

What is a Ventricular Septal Defect?

A Ventricular Septal Defect is often abbreviated as "VSD" and means that there is a hole between the two pumping chambers of the heart (ventricles). This allows a certain amount of blood to flow from the left ventricle across the hole to the right ventricle and out to the lungs. This causes the heart to work harder than normal. Most of the time these holes are quite small and over a period of time will close up completely on their own. About five percent of the time they will need surgical closure.

These holes come in three sizes - small, medium and large. The small ones seldom cause any problems unless it is too close to the aortic valve and never require any medication to help the heart. Medium size holes sometimes require medication (like Digoxin, Lasix or Captopril) and occasionally require surgery. The large ones always require medication and usually require surgery.

We are not certain what cause holes in the heart (VSD5). The heart is completely formed by the eighth week of the pregnancy (this is because it has to supply blood to the rest of the fetus). The wall between the ventricles is formed by the joining of four pieces of tissue that must come together. What usually happens is that for some reason one of the pieces doesn't arrive on time and a small gap is created. Most of the time a VSD is the only thing wrong with the heart. Sometimes it can be associated with other problems such as other holes or narrowed valves. On occasion there may be syndromes that are associated with VSDs and very rarely these may run in families. VSDs are never associated with any kind of birth trauma or illnesses the mother may have had toward the end of the pregnancy.

Medium and large size VSDs can cause heart failure. This doesn't mean that the heart stops but rather that it is not able to handle the extra work that having a hole causes. When this happens we are able to give your child medication that will help the heart to work more efficiently. We find that children with large VSD5 don't grow as well as children with normal hearts. This is because energy or calories that would be used for growth have to be used for extra work of the heart. These children are also more prone to develop pneumonia and colds.

Many times by giving medication early in life we can avoid needing to do surgery later, as often times the hole will get smaller as the child becomes bigger. When surgery is required it is usually done between three months and three years of age. Fortunately, after surgery these children usually catch up in growth. We sometimes need to surgically close VSDs because they can cause the pressures in the lungs to be too high and potentially damage the lungs. Rarely small VSDs need to be closed to prevent damage to the Aortic valve.

Children with VSDs are at a higher risk of developing an infection of the heart. This can be a serious and life threatening condition. For this reason they should take Amoxicillin whenever they go to the Dentist or have any kind of surgery.

If you have any questions please ask one of the doctors.

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