

Specific Congenital Heart Defects

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Annotation: Since the rate of Congenital Heart Defects is increasing rapidly nowadays, it is significant to properly promote it to people and show them how to avoid the things that cause this disease. This article also shows a general understanding of this disease, its types and despite patients who have been suffering from this illness, face various other heart and immune system related diseases, it will present several ways to treat CHD properly and explain why these provided ways are more efficient. Moreover, there are some statistical rates of this widely known defect around the world observed in previous decades with undesirable symptoms and consequences as well. To illustrate detailed article, we have chosen only two most occurred Congenital Heart **Defects:** Atrial Septal Defect (1 in every 769) and Ventricular Septal Defect (1 in every 240 babies born in the United States each year).

Key words: high blood pressure, influential factors, signs and symptoms, health care provider, gene and chromosomes.

Congenital Heart Defects is a heart disease caused by poor blood circulation. The heart cannot efficiently pump blood, so the circulation of oxygen and nutrients in the body is disturbed, resulting in blood stagnation. In addition, heart failure can cause coronary heart disease, lung disease, myocarditis, rheumatism and arterial hypertension. And to begin with the first defect that millions of babies born with -is Atrial Septal Defect.

In this defect of heart there is usually a hole in the wall that divides the upper chambers (atria) of the heart. A hole can vary in size and may close on its own or may require surgery. An atrial

septal defect is one type of congenital heart defect which means present at birth. The hole increases the amount of blood that flows through the lungs and over time, it may cause damage to the blood vessels in the lungs. This damage to the blood vessels in the lungs may lead to problems in later life, such as high blood pressure in the lungs and heart failure. Some other lead problems can include abnormal heartbeat, and increased risk of stroke.

Occurrence of it according to a study in Atlanta, the Centers for Disease Control and Prevention (CDC) estimated that 12 to 13 of every 10,000 babies born had an atrial septal defect. This means about 5,240 babies are born each year in the United States of America with an atrial septal defect. In other words, about 1 in every 769 babies born in the United States each year are born with this defect of heart.

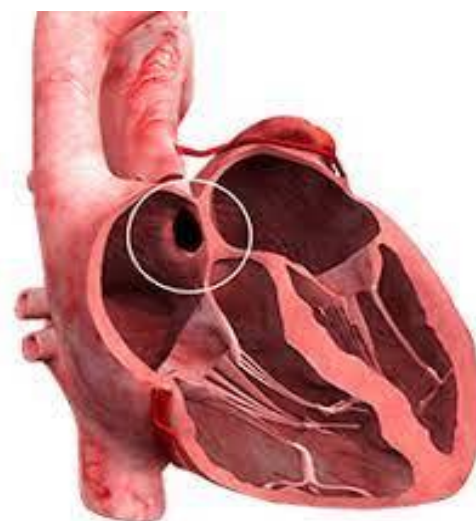
To prevent a baby or avoid atrial septal defect humans should have a basic knowledge about the causes and factors that can lead to. It not acceptable that the exact causes of ASD among most babies are unknown. Some babies have heart defects because of unmanageable changes in their *genes* or chromosomes *which means it can be inherited from their parents*. These type of heart defect also are considered to be caused by a combination of genes and several other influential factors, such as things the mother comes in contact with in the environment or what the mother eats or drinks or the medicines that are used. In short, expectant should be more careful at the period of gestation. One more feature of this disease is the way it is diagnosed: In many cases it may not be diagnosed until adulthood.

During pregnancy to check for birth defects and other conditions, , there are screening tests (prenatal tests). An atrial septal defect might be seen during an ultrasound (which creates pictures of the body), but it depends on the size of the hole and its location. If an atrial septal defect is suspected, a specialist will need to confirm the diagnosis.

There are also some symptoms and signs of atrial septal defect: An atrial septal defect is present at birth, but many babies do not have any signs or symptoms. Signs and symptoms of a large or untreated atrial septal defect may include the following:

- Frequent respiratory or lung infections
- Difficulty breathing
- Tiring when feeding (infants)
- Shortness of breath when being active or exercising
- Skipped heartbeats or a sense of feeling the heartbeat
- A heart murmur, or a whooshing sound that can be heard with a stethoscope
- Swelling of legs, feet, or stomach area
- Stroke

It is possible that an atrial septal defect might not be diagnosed until adulthood. One of the most common ways an atrial septal defect is found is by detecting a murmur when listening to a person's heart with a stethoscope. If a murmur is heard or other signs or symptoms are present, the health care provider might request one or more tests to confirm the diagnosis. The most common test is - an *echocardiogram* which is an ultrasound of the heart.



When it comes to the way that atrial septal defect is treated, there are some essential factors that should be considered. It depends on the age of a patient diagnosed, the number of or seriousness of symptoms, size of the hole, and presence of other conditions. In some cases, surgery can be only way to repair the hole. Sometimes medications are prescribed to help treat symptoms. Nevertheless, there are no known medications that can repair the hole.

The period in which some medicine can be given by health care provider is after the symptoms are diagnosed and in that period he should monitor for a while if the hole of upper chambers it closes on its own. A health care provider may recommend the atrial septal defect be closed for a child with a large atrial septal defect, even if there are few symptoms, to prevent problems later in life. Closure may also be recommended for an adult who has many or severe symptoms. Closure of the hole may be done during *cardiac catheterization* or *open-heart surgery*. After these procedures, follow-up care will depend on the size of the defect, person's age, and whether the person has other birth defect.

Turning in to **ventricular septal defect**, is defect has many features in common with the defect we have talked above, it is a type of defect that present at birth and there is a hole on the wall of lower chambers of a heart which also called as ventricular septum. The precise answer to the question What a Ventricular Septal Defect is that it happens during pregnancy if the wall that forms between the two ventricles does not fully develop, leaving a hole. A ventricular septal defect is one type of congenital heart defect. In a baby without a congenital heart defect, the right side of the heart pumps oxygen-poor blood from the heart to the lungs, and the left side of the heart pumps oxygen-rich blood to the rest of the body. In babies with a ventricular septal defect, blood often flows from the left ventricle through the ventricular septal defect to the right ventricle and into the lungs. This extra blood being pumped into the lungs forces the heart and lungs to work harder. Over time, if not repaired, this defect can increase the risk for other complications, including heart failure, high blood pressure in the lungs (called pulmonary hypertension), irregular heart rhythms (called arrhythmia), or stroke. It is important to represent that there are some features that makes the defect more challenging: an infant with a ventricular septal defect can have one or more holes in different places of the septum. There are several names for these holes. Some common locations and names are:

1. **Conoventricular** **Ventricular** **Septal** **Defect**
In general, this is a hole where portions of the ventricular septum should meet just below the *pulmonary* and *aortic valves*.
2. **Perimembranous** **Ventricular** **Septal** **Defect**
This is a hole in the upper section of the ventricular septum.
3. **Inlet** **Ventricular** **Septal** **Defect**
This is a hole in the septum near to where the blood enters the ventricles through the tricuspid and mitral valves. This type of ventricular septal defect also might be part of another heart defect called an atrioventricular septal defect (AVSD).
4. **Muscular** **Ventricular** **Septal** **Defect**
This is a hole in the lower, muscular part of the ventricular septum and is the most common type of ventricular septal defect.

According to a study in Atlanta, the Centers for Disease Control and Prevention (CDC) estimated that 42 of every 10,000 babies born had a ventricular septal defect. This means about

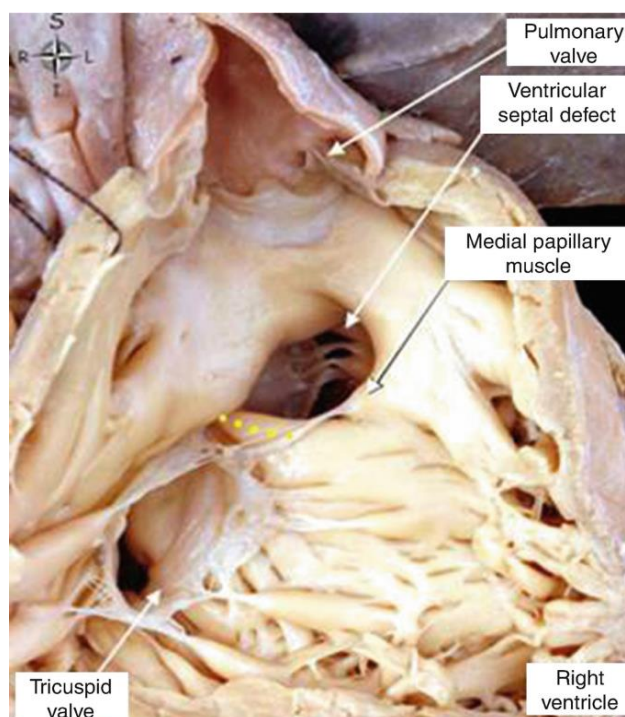
16,800 babies are born each year in the United States with a ventricular septal defect. In other words, about 1 in every 240 babies born in the United States each year are born with a ventricular septal defect and this means some solutions should be taken.

A ventricular septal defect usually is diagnosed after a baby is born.

The size of the ventricular septal defect will influence what symptoms, if any, are present, and whether a doctor hears a heart murmur during a physical examination. Signs of a ventricular septal defect might be present at birth or might not appear until well after birth. If the hole is small, it usually will close on its own and the baby might not show any signs of the defect. However, if the hole is large, the baby might have symptoms, including:

- Shortness of breath,
 - Fast or heavy breathing,
 - Sweating,
 - Tiredness while feeding
 - Poor weight gain
 - Tires easily when eating or playing
 - Is not gaining weight
-
- Becomes breathless when eating or crying
 - Breathes rapidly or is short of breath
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- Shortness of breath
 - Rapid or irregular heartbeat
 - Fatigue or weakness

The size of the hole and the problems it might cause are affecting features to treatments for a ventricular septal defect. Many ventricular septal defects are small and close on their own; if the hole is small and not causing any symptoms, the doctor will check the infant regularly to ensure there are no signs of heart failure and that the hole closes on its own. If the hole does not close on its own or if it is large, further actions might need to be taken. Depending on the size of the hole, symptoms, and general health of the child, the doctor might recommend either cardiac catheterization or open-heart surgery to close the hole and restore normal blood flow. After surgery, the doctor will set up regular follow-up visits to make sure that the ventricular septal defect remains closed. Most children who have a ventricular septal defect that closes (either on its own or with surgery) live healthy lives.



Risk factors for ventricular septal defect include:

- Premature birth
- Down syndrome and other genetic conditions
- Family history of heart problems present at birth (congenital heart defects)

A baby born with ventricular septal defect may have other heart problems, such as:

- Coarctation of the aorta
- Double outlet syndrome
- Patent ductus arteriosus
- Tetralogy of Fallot

If you already have a child with a congenital heart defect, a genetic counselor can discuss the risk of your next child having one.

Some children will need medicines to help strengthen the heart muscle, lower their blood pressure, and help the body get rid of extra fluid. Some babies with a ventricular septal defect become tired while feeding and do not eat enough to gain weight. To make sure babies have a healthy weight gain, a special high-calorie formula might be prescribed. Some babies become extremely tired while feeding and might need to be fed through a feeding tube.

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