

Development of Fetal Circulation

- First blood cells arise in the yolk sac
- By the end of the third week
 - Embryo has a system of paired vessels
 - Vessels forming the heart have fused

Development of Fetal Circulation

- Unique vascular modifications
 - Umbilical arteries and umbilical vein
 - Three vascular shunts
- All are occluded at birth

Development of Fetal Circulation

- Vascular shunts
 - Ductus venosus: bypasses liver (umbilical vein → ductus venosus → IVC)
 - Foramen ovale: opening in interatrial septum; bypasses
 - pulmonary circulation

Useful website:

www.cayuga-cc.edu/people/web_pages/greer/.../heart4.html - [Cached](#) - [Similar](#)