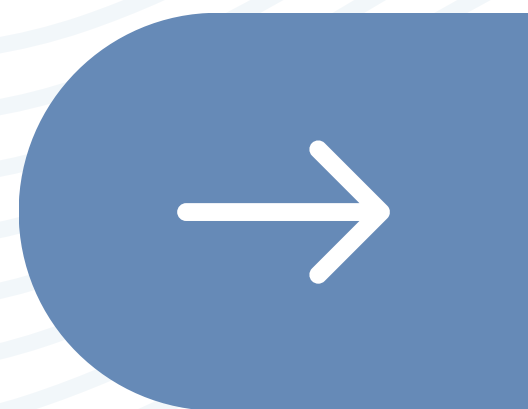


#DIBS BY NEXTILLO

DAILY INFORMATION BULLETIN SERVICE

FETAL CIRCULATION





#DIBSBYNEXTILLO

DAILY INFORMATION BULLETIN SERVICE

FETAL CIRCULATION

Oxygen exchange occurs in *placenta*, 2 *umbilical arteries* carry deoxygenated blood: from fetus to placenta, *Umbilical vein* carries *oxygenated blood*: from placenta to fetus.

- *Adult Heart: Works as series*
- *Fetal heart: Works as parallel*





FETAL CIRCULATION

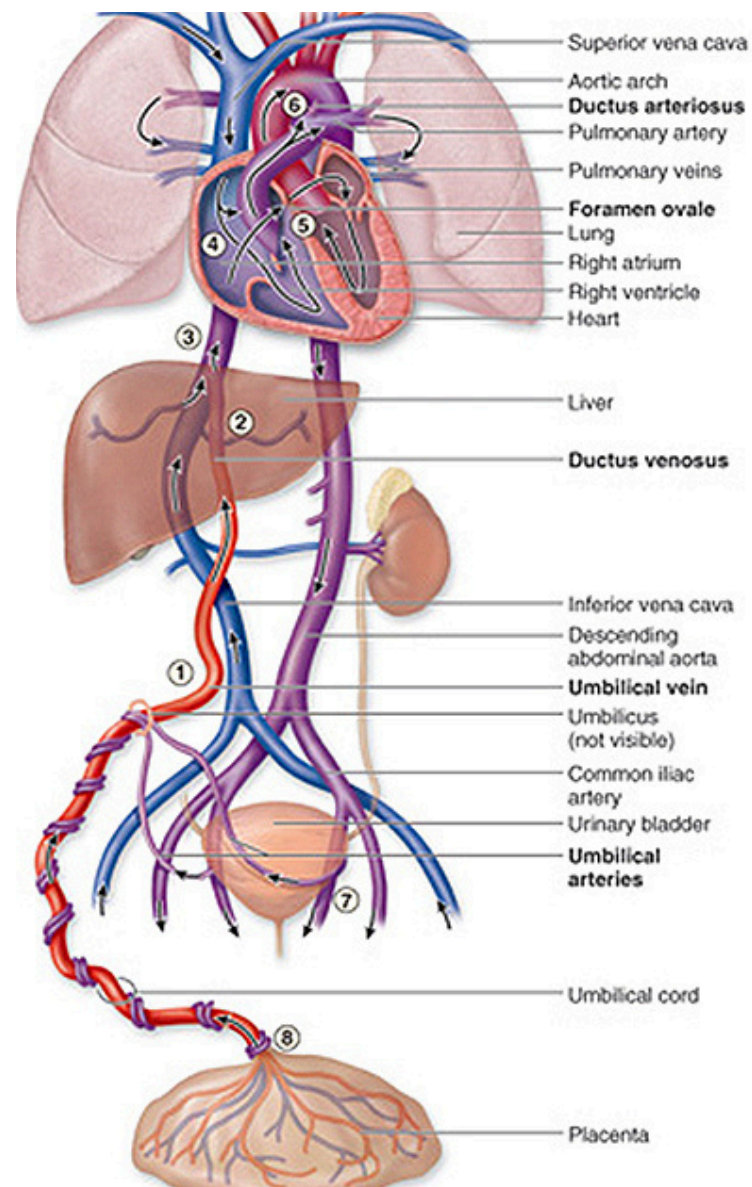
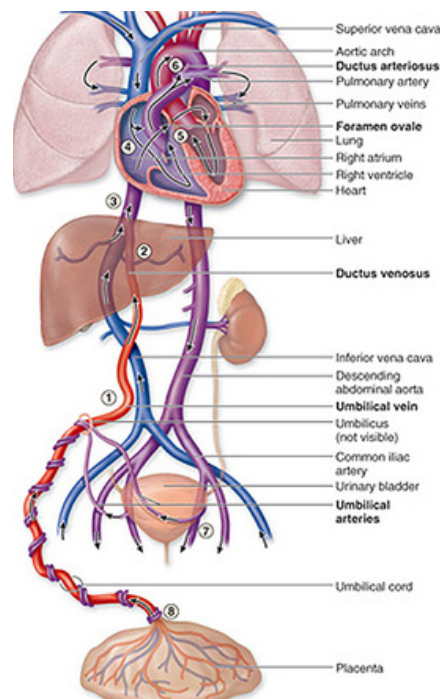




IMAGE DESCRIPTION



- *Ductus arteriosus sends the oxygen-poor blood to the organs in the lower half of the fetal body.*
- *This allows for the oxygen-poor blood to leave the fetus through the umbilical arteries and get back to the placenta to pick up oxygen.*
- *Since the foramen ovale and ductus arteriosus are normal findings in the fetus, it is impossible to predict whether these connections will close normally after birth in a normal fetal heart.*
- *These two bypass pathways in the fetal circulation make it possible for most fetuses to survive pregnancy even when there are complex heart problems and not be affected until after birth, when these pathways begin to close.*



ADULT CIRCULATION

- ***Deoxygenated Blood from right heart(right ventricle) goes to Lungs via Pulmonary trunk and Artery.***
- ***Then it get oxygenated.***
- ***Oxygenated blood is carried by pulmonary veins to left atrium.***
- ***Then it goes to left ventricle.***
- ***Then by aorta blood is sent to all over the body.***





STRUCTURES WITH THEIR CLOSURES

- ***Ductus venosus's physiological closure occurs in 10 to 96 hours after birth.***
- ***Anatomical closure occurs by 2 to 3 weeks of life.***
- ***Remnant is ligamentum venosum.***
- ***Ductus arteriosus's physiological closure occurs in 10 to 15hrs after birth.***
- ***Anatomical closure occurs by 15-21 days(can be 3 months also).***
- ***Remnant is ligamentum arteriosus.***
- ***Foramen ovale's physiological closure occurs at birth.***
- ***Anatomical closure occurs within 1 year.***
- ***Remnant is fossa ovalis.***





PATENT DUCTUS ARTERIOSUS

- ***Patent (open) ductus arteriosus and patent foramen ovale each characterize about 8% of congenital heart defects.***
- ***Drug of choice for patent ductus arteriosus is Indomethacin.***
- ***Surgical correction now available, ideally completed around age two.***





MCQ

Question:

All of the following pairs for adult derivatives of embryonal structures is correct, except?

- A) Umbilical Artery : Lateral umbilical ligaments*
- B) Umbilical Vein : Ligamentum teres*
- C) Ductus Venosus : Ligamentum venosus*
- D) Foramen Ovale : Fossa Ovalis*

Ans A) Umbilical Artery : Lateral umbilical ligaments

