

Ventricular Septal Defect

When there's a large opening between the ventricles, a large amount of oxygen-rich (red) blood from the heart's left side is forced through the defect to the right side. Then it's pumped back to the lungs, even though it's already been refreshed with oxygen. This is inefficient, since the blood that's already been to the lungs is returning there, and blood that needs to go to the lungs is being displaced. The heart, which has to pump an extra amount of blood, is overworked and may enlarge.

Symptoms may not occur until several weeks after birth. Some babies with a large ventricular septal defect don't grow normally and may become undernourished. High pressure may occur in blood vessels in the lungs because there's more blood there. Over time this pressure may cause permanent damage to the wall of the vessels.

If the opening is small, it doesn't strain the heart. In that case, the only abnormal finding is a loud murmur. Closing these small defects with surgery may not be needed. In fact, they often close on their own. But if the opening is large, open-heart surgery is recommended to close it and prevent serious problems.

Babies with ventricular septal defect may develop severe symptoms or high blood pressure in the lungs. Early repair is often necessary. The repair may be delayed in other babies. Closing a large septal defect by open-heart surgery usually is done in infancy or childhood even in patients with few symptoms. Doing so

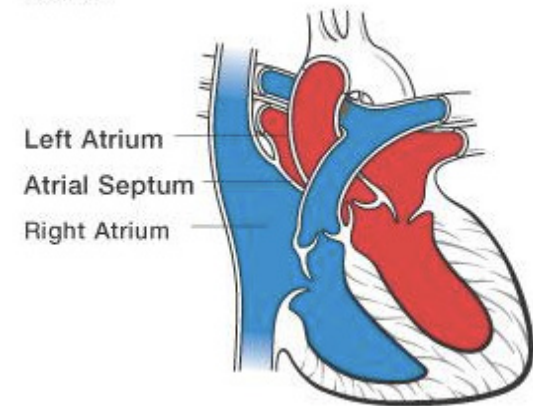
prevents complications later. Usually the defect is so large that a cloth patch is sewn over it to close it completely. Later this patch is covered by the normal heart lining tissue and becomes a permanent part of the heart. Some defects can be sewn closed without a patch.

If an infant is very ill and has more than one defect or a defect in an unusual location, an operation may relieve the severe symptoms of high pressure in the lungs. This procedure (pulmonary artery banding) narrows the pulmonary artery to reduce the blood flow to the lungs. This lets the child grow. When the child is older, doctors can remove the band and fix the defect with open-heart surgery.

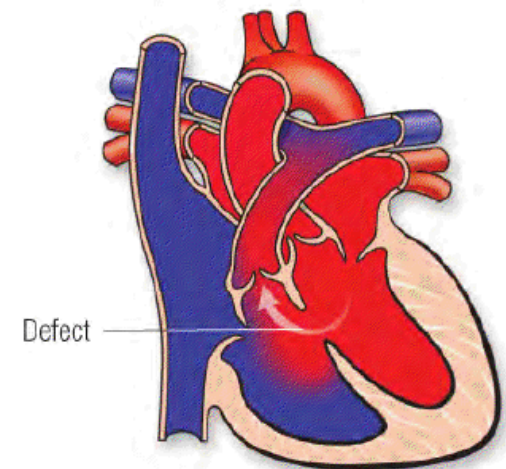
Repairing a ventricular septal defect with surgery usually restores the blood circulation to normal. The long-term outlook is good. After surgery a child must be examined regularly by a pediatric cardiologist. The cardiologist will make sure that the heart is working normally.

Children with a ventricular septal defect risk getting an infection of the heart's walls or valves. This is called endocarditis. To prevent this, a child should get antibiotics such as amoxicillin before dental work and certain surgeries. After successful repair of the ventricular septal defect, your child may no longer need antibiotics. Good dental hygiene also helps lower the risk of endocarditis. For more information about endocarditis, ask your pediatric cardiologist.

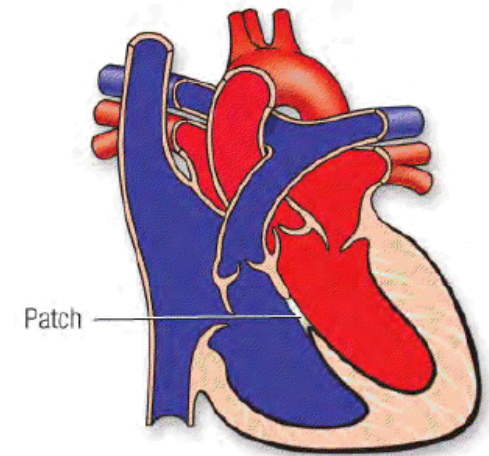
Normal



Ventricular Septal Defect



Closure by Patch



Ventricular Septal
Defect
(VSD)