

The heart is a muscular pump located in the chest that is constantly working and pumping. The heart pumps blood throughout the body around the clock. The heart is divided into right and left halves by a muscle wall. The right half is related to venous blood and the left half is related to arterial blood. Each of the right and left halves is again divided into two sub-cavities by a thinner muscle valve. The upper cavities, which are smaller and thinner, are called atria and 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.

## Aortic coarctation

The stenosis of the initial part of the descending aorta is called coarctation. This stenosis may occur in any part of the aorta. Therefore, blood flow to the abdomen and lower limbs decreases and instead the amount of flow in the upper limbs increases. Therefore, the heart must work harder to cope with this pressure. This disease is a complex defect and can be associated with other heart problems. Due to the fact that the aorta is the most important artery in the body, stenosis in any part of it can cause fatal complications in the long run, such as heart failure and rupture of the aorta.

## Signs and symptoms

Symptoms depend on the severity of the aortic stenosis.

Severe coarctation may be detected in infancy, but in the mild form of the disease, due to the lack of symptoms, the disease may not be diagnosed even at youth period.

## Symptoms include:

These patients suffer from chest pain

- vertigo
- Headache
- syncope
- nose bleeding
- Heart palpitations and shortness of breath are complained of on clinical examination

- High blood pressure in the upper extremities
- Cold feet and low blood pressure in the lower extremities
- No pulse or weak pulse in the lower extremities
- Peripheral cyanosis (blue on the skin of the lower body due to insufficient oxygen supply)

before any dental or surgical procedure to reduce the risk of endocarditis.



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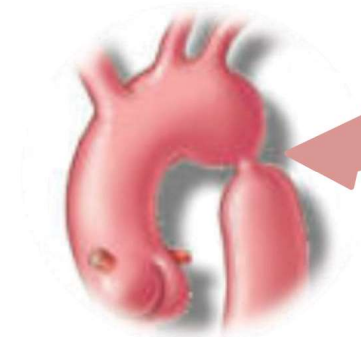
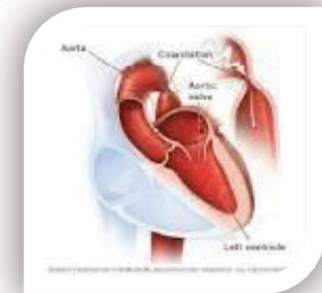
## Treatment and prevention

Aortic coarctation can be treated with invasive non-surgical interventions (stenting). But choosing the right method can be complicated and is based on age and the severity of the stenosis.

The prognosis for patients after surgery is usually good, but long-term medical follow-up is necessary, and the patient may need prophylactic antibiotics



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