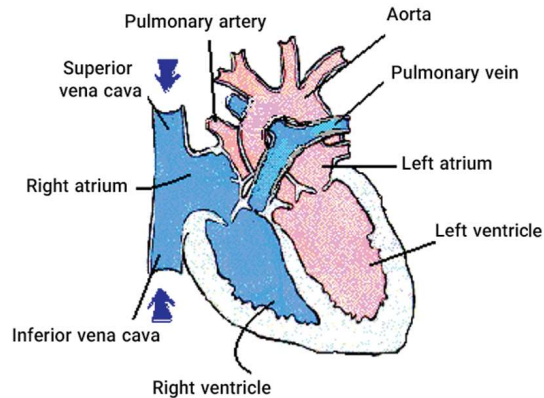


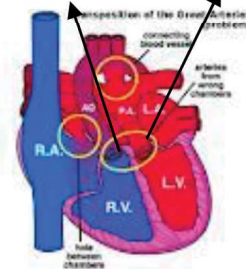
The **heart** is a muscular pump located in the chest that is constantly working and pumping. The heart pumps blood throughout the body round the clock.



The heart is divided into right and left halves by a vertical muscle wall. The right half is related to venous blood and the left half is related to arterial blood. Each of the two right and left halves is again divided into two sub-cavities by a thinner horizontal muscle blade. The upper cavities, which are smaller and thinner, are called atria they receive blood. The lower chambers, which are larger and thicker, are the ventricles of the heart and pump blood to other parts of the body. So the heart consists of four chambers: two small chambers at the top (right and left atria) and two large chambers at the bottom (right and left ventricles).

Large vessel displacement is one of the most common congenital heart defects.

Aortic artery **Pulmonary artery**



In this disorder, the aortic and pulmonary arteries are displaced. In other words, instead of the aortic artery originating in the left ventricle and carrying oxygenated blood throughout the body, it originates in the right ventricle and carries low-oxygenated blood throughout the body, also, instead of carrying hypoxic blood from the right ventricle to the lungs for oxygenation, the pulmonary artery carries oxygenated blood from the left ventricle to the lungs. Therefore, oxygen delivery to the body is not done properly and if there is no other defect in the heart (such as the ventricular or atrial perforation), the baby will be severely bruised in the first hours of his or her birth. However, bruising may become more pronounced or more severe when the arterial canal closes a few days after birth. Factors such as maternal viral diseases during pregnancy (such as rubella), maternal age over 40, diabetes, or alcohol consumption

may play a role in the development of this disorder. It should be noted that in most cases the cause is unknown.

Symptoms:

- * Bruising and low blood oxygen levels.
- * Increase in the number of breaths to compensate for the lack of ox Feeling the sound of blood mixing to the right and left of the chest heart, should there be a hole between the ventricles.

Diagnosing the illness:

- * The presence of bruising at birth, which is not helped by recommended oxygen.
- * Echocardiography, which shows the structure of the heart and the abnormal location of the arteries in a completely painless and non-invasive way.
- * Cardiac angiography may also be needed to identify possible defects more accurately.

treatment:

The primary and immediate focus of treatment is on providing the necessary level of oxygen and maintaining heart and lung function.

In the first stage, after diagnosis, prostaglandin is used to keep the arterial canal open and allow oxygenated and hypoxic blood to mix.

Special balloons that pass through the arteries of the thigh or umbilicus may be used to open the hole between the duodenum and allow the blood to mix and maintain proper blood oxygen levels. It is important to use antibiotics before any treatment to prevent heart infections. As soon as the baby's condition is established, surgery should be performed to correct the defect. The sooner surgery is performed, the better the baby's heart function will be for the future. Often in corrective surgery for this disorder, the left atrium is connected to the right ventricle, where the aortic artery originates. In fact, the surgeon reverses the function of the ventricles so that the oxygenated blood reaches the whole body and the hypoxic blood goes to the lungs and receives oxygen.



Another type of corrective surgery for this disorder is that during an open heart surgery, the pulmonary arteries and aorta are cut and connected to their natural location to function as normal blood vessels in the heart.

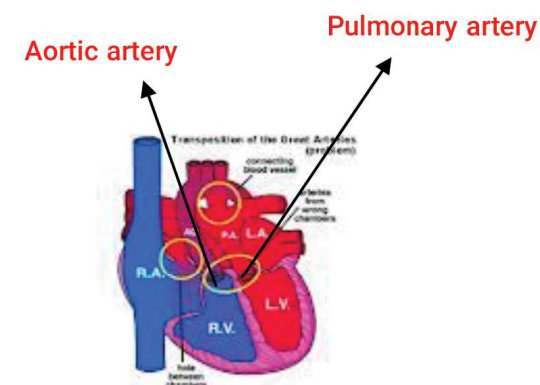
The selection of surgery is made by the surgeon according to the condition of the child and other heart disorders. Surgery for this disorder is considered as a major operation, and the baby has an almost large surgical incision on his chest after the operation. The child is usually transferred to the ward and stays in the hospital for 1 to 2 weeks until the condition of the child is confirmed satisfactory after surgery. During this time, tubes and wires may be attached to your baby's body, which are essential for his or her treatment and will be removed as soon as they are no longer needed and before leaving the hospital. The baby's heart rate is monitored during this time, and if it is irregular and abnormal, a thin device is used to support the thin wires placed at the bottom and side of the surgical wound to create the expected order. These wires will be easily removed before the child is discharged from the hospital. Medications such as lanoxin may be needed after surgery to boost heart function. Your doctor and nurse will advise you on how should the medications be consumed and their possible side effects.

**Do not forget the next visits as recommended
by your doctor**

Pediatric Medical Research and Training Center:
Address: No. 62, Pediatric Medical Center, Next to Imam Khomeini's Hospital, Dr. Mohammad Karib St., at the end of Keshawarz Boulevard, Tehran.
Tel: 02161475
Hospital website: Patient education
<http://chmc.tums.ac.ir>



**Tehran University of Medical Sciences
Pediatric Medical Center
The scientific center of the country's
children**



Large vessel displacement

TGA