

HD-3: Development of the Cardiovascular System I

Learning objectives

1. Understand the formation of the primitive heart tube.
2. Understand the progression of cardiac development from the primitive heart tube to septation of the atria and ventricles and formation of the atrioventricular valves.
3. Know the derivation of the great vessels and semilunar valves.
4. Understand the components that comprise the ventricular septum.
5. Be able to discuss the origin of some well known cardiac malformations.

Glossary

Aortocopulmonary septum: the portion of the conotruncal septum that divides the truncus arteriosus into the ascending aorta and the pulmonary trunk.

Atrioventricular valves: the tricuspid and mitral valves.

Bulbar ridges: another name for the truncoconal ridges or conus swelling that ultimately separate the conotruncal outflow tract.

Conotruncal septum: the septum that divides the conus cordis into the outflow tracts (infundibulum of the right ventricle and aortic vestibule) as well as the truncus arteriosus into the aorta and pulmonary artery.

Membranous interventricular septum: outgrowth of tissue from the inferior endocardial cushion, which fuses with the conus swellings and closes the foramen between the right and left ventricles.

Semilunar valves: the aortic and pulmonary valves.

Recommended Reading

Larsen, Human Embryology 3rd Edition: Page 157-187.