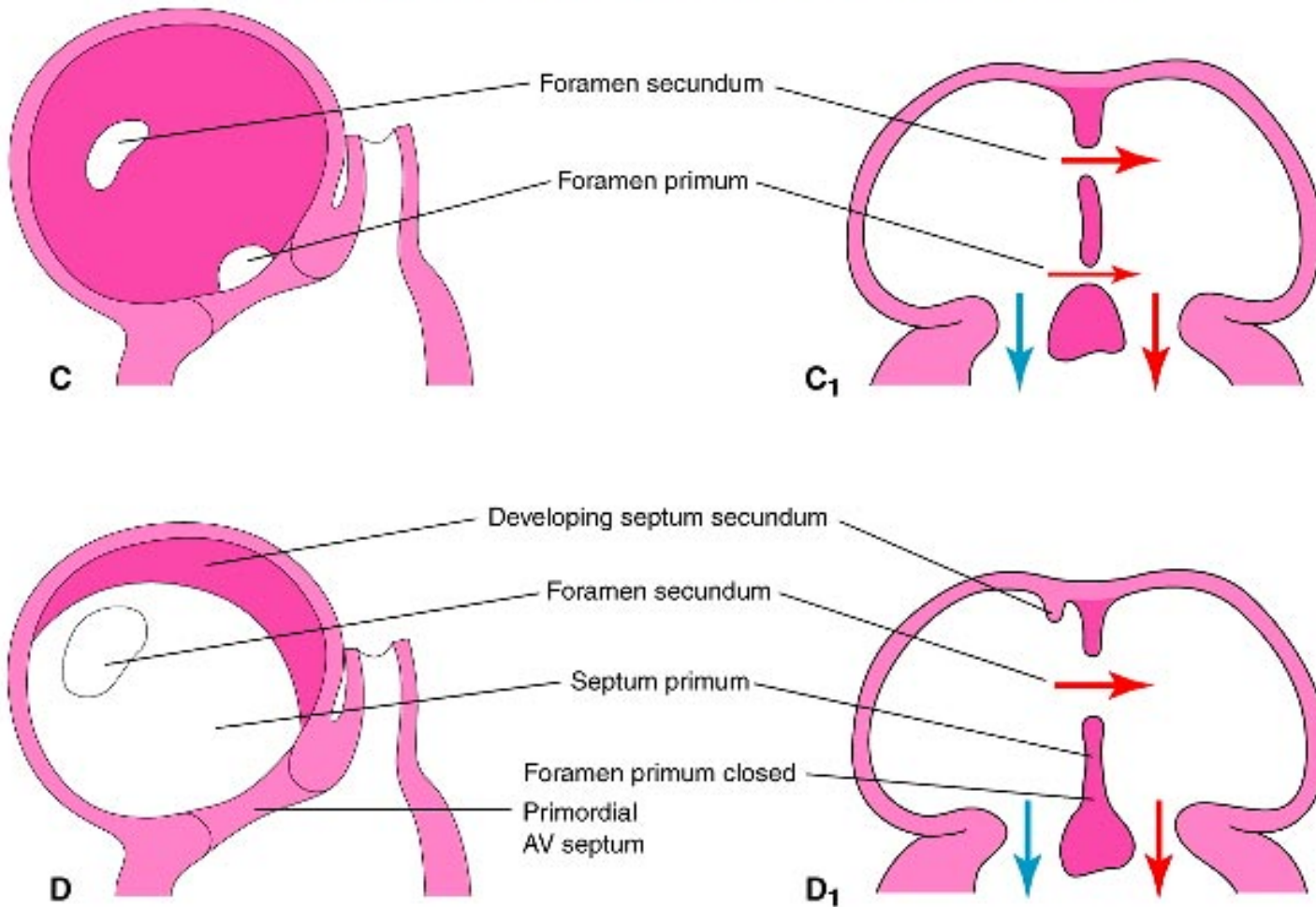


# ATRIAL SEPTUM FORMATION- I

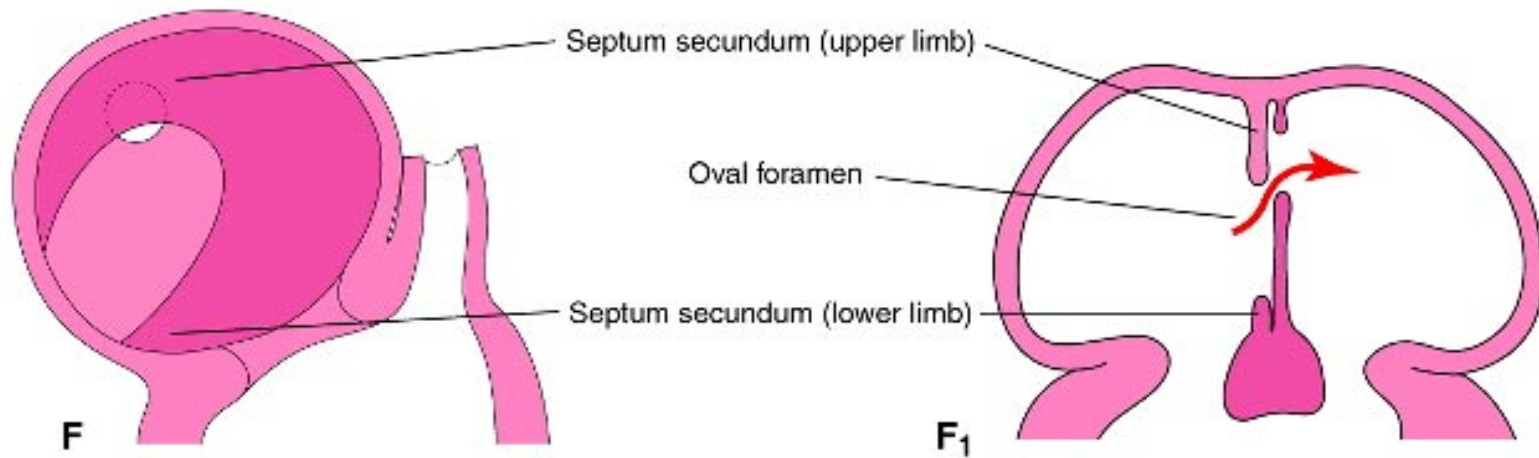
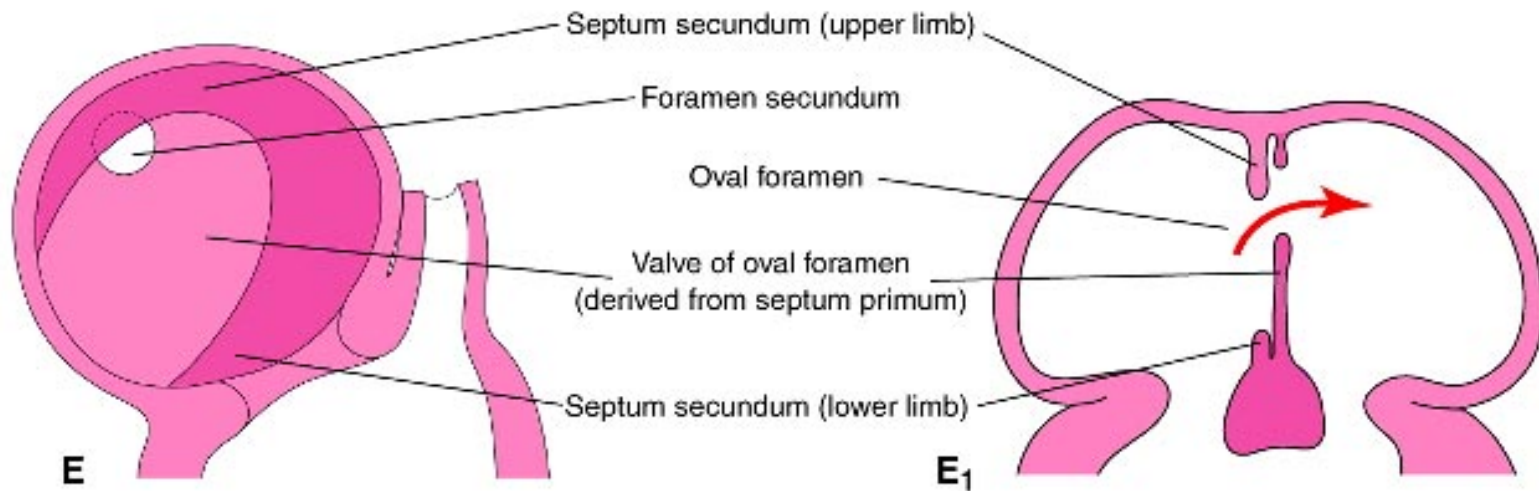


# ATRIAL SEPTUM FORMATION- II

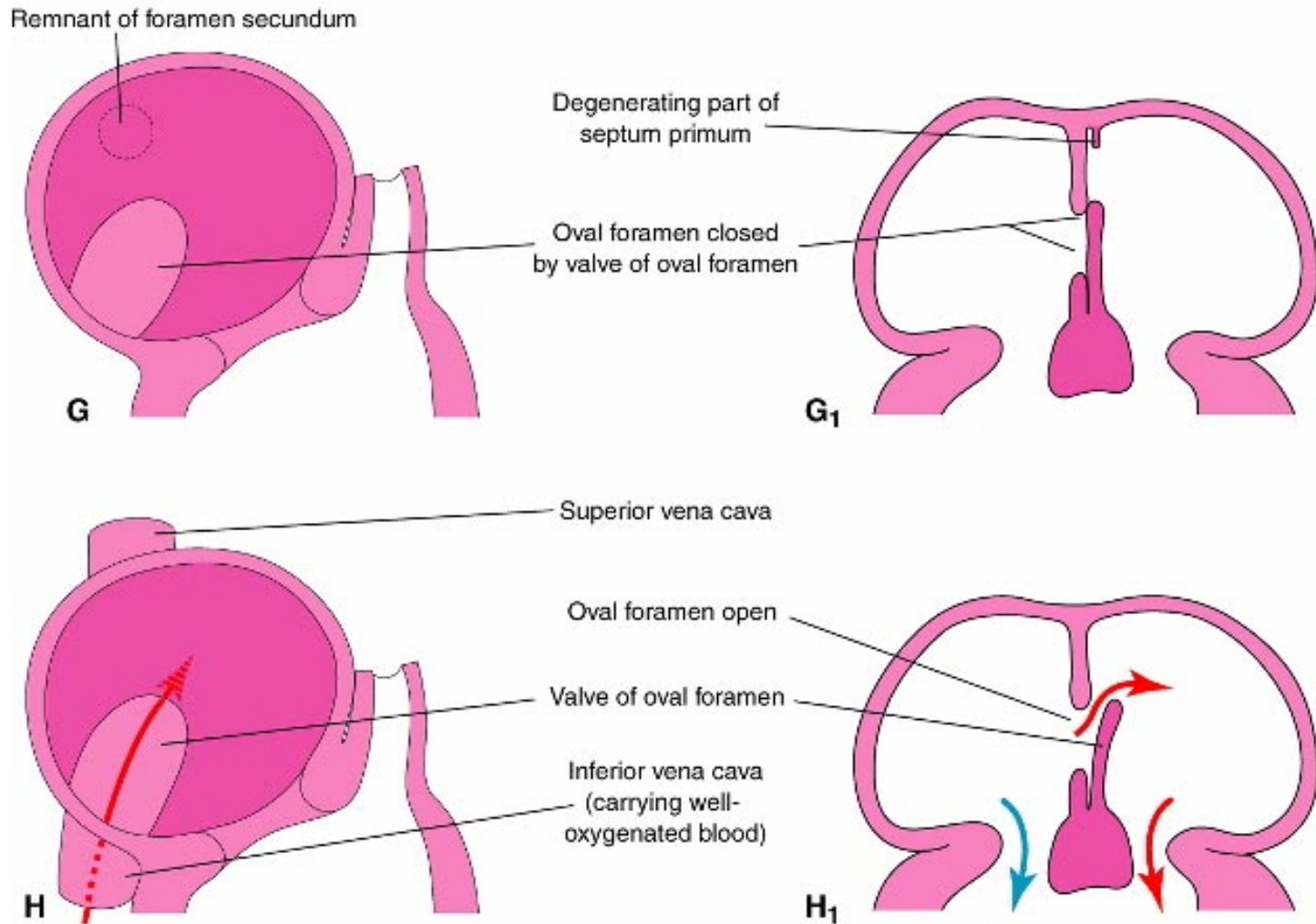
Red arrows—well oxygenated blood    Blue arrows—poorly oxygenated blood



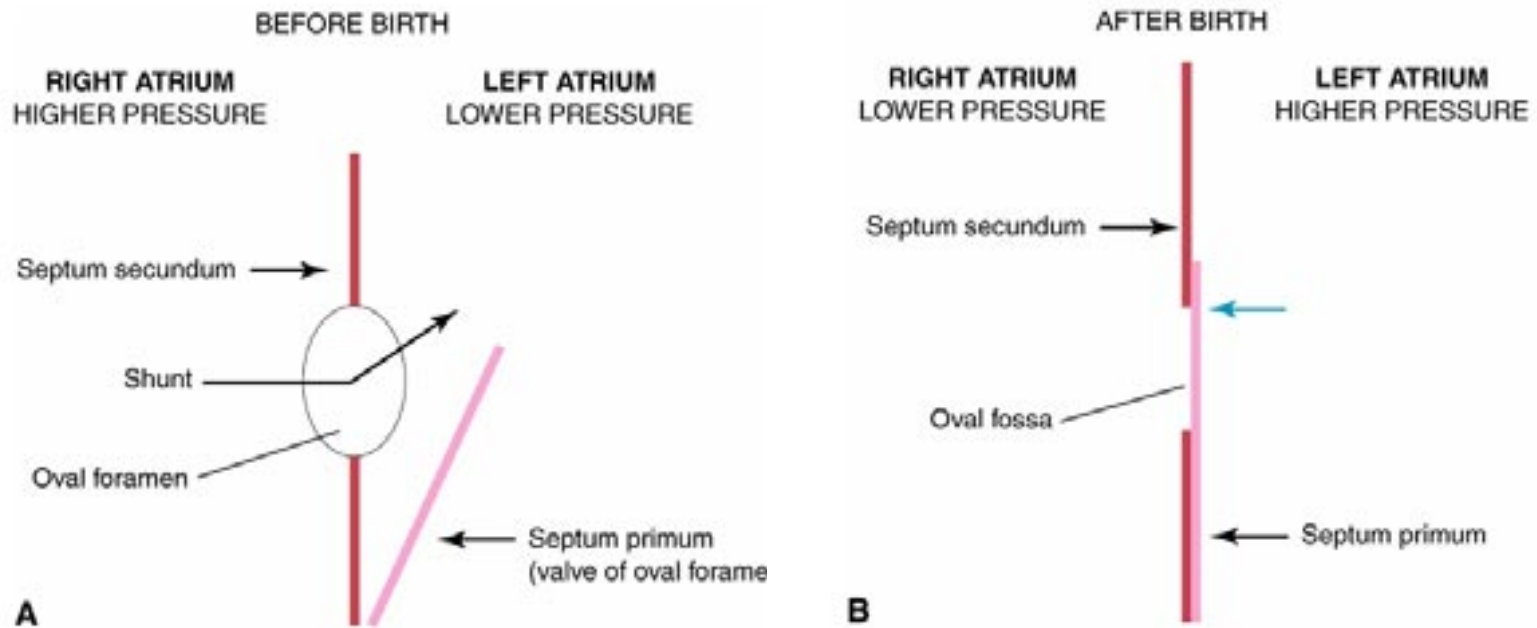
# ATRIAL SEPTUM FORMATION- III



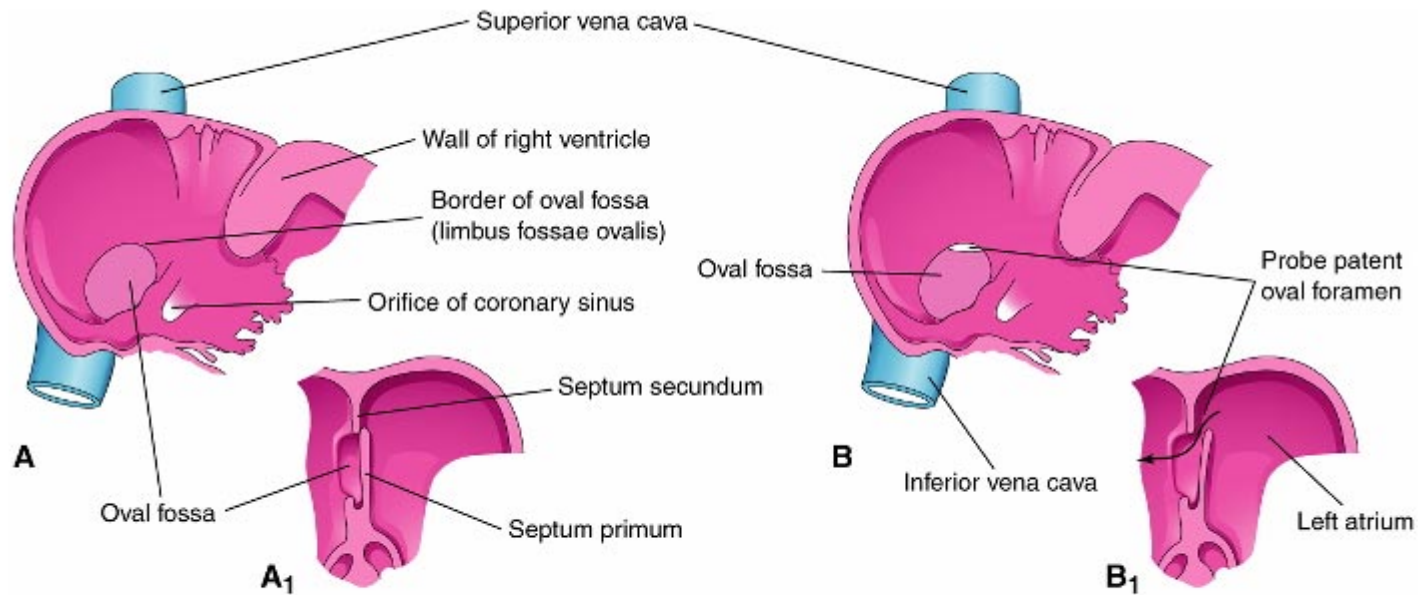
# ATRIAL SEPTUM FORMATION- IV



# ATRIAL SEPTUM FORMATION- V



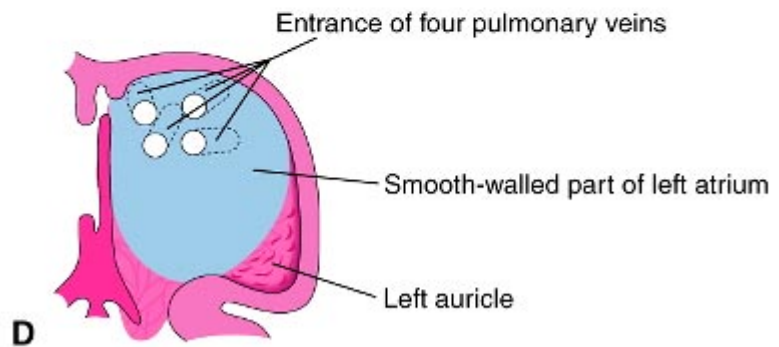
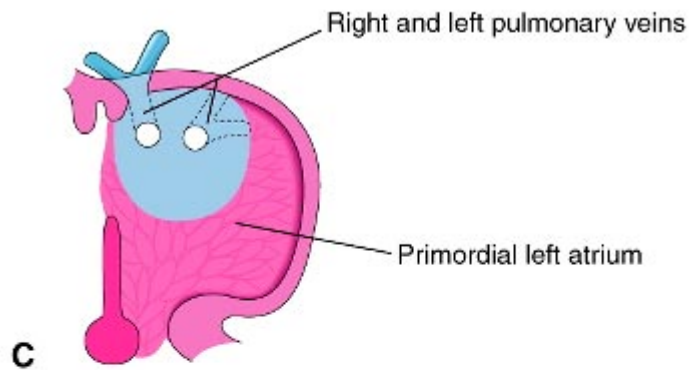
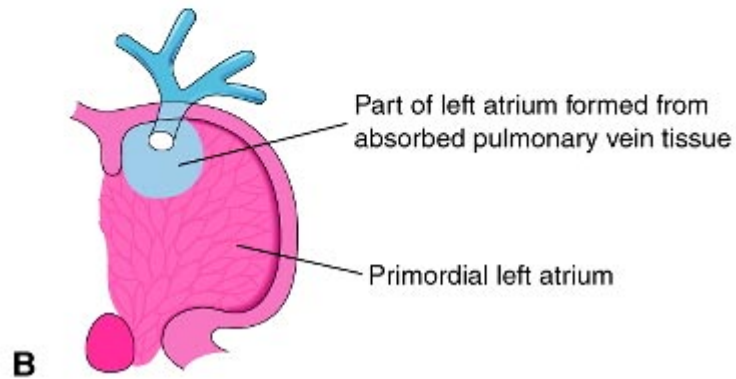
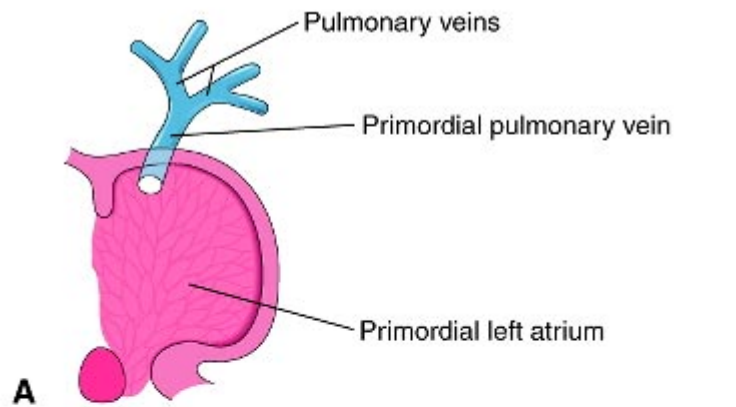
# THE DEFINITIVE RIGHT ATRIUM



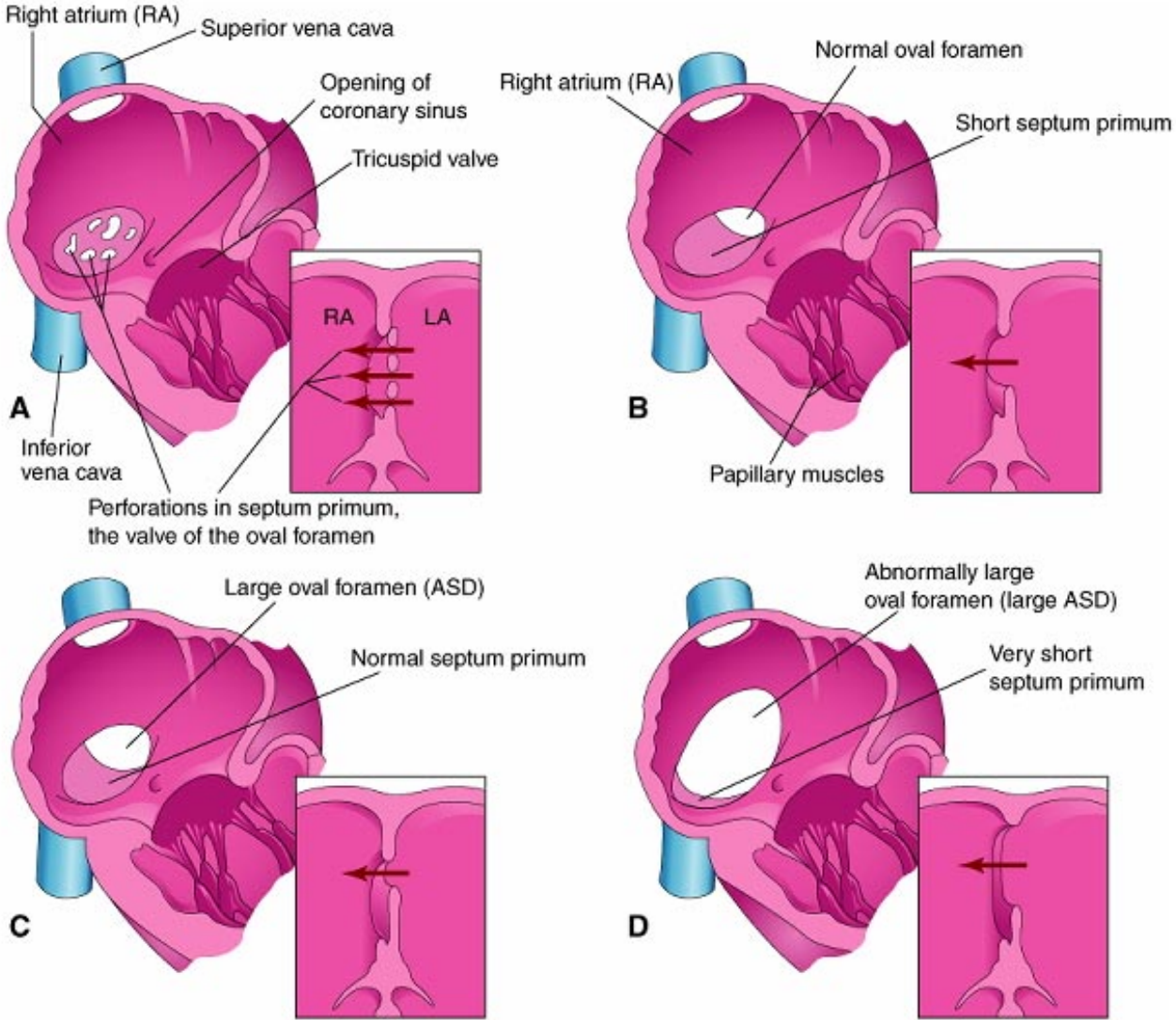
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**\*\*NOTE: In 25% of normal population, the foramen ovale remains 'probe patent'.**

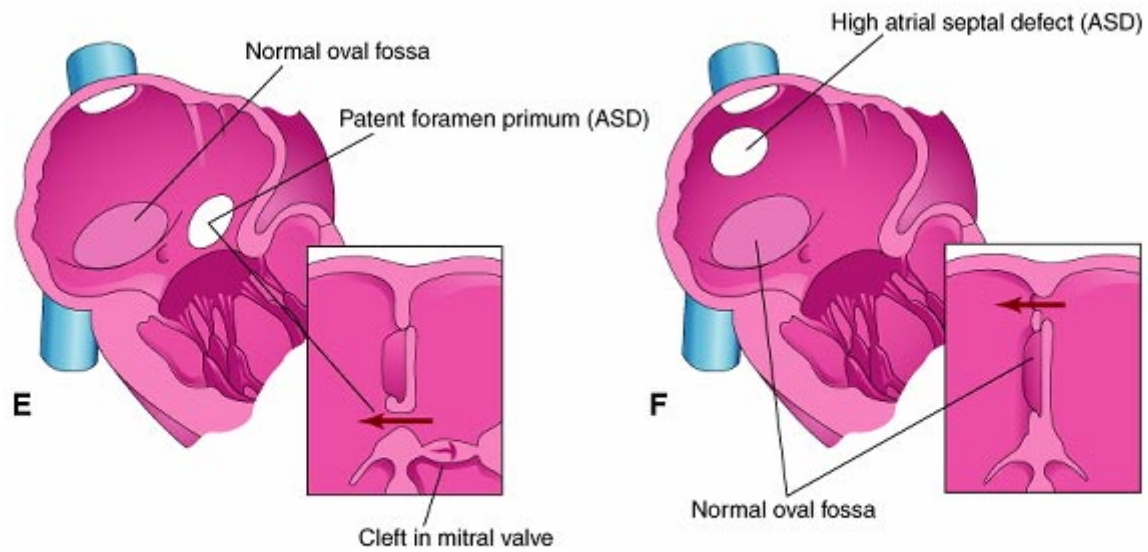
# THE DEFINITIVE LEFT ATRIUM



# ATRIAL SEPTAL DEFECTS- "Fossa Ovalis" type

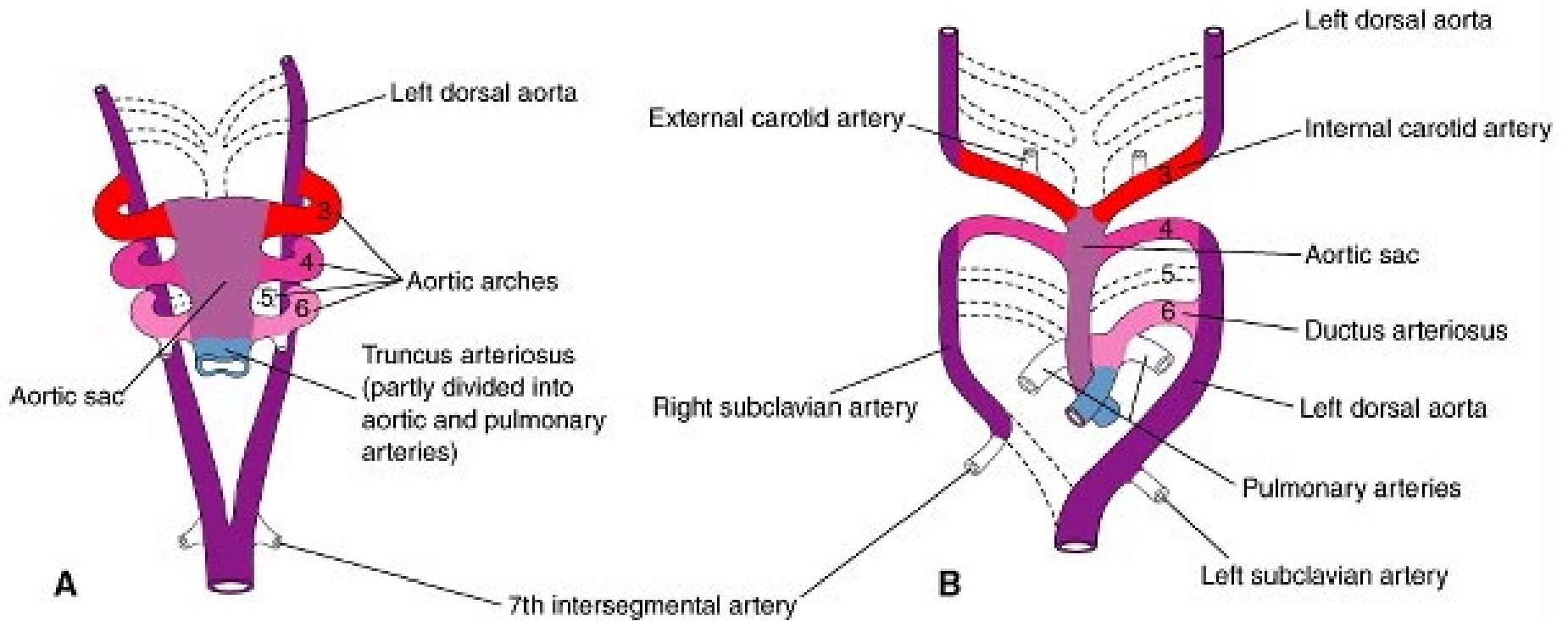


# ATRIAL SEPTAL DEFECTS- Unrelated to Foramen Ovale

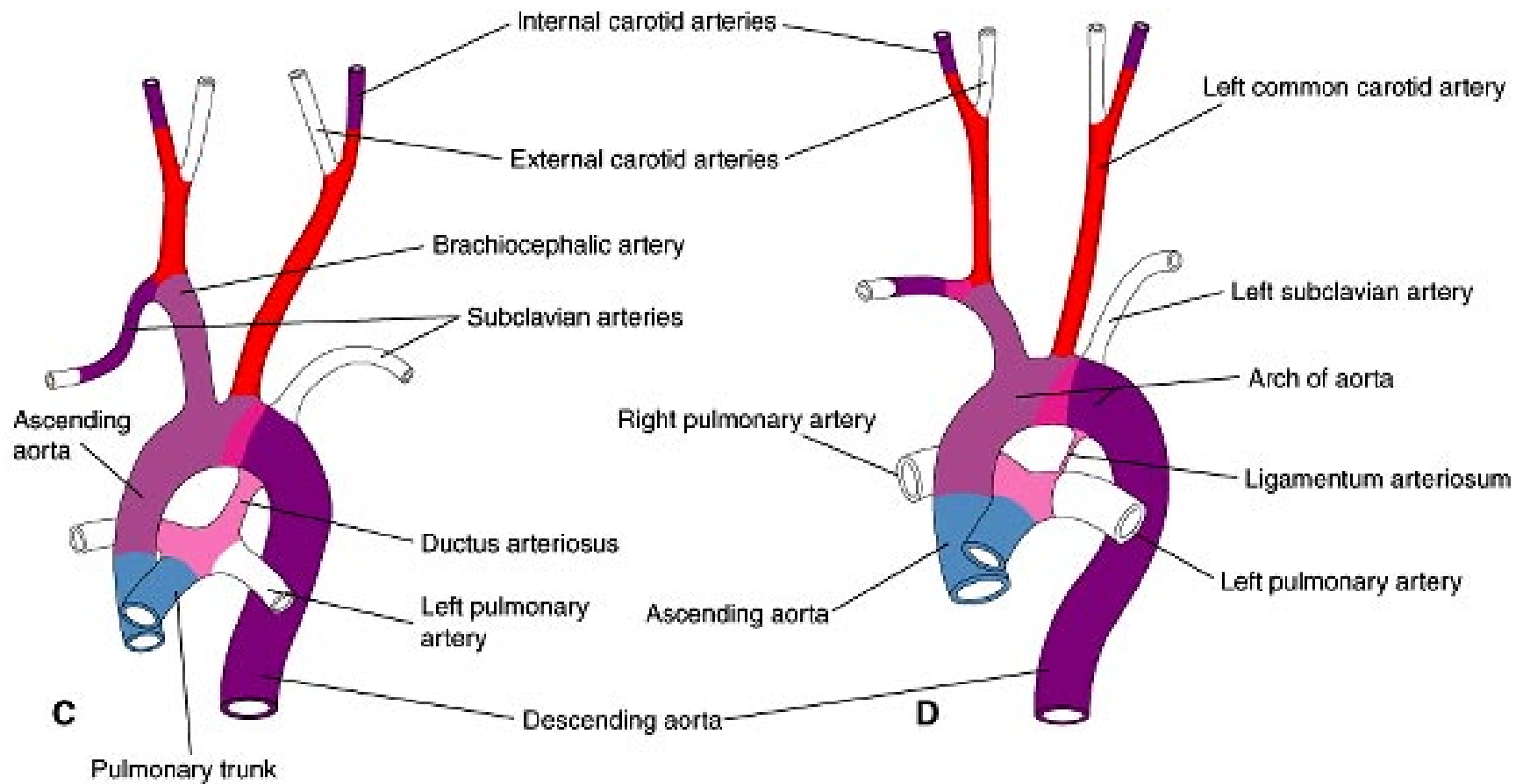


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# AORTIC ARCHES AND DERIVATIVES - I

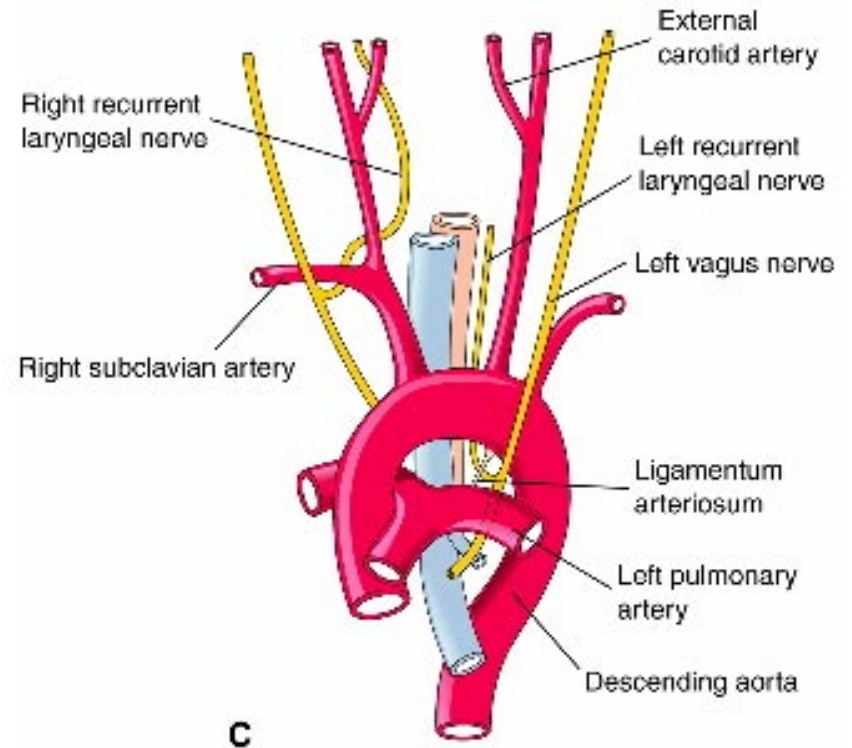
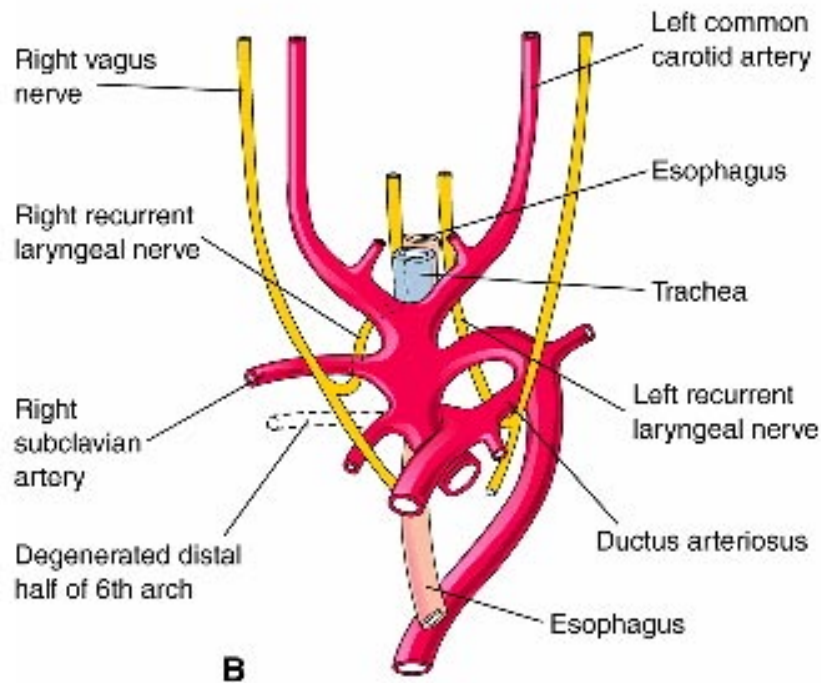
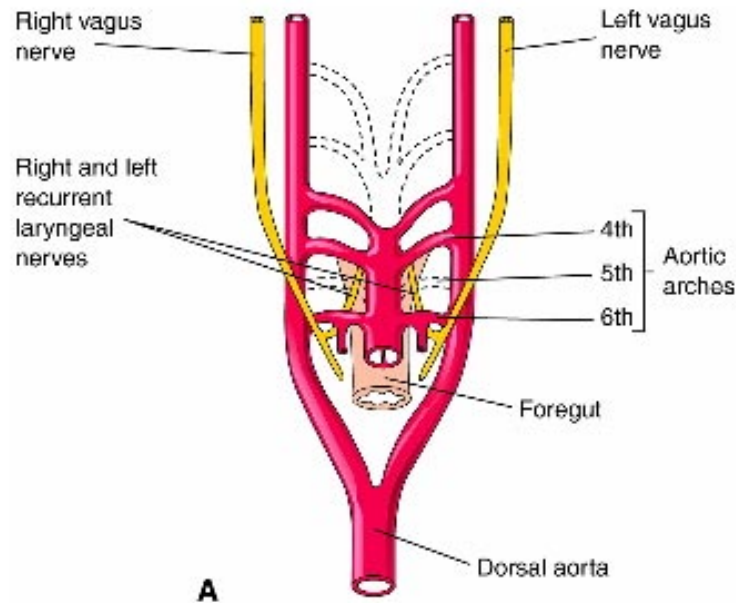


# AORTIC ARCHES AND DERIVATIVES - II



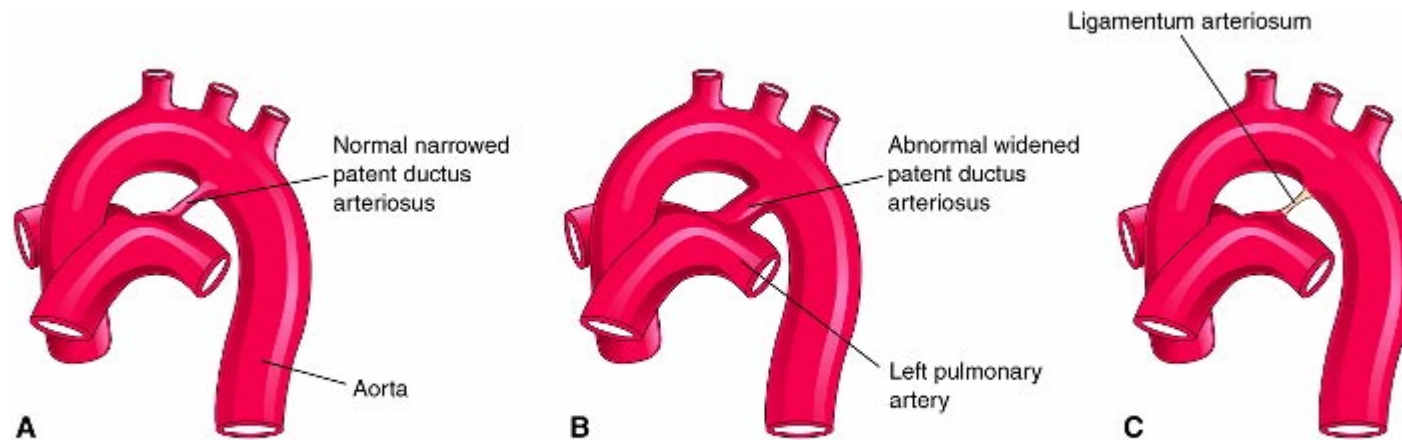
# RECURRENT LARYNGEAL NERVES

## Right vs Left

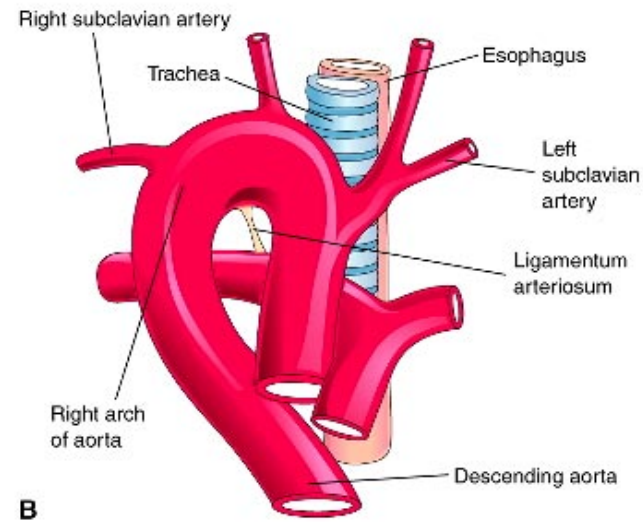
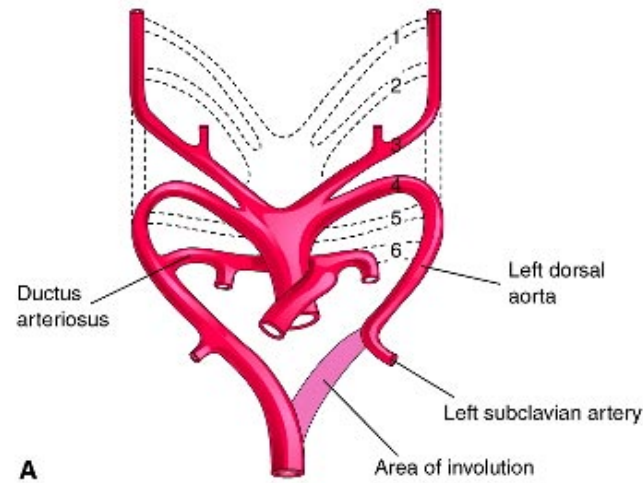


# PATENT DUCTUS ARTERIOSUS

**P**rostaglandin: Keeps the duct **P**atent  
**I**ndomethacin: Closes the duct.

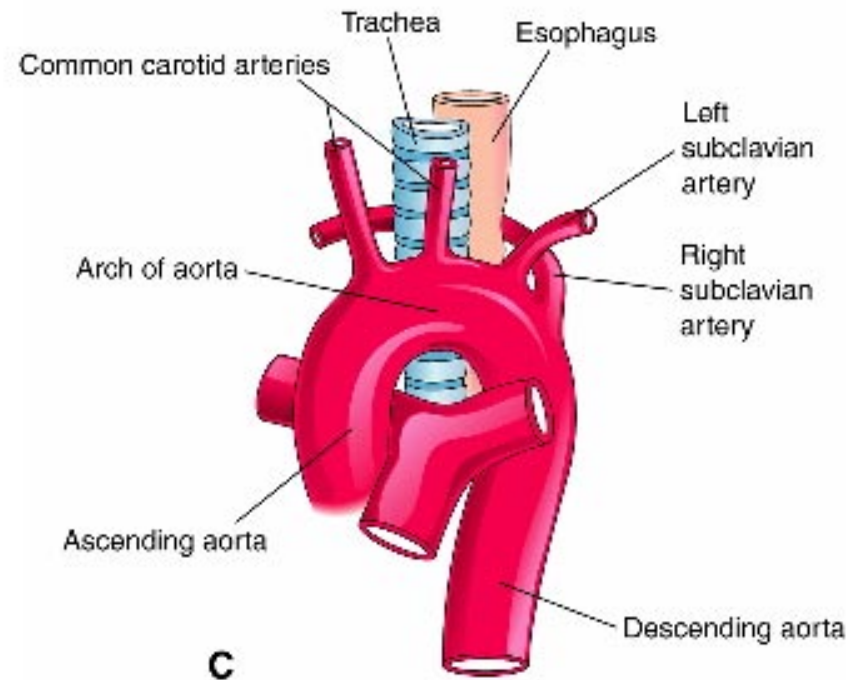
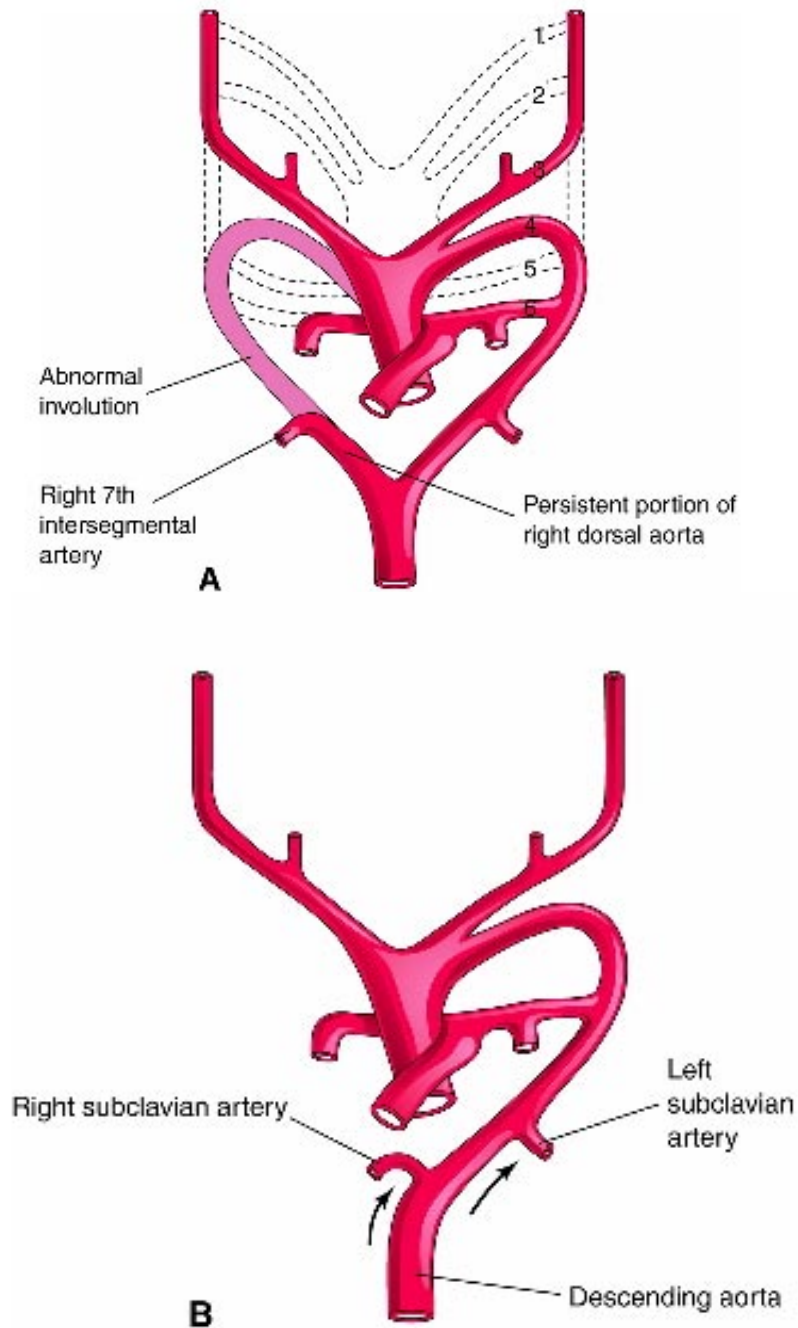


# RIGHT AORTIC ARCH: Mirror image branching

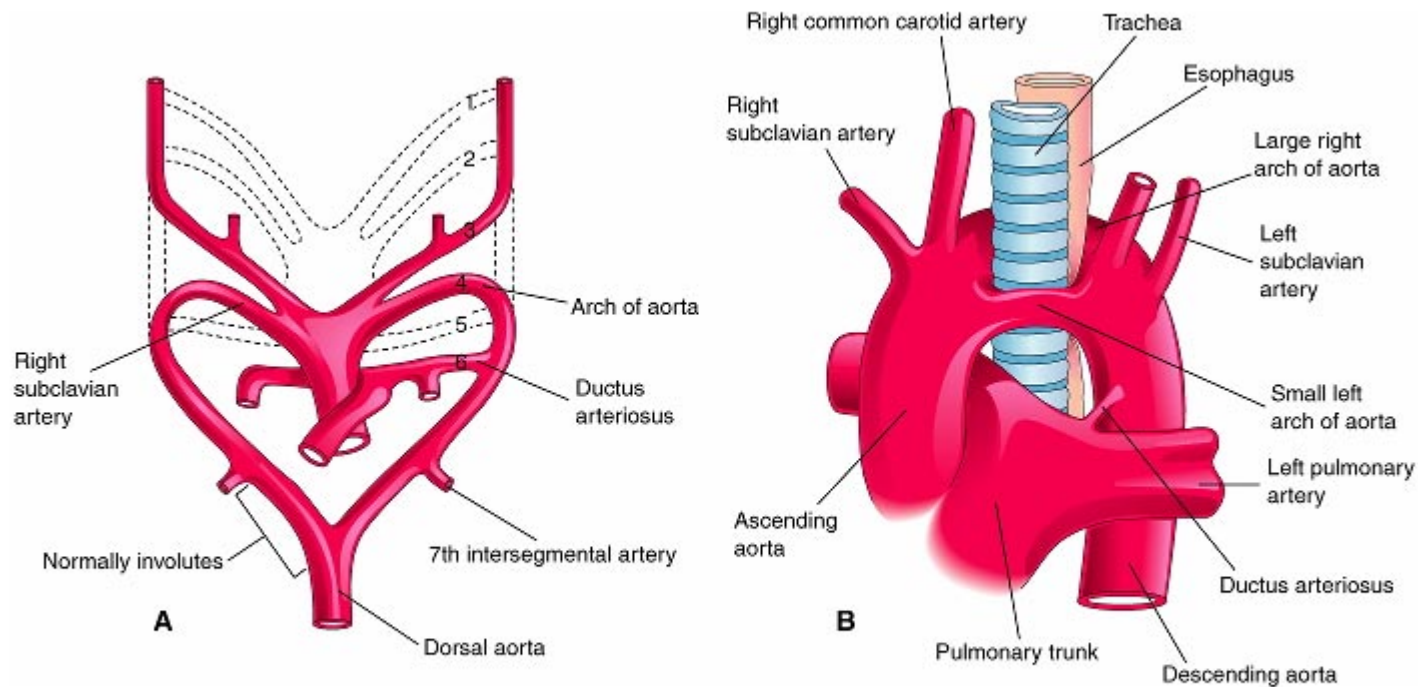


# ABERRANT RIGHT SUBCLAVIAN ARTERY:

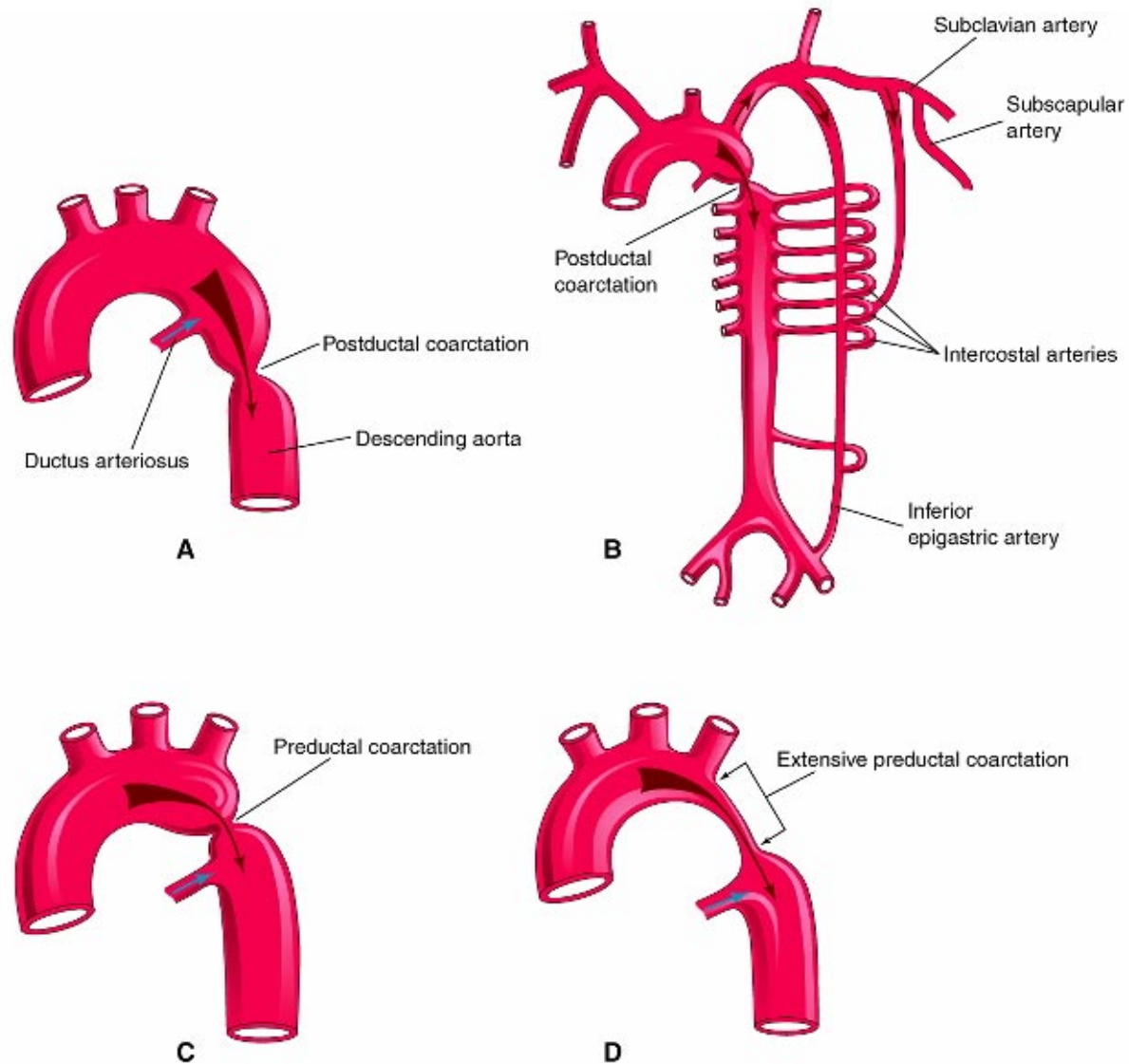
Occurs in 0.5% of people.  
Usually asymptomatic.



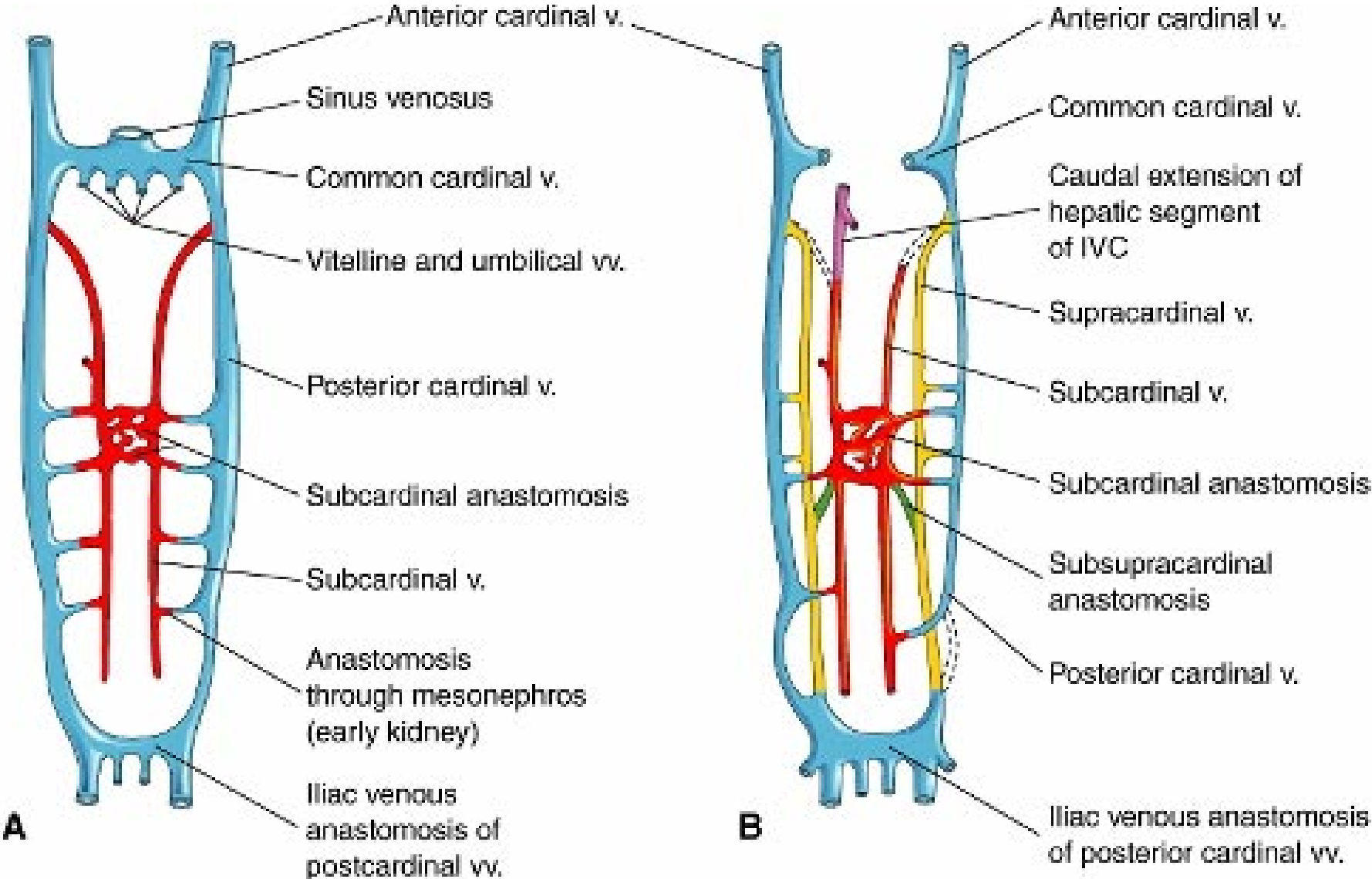
# DOUBLE AORTIC ARCH: “Vascular ring” Causes airway obstruction, stridor in infancy.



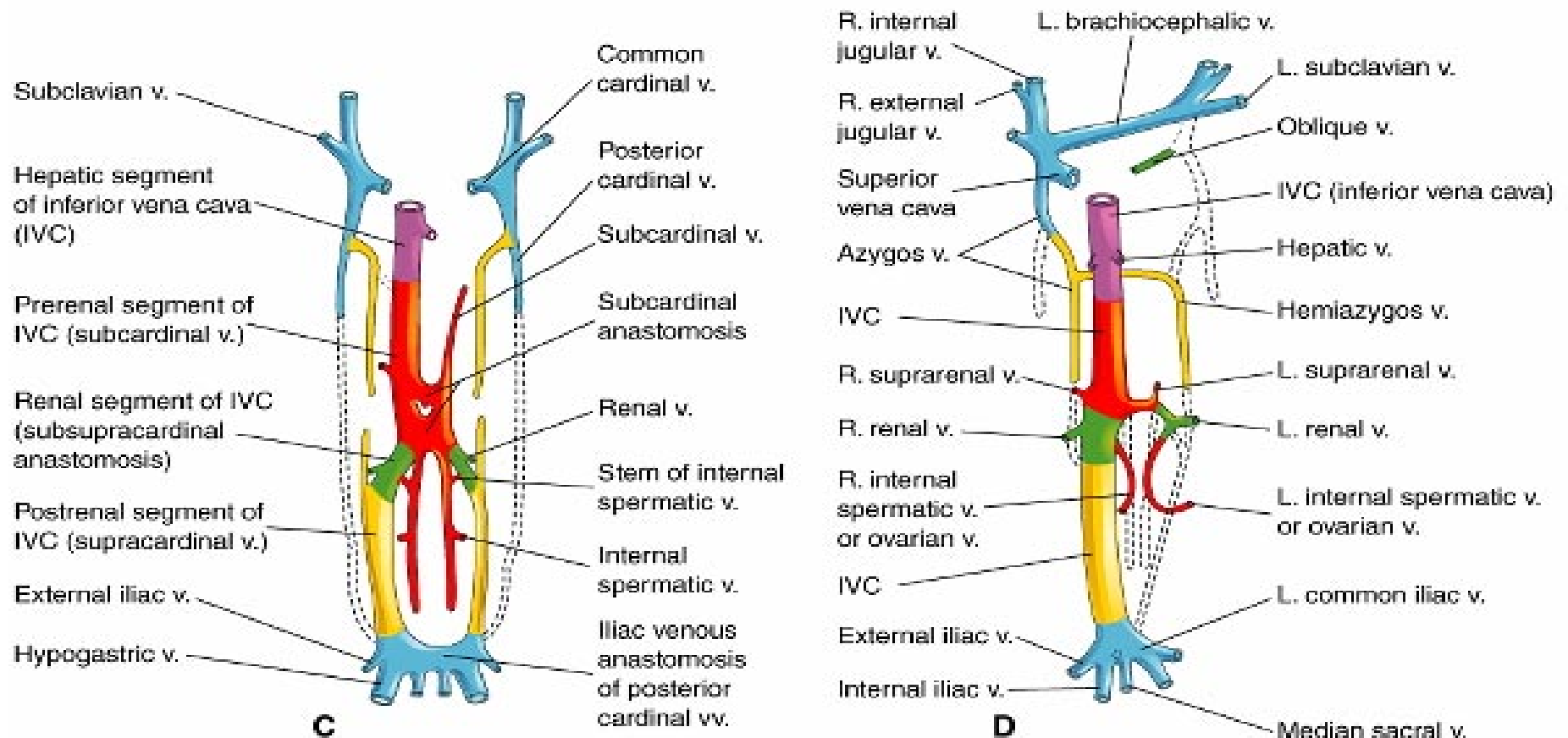
# COARCTATION OF THE AORTA



# THE CARDINAL VEINS AND THE VENAE CAVAE

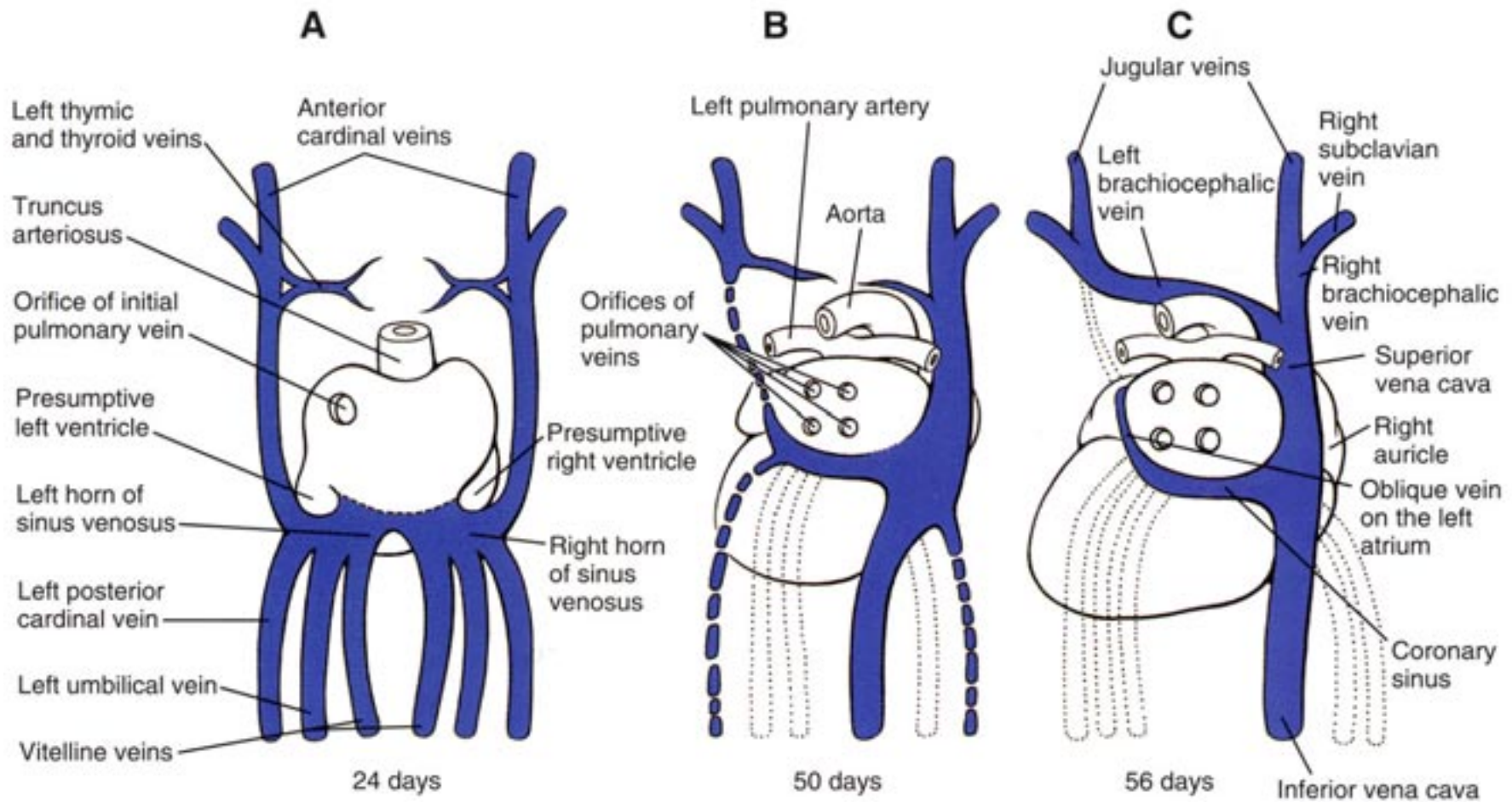


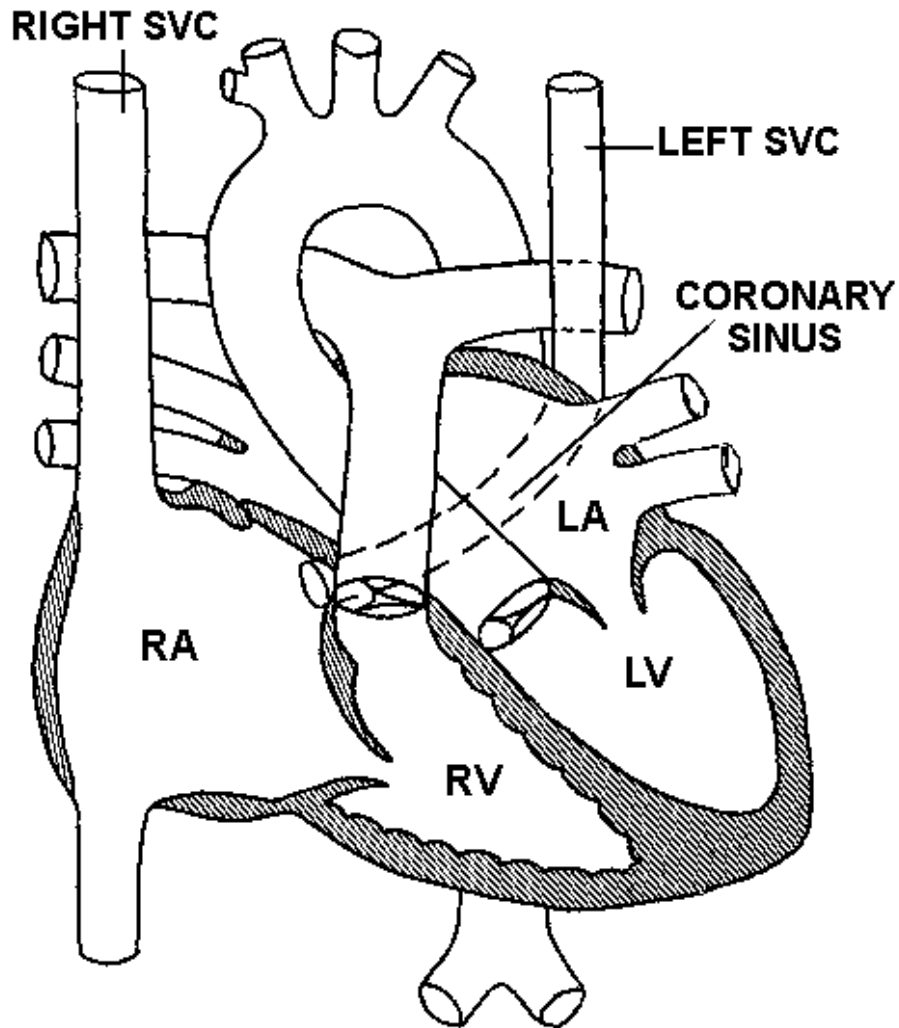
# THE CARDINAL VEINS AND THE VENAE CAVAE



Cardinal, umbilical, and vitelline veins
  Subcardinal veins
  Supracardinal veins
  Hepatic segment
 v. - vein  
vv. - veins

# SINUS VENOSUS AND THE CORONARY SINUS





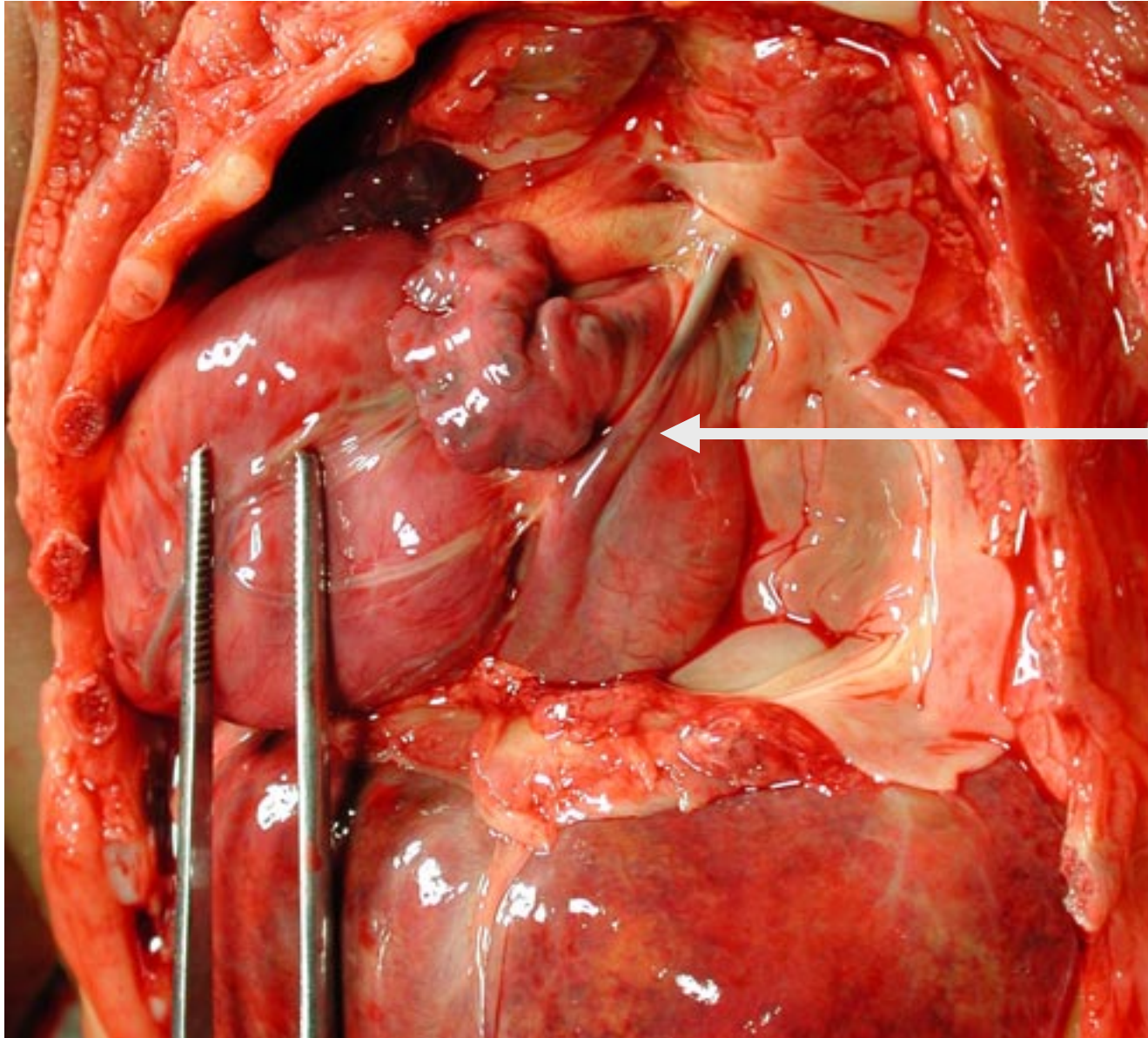
## **PERSISTENT LEFT SVC**

**0.3% of general population.  
4 % of patients with Cong. Ht Dis.**

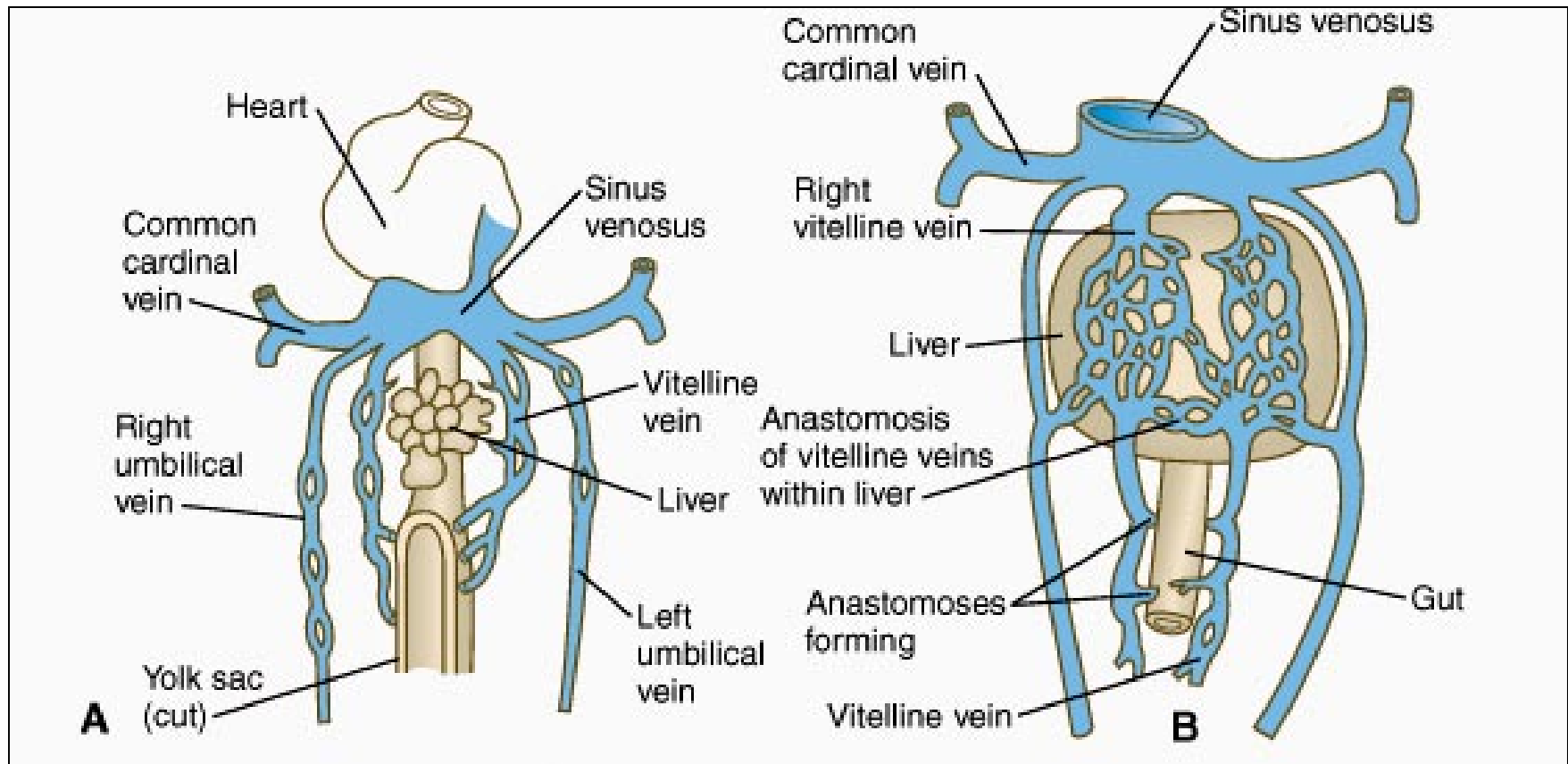
**Usually drains to Coronary sinus.  
Usually asymptomatic.**

**Enlarged coronary sinus is a clue.**

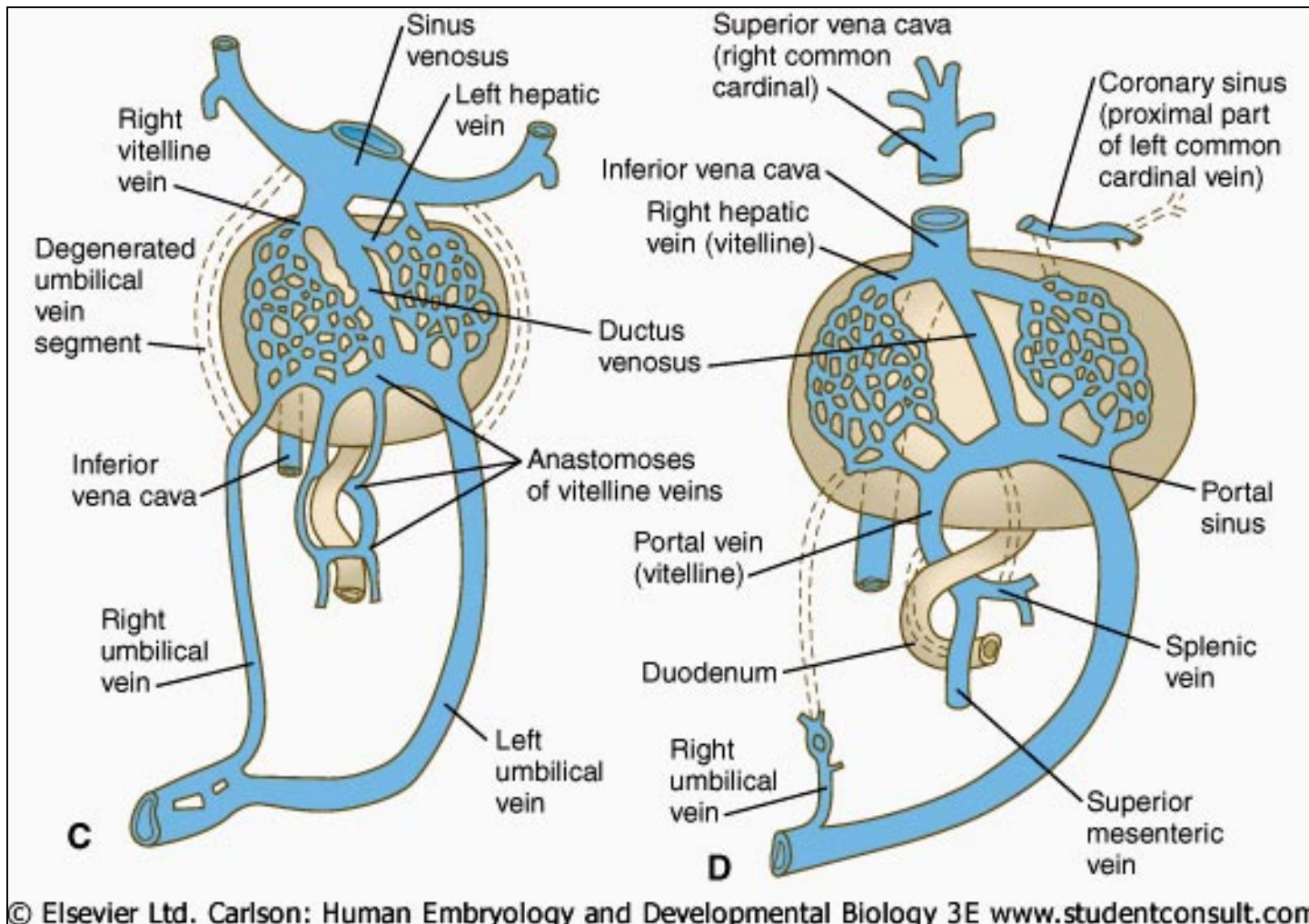
## Left SVC to coronary sinus



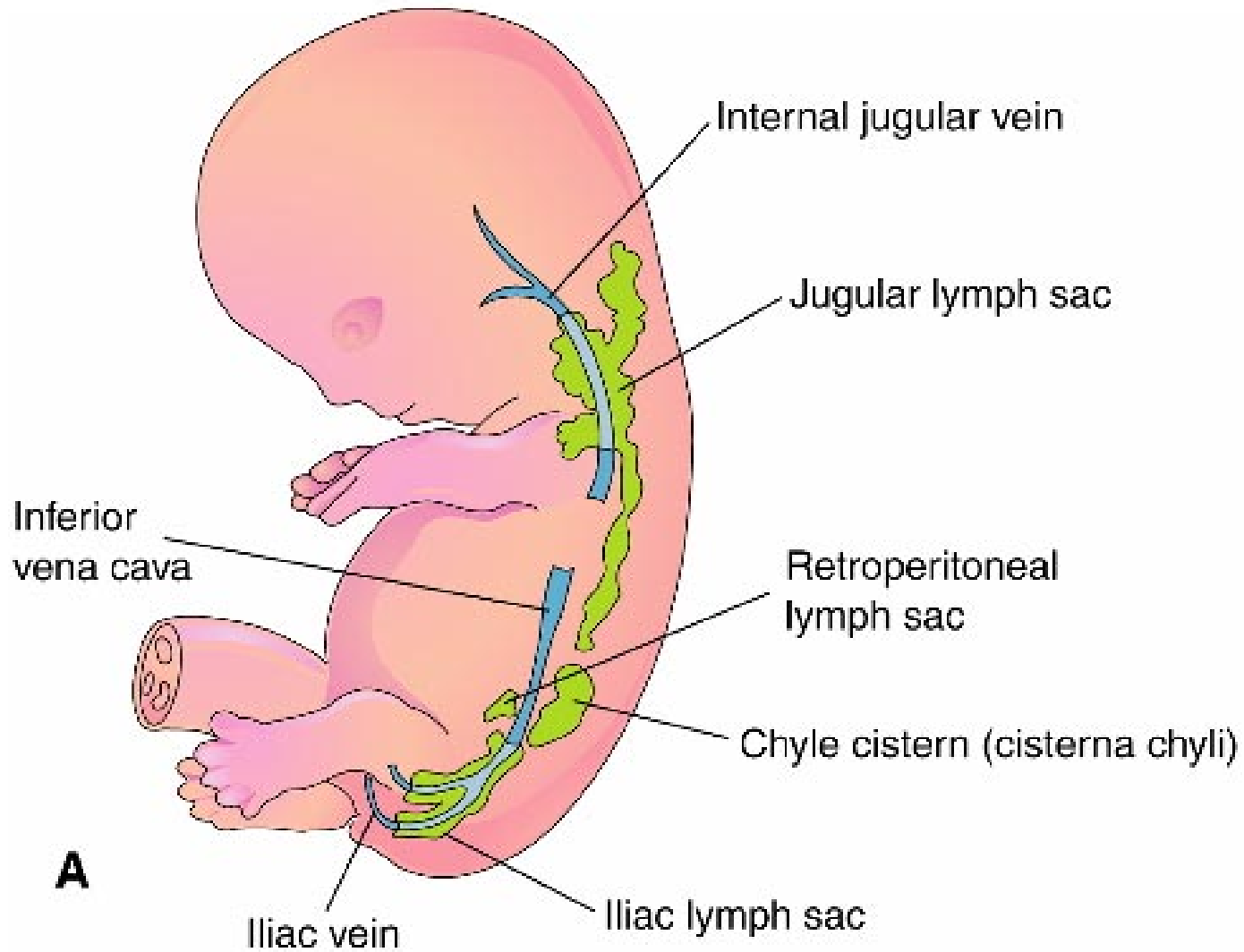
# UMBILICAL AND VITELLINE VEINS- I: Liver, portal vein and ductus venosus.



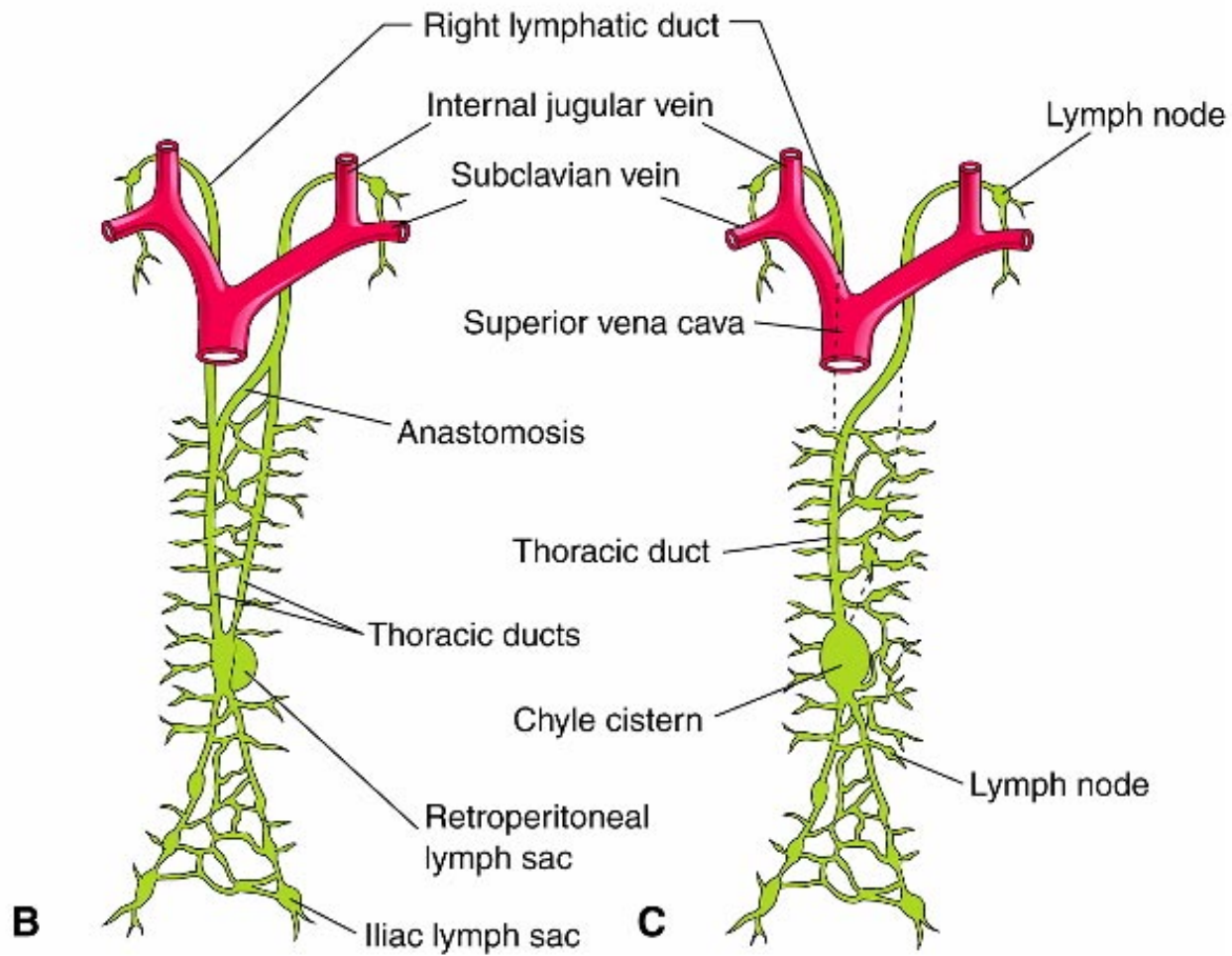
# UMBILICAL AND VITELLINE VEINS- II: Liver, portal vein and ductus venosus.



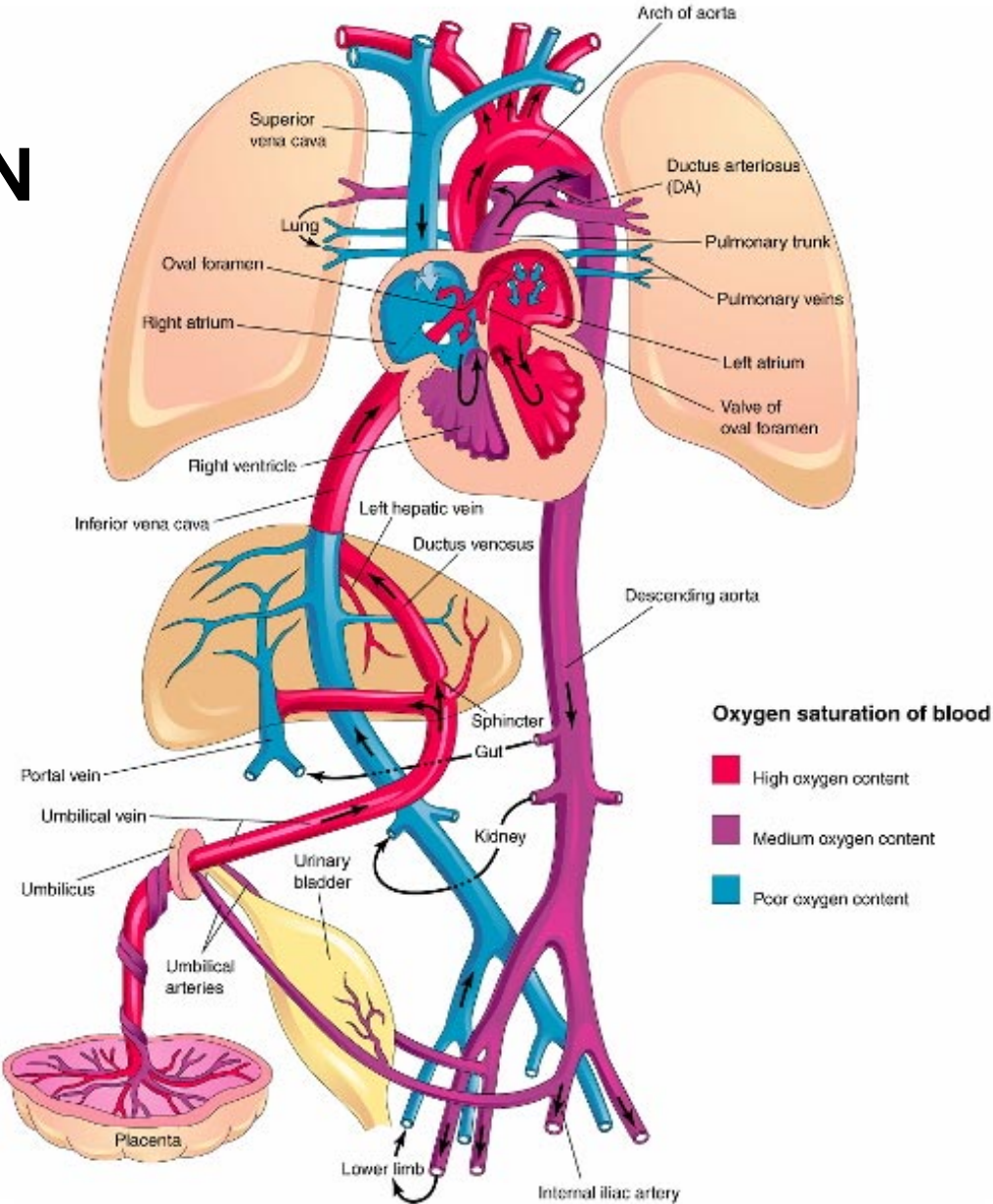
# LYMPHATIC SYSTEM- I



# LYMPHATIC SYSTEM- II



# FETAL CIRCULATION



# POSTNATAL CIRCULATION

