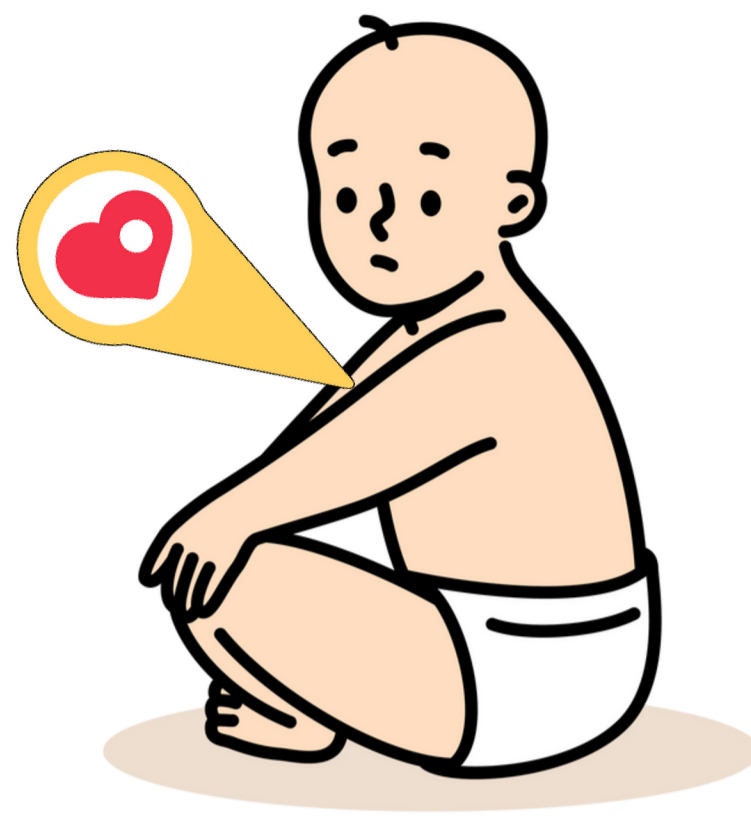


what is Congenital Heart Disease



Definition:

Congenital heart disease (CHD) means you were born with a problem (defect) in your heart. A heart defect is a change in the heart's structure that happens before birth.

Heart defects are most often diagnosed before or soon after birth but can go undetected into adulthood. A heart defect can be mild or serious; some patients may not need any treatment, while others need surgery or other procedures soon after birth and possibly throughout life.

Thanks to advancements in medical care, most Canadians with CHD now live well into adulthood, and more and more into old age.

Symptoms:

- Getting out of breath easily during exercise
- Feeling very tired during exercise or activity
- Fainting during exercise
- A bluish tinge to fingers, toes, lips, and around the eyes
- Swelling in the hands, ankles, or feet

Causes of CHD

Often, the exact cause is unknown. However, certain factors in a mother's early pregnancy may increase the risk of heart defects:

- Having rubella (German measles)
- Diabetes
- Some medications
- Alcohol use
- Smoking
- Genetics (family history)

Common Types of CHD:

heart.org

AORTIC VALVE STENOSIS (AVS)

- A valve from the heart to the body that does not properly open and close and may also leak blood. When the blood flowing out from the heart is trapped by a poorly working valve, pressure may build up inside the heart and cause damage.

ATRIAL SEPTAL DEFECT (ASD)

- A "hole" in the wall that separates the top two chambers of the heart. This defect allows oxygen-rich blood to leak into the oxygen-poor blood chambers in the heart. ASD is a defect in the septum between the heart's two upper chambers (atria). The septum is a wall that separates the heart's left and right sides.

COARCTATION OF THE AORTA (COA)

- A narrowing of the major artery (the aorta) that carries blood to the body. This narrowing affects blood flow where the arteries branch out to carry blood along separate vessels to the upper and lower parts of the body. CoA can cause high blood pressure or heart damage.

D-TRANSPOSITION OF THE GREAT ARTERIES

- A heart in which the two main arteries carrying blood away from the heart are reversed. A normal blood pattern carries blood in a cycle: body-heart-lungs-heart-body. When a d-transposition occurs, the blood pathway is impaired because the two arteries are connecting to the wrong chambers in the heart. Without surgery, the only way to survive this condition temporarily is to have leakages that allow some oxygen-rich blood to cross into the oxygen-poor blood for delivery to the body. A hospital facility can also catheterize a patient until corrective surgery can be performed.

EBSTEIN'S ANOMALY

- A malformed heart valve that does not properly close to keep the blood flow moving in the right direction. Blood may leak back from the lower to upper chambers on the right side of the heart. This syndrome also is commonly seen with ASD (or a hole in the wall dividing the two upper chambers of the heart).

I-TRANSPOSITION OF THE GREAT ARTERIES

- A heart in which the lower section is fully reversed. This malformation of the heart causes a reversal in the normal blood flow pattern because the right and left lower chambers of the heart are reversed. The I-transposition, however, is less dangerous than a d-transposition because the great arteries are also reversed. This "double reversal" allows the body to still receive oxygen-rich blood and the lungs to still receive the oxygen-poor blood.

PATENT DUCTUS ARTERIOSIS (PDA)

- An unclosed hole in the aorta. Before a baby is born, the fetus's blood does not need to go to the lungs to get oxygenated. The ductus arteriosus is a hole that allows the blood to skip the circulation to the lungs. However, when the baby is born, the blood must receive oxygen in the lungs and this hole is supposed to close. If the ductus arteriosus is still open (or patent) the blood may skip this necessary step of circulation. The open hole is called the patent ductus arteriosus.

PULMONARY VALVE STENOSIS

- A thickened or fused heart valve that does not fully open. The pulmonary valve allows blood to flow out of the heart, into the pulmonary artery and then to the lungs.

SINGLE VENTRICLE DEFECTS

- Rare disorders affecting one lower chamber of the heart. The chamber may be smaller, underdeveloped, or missing a valve.

TETRALOGY OF FALLOT

A heart defect that features four problems. They are:

- A hole between the lower chambers of the heart
- An obstruction from the heart to the lungs
- The aorta (blood vessel) lies over the hole in the lower chambers
- The muscle surrounding the lower right chamber becomes overly thickened

People with unrepaired tetralogy of Fallot are often blue due to a lack of oxygen to the lungs. Tetralogy of Fallot is treated surgically, and further surgeries may be necessary later on.

TRUNCUS ARTERIOSUS

- When a person has one large artery instead of two separate ones to carry blood to the lungs and body. In a normal heart, the blood follows this cycle: body-heart-lungs-heart-body. In truncus arteriosus, the blood leaving the heart does not follow this path. It has only one vessel, instead of two separate ones for the lungs and body. With only one artery, there is no specific path to the lungs for oxygen before returning to the heart to deliver oxygen to the body.

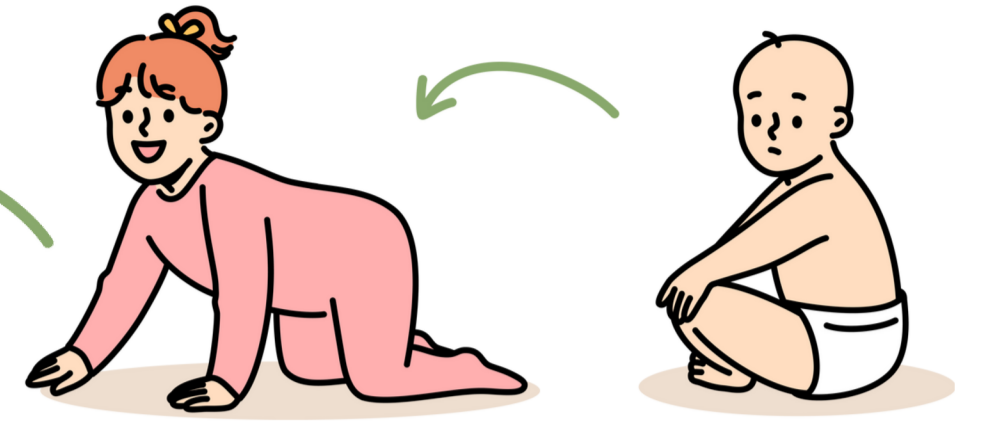
VENTRICULAR SEPTAL DEFECT (VSD)

- VSD is a hole in the wall separating the two lower chambers of the heart. In normal development, the wall between the chambers closes before the fetus is born, so that by birth, oxygen-rich blood is kept from mixing with the oxygen-poor blood. When the hole does not close, it may cause higher pressure in the heart or reduced oxygen to the body.

what is

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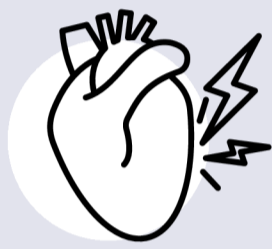


Why is it called Congenital Heart Disease?

Having a heart defect from birth can affect the whole body and mind over time. This is why doctors often call it a “disease” rather than just a “defect.”

Possible complications include:

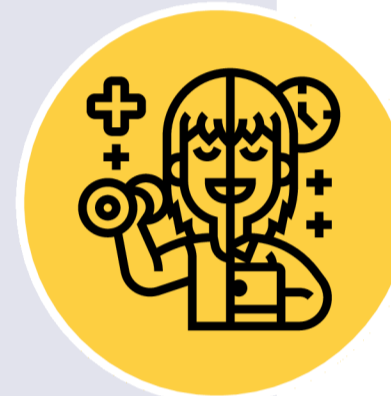
- **Heart Failure:** Fluid builds up in the lungs or other parts of the body, causing shortness of breath and swelling
- **Endocarditis:** An infection of the lining of the heart and valves
- **Arrhythmias** (irregular heartbeats): Can happen due to scar tissue from surgeries
- **Delayed Growth:** Because the body may not get enough oxygen early in life
- **Stroke:** A blood clot can form in the heart and travel to the brain
- **Mental Health Issues:** Living with a chronic condition can lead to anxiety and/or depression



Treatment

Some mild defects may not need treatment and can get better as a child grows. More serious defects may need:

- Medicines
- Special heart procedures
- Heart surgery
- Heart transplant (in very severe cases)



Living With CHD:

People with CHD need regular checkups, even if they feel well. It is best to see a cardiologist who specializes in congenital heart disease, because they understand how heart defects affect the body differently than common heart problems in adults.

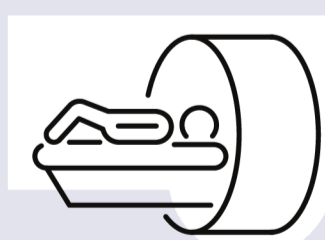
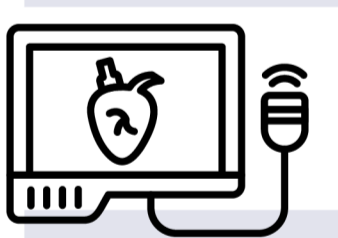
There are specially trained healthcare teams for adults with CHD at 15 centres across Canada (see www.cachnet.org).

These specialists can also give advice on family planning, pregnancy, diet, exercise, and end-of-life care. Many clinics have counsellors or psychologists who can help with the emotional side of living with a long-term heart condition.

Research on women’s health issues, such as how hormones and menopause affect CHD, is still developing. More studies are needed to find the best treatments.

Testing for Diagnosis

- **Pulse oximetry:** Checks if there is enough oxygen in the blood.
- **Electrocardiogram (ECG or EKG):** Shows the heart’s electrical activity and how it beats.
- **Echocardiogram (Echo):** Uses sound waves to make pictures of the heart and see how blood flows.
- **Chest X-ray:** Shows the size of the heart and if there is fluid in the lungs.
- **Cardiac catheterization:** A thin tube is guided through a blood vessel to the heart to check blood flow and heart function.
- **Cardiac MRI:** Uses magnets and radio waves to make detailed pictures of the heart.



Additional Online Resources:

- Canadian Adult Congenital Heart Network
- Canadian Congenital Heart Alliance
- Heart & Stroke: Congenital Heart Disease
- Adult Congenital Heart Association (US)
- Zipper Sisters: Women with CHD (Facebook)
- Global Alliance for Rheumatic & Congenital Hearts

Thank you to Shelagh Ross for your knowledge & help. NOTE: These guidelines are compiled as general information. Always speak with your care team. Thank you!



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