

## About the Heart -> Septal Defects

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Sometimes a baby is born with a hole in the septum. (The septum is the wall that separates the left and right sides of the heart). This defect is sometimes referred to as a "hole in the heart". A defect may be between the two upper chambers or atria ([atria septal defect](#), see [figure](#)) or between the two lower chambers or ventricles ([ventricular septal defect](#), see [figure](#)). Sometimes, both upper and lower chambers are involved.

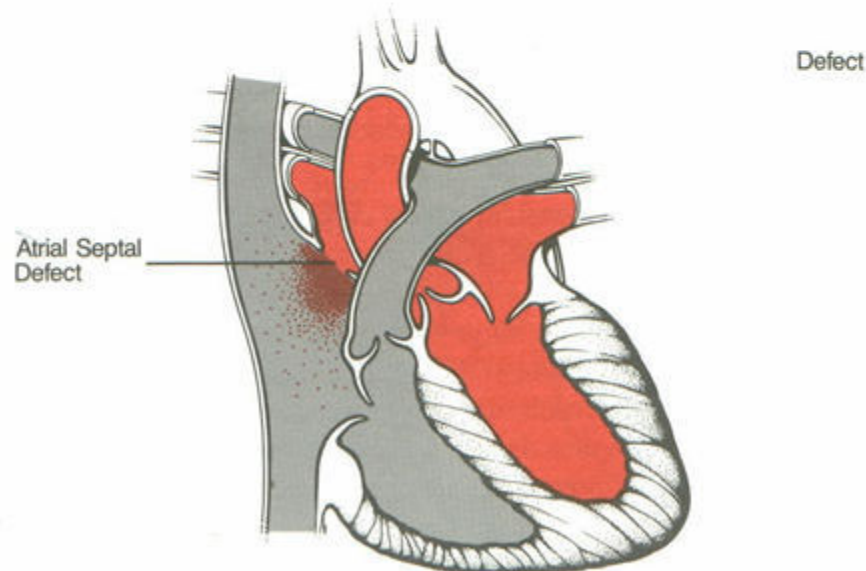
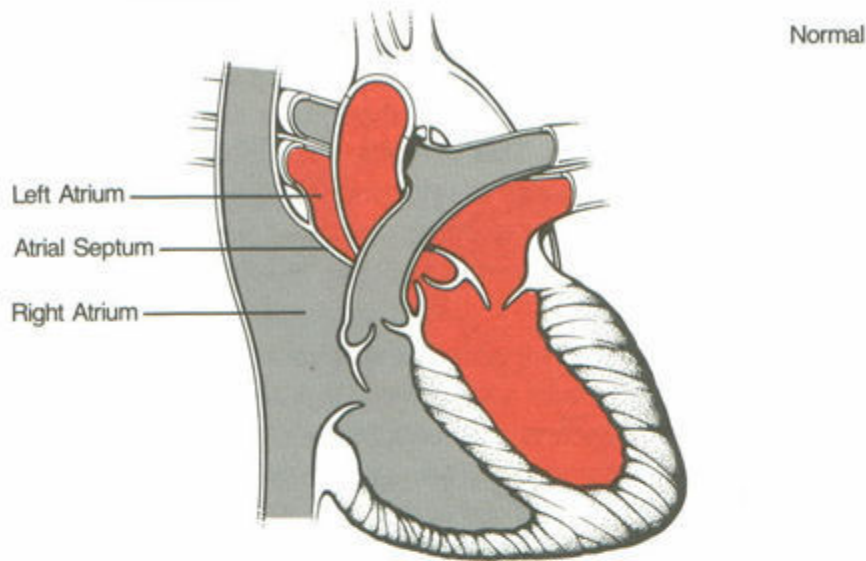
If a septal defect is small it doesn't hurt the heart. In that case, the only abnormal finding is a heart murmur. This type of murmur is different than an "innocent murmur" because it indicates something is different about the heart. Closing these small defects with surgery is usually not needed. In fact, they often close on their own.

When there is a large defect, a significant amount of oxygen-rich (red) blood from the left side of the heart flows into the right side and is then pumped back to the lungs. This causes an extra load on the heart and lungs.

In this situation the heart may become over-worked and enlarged. If untreated the extra work causes the heart muscle to tire and over time it may fail. Closing the defect by open-heart surgery in childhood usually prevents serious problems later in life.

### **Atrial Septal Defects (ASD)**

Many children with atrial septal defects have few, if any, symptoms. A small hole does not allow enough blood to pass through to cause a child any problems. If the opening remains large, open-heart surgery, or non-surgical closure, is recommended to prevent serious problems. The long-term outlook for a corrected atrial septal defect is excellent.



### Ventricular Septal Defects (VSD)

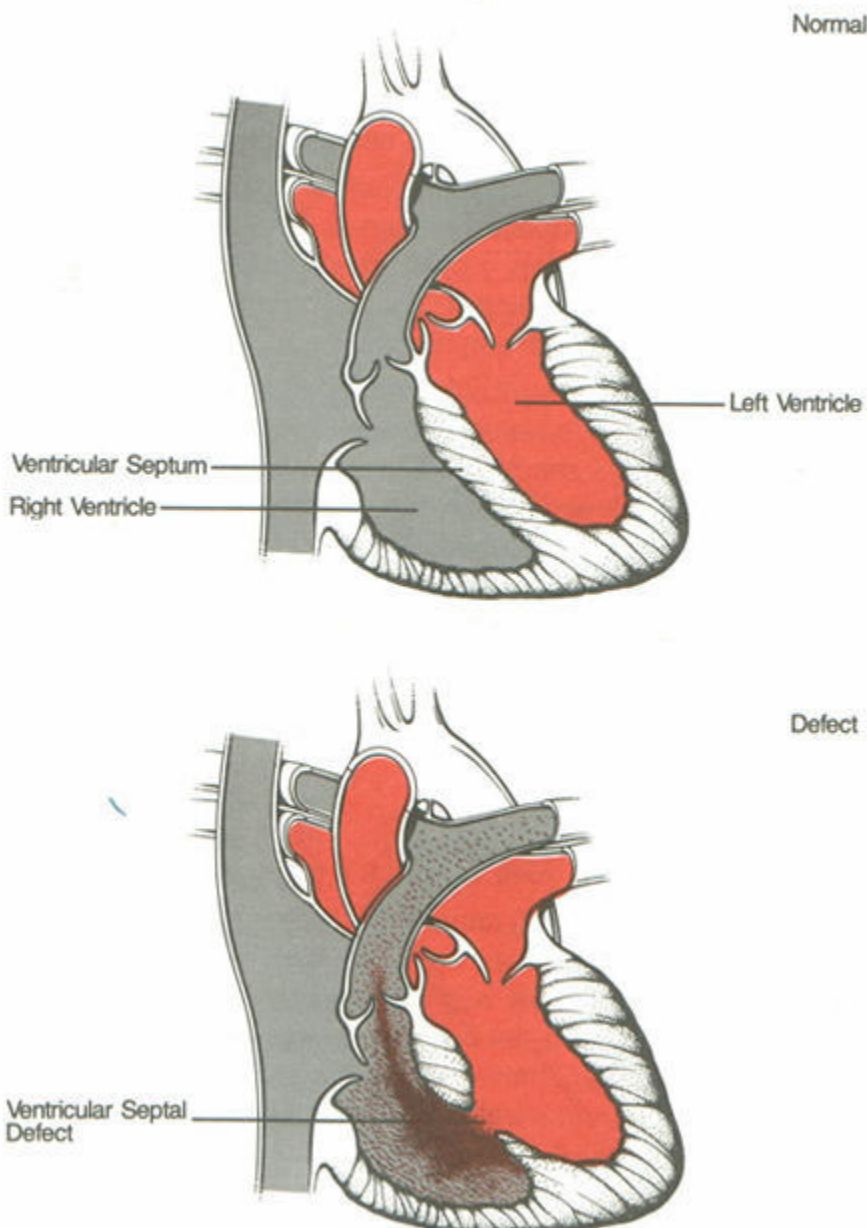
Symptoms of a ventricular septal defect may not occur until several weeks after birth. Some babies with a large ventricular septal defect don't grow normally and may become undernourished. Babies with VSD may also develop respiratory symptoms (grunting or rapid breathing) due to an increased workload on the heart and lungs. Over time, this may cause permanent damage to vessels in the lungs.

Closing a large VSD by open-heart surgery usually is done in infancy or early childhood even in patients with few symptoms. If completed before permanent damage has occurred to the lungs, correction of a VSD prevents later complications. Early repair is often necessary, but may be delayed in some babies for other reasons.

When a VSD is large enough for surgery, it usually requires a cloth patch sewn over it to close it completely. The patch is eventually covered by the normal heart lining tissue and becomes a permanent part of the heart.

Repairing a VSD with surgery usually restores the blood circulation to normal. Patients do very well in the long term. After surgery a child must be examined regularly by a pediatric cardiologist to make sure that the heart is working normally.

Children with a VSD risk getting an infection of the heart's walls or valves (endocarditis). To prevent this, a child should take antibiotics such as amoxicillin before dental work and certain surgeries. After a VSD has been successfully repaired with surgery, your child may no longer need these antibiotics. Good dental hygiene also helps lower the risk of endocarditis. For more information about dental hygiene and preventing endocarditis, ask your pediatric cardiologist.



Figures and Text Adapted from "If Your Child has a Congenital Heart Defect" by the American Heart Association



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