

Coarctation of the Aorta (CoA)

What is it?

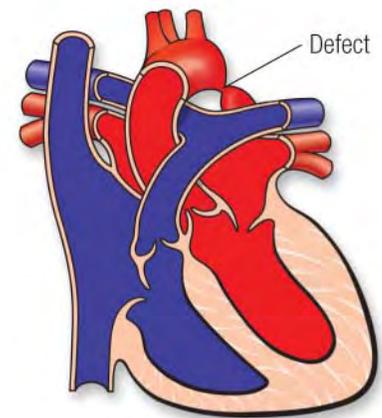
In this condition the aorta (the main artery that carries blood from the heart to the body) is narrowed or constricted.

What causes it?

In most children, the cause isn't known. Some children can have other heart defects along with coarctation.

How does it affect the heart?

Coarctation obstructs blood flow from the heart to the lower part of the body. Blood pressure increases above the constriction. The blood pressure is much higher than normal in the left pumping chamber (left ventricle) and the heart must work harder to pump blood through the constriction in the aorta. This can cause thickening (hypertrophy) and damage to the overworked heart muscle.



How does the coarctation affect my child?

Usually no symptoms exist at birth, but they can develop as early as the first week after birth. A baby may develop congestive heart failure or high blood pressure.

If the obstruction is mild, the heart won't be very overworked and symptoms may not occur. In some children and adolescents, coarctation is discovered only after high blood pressure is found.

What can be done about the coarctation?

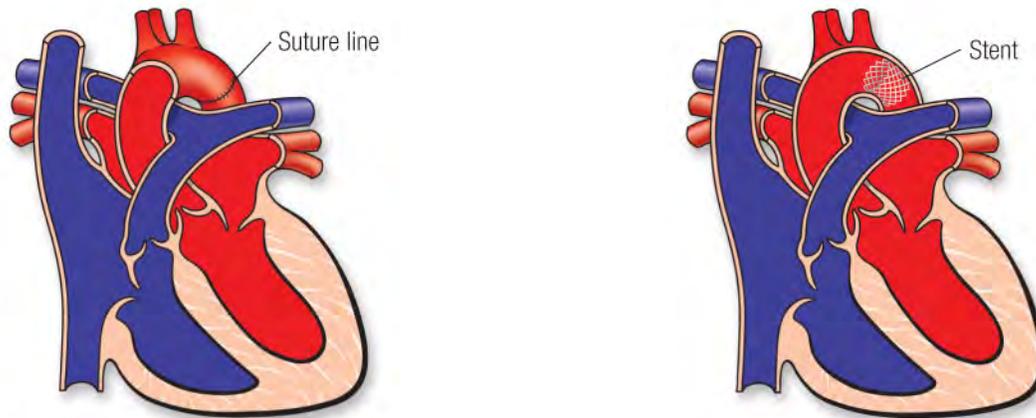
The coarctation obstruction can be relieved using surgery or catheterization.

During cardiac catheterization a special catheter containing a balloon is placed in the constricted area. Then the balloon is inflated for a short time, stretching the constricted area open. The balloon and catheter are then removed.

Surgery is often used to repair coarctation. A surgeon doesn't have to open the heart to repair the coarctation. It can be fixed in several ways. One way is for the surgeon to remove the narrowed segment of aorta. Another option is to sew a patch over the narrowed section using part of the blood vessel to the arm or a graft of synthetic material.

An infant with a severe coarctation should have a procedure to relieve the obstruction. This may relieve heart failure in infancy and prevent problems later, such as developing high blood pressure as an adult because of the coarctation.

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What activities can my child do?

If the coarctation has been repaired, there is no important leftover obstruction or high blood pressure, your child may not need any special precautions regarding physical activity, and may be able to participate in normal activities without increased risk.

Some children with obstruction, hypertension, heart muscle abnormalities or other heart defects may have to limit their physical activity. Check with your child's pediatric cardiologist about this.

What will my child need in the future?

The outlook after surgery is favorable, but long-term follow-up by a pediatric cardiologist is needed. Rarely, coarctation of the aorta may recur. Then another procedure to relieve the obstruction may be needed. Also, blood pressure may stay high even when the aorta's narrowing has been repaired.

What about preventing endocarditis?

Children with coarctation of the aorta may risk developing endocarditis. Your child's cardiologist may recommend that your child receive antibiotics before certain dental procedures for a period of time after coarctation repair.