

Ventricular septal defects are heart defects that are present at birth (congenital). The normal heart has four chambers. The two upper chambers, known as atria, are separated from each other by a fibrous partition known as the atrial septum. The two lower chambers are known as ventricles and are separated from each other by the ventricular septum. Valves connect the atria (left and right) to their respective ventricles. The aorta, the main vessel of arterial circulation, carries blood from the left ventricle and away from the heart. The exact cause of VSDs is not known. These defects probably occur as the result of errors in the development of an embryo. During the early part of fetal development there is no wall (septum) to separate the left and right ventricles. As the fetus grows, so does a muscular wall that splits the lower chamber into two ventricles. If the muscle does not form a solid wall, a hole remains and is what is called the ventricular septal defect. The why and how of these developmental errors is not fully understood. However, research suggests that they may occur as the result of the complex interaction of many factors, both genetic and environmental (multifactorial).