

Coarctation of the Aorta

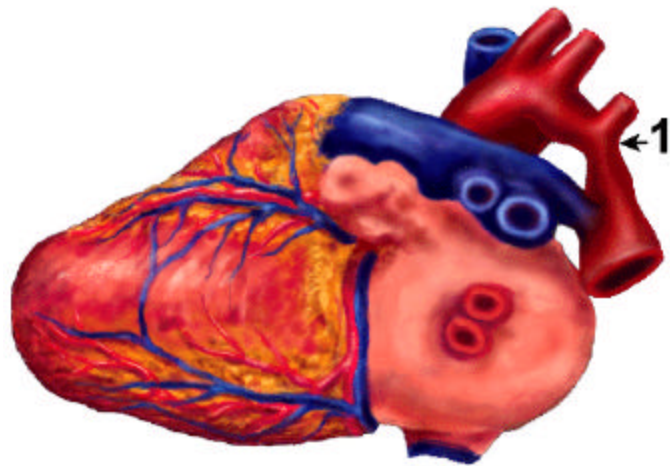
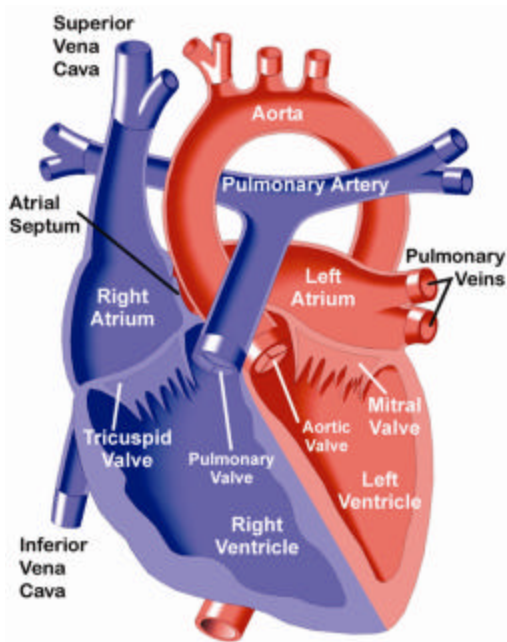
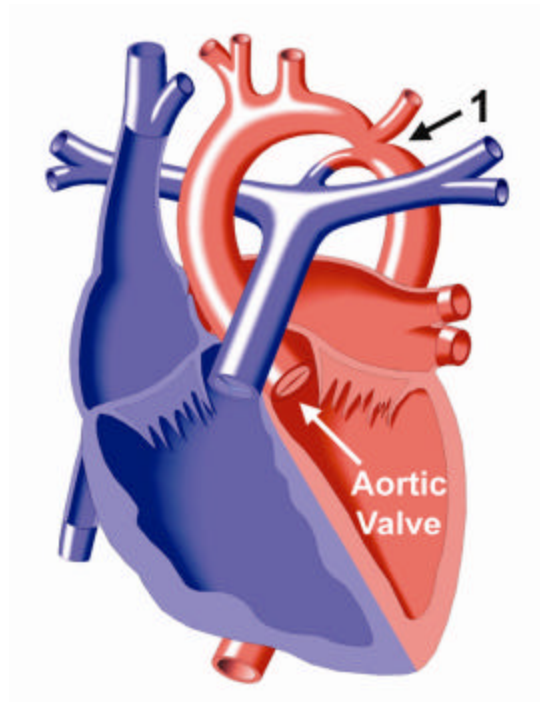
Coarctation of the Aorta is characterized by a blockage (coarctation) in the aorta itself. This may consist of a narrowing of the vessel or a shelf-like obstruction within it.

The coarctation is located on the descending aorta near the heart, usually immediately past the point (further from the heart) where the subclavian artery (SA in the diagram) exits the aorta on its way to the upper body.

In some cases, the aortic valve (AV in the diagram), through which blood enters the aorta from the left ventricle, is abnormally formed in this defect, with only two valve leaflets (termed bicuspid) rather than the usual three.

The obstruction to blood flow caused by the coarctation causes high pressure in the left ventricle (which pumps blood into the aorta) and the part of the aorta between the heart and the blockage (the aortic arch).

While the blood pressure in the upper body becomes high, the blood pressure in the lower body is low because of the reduced blood flow through the aorta. If the obstruction in the aorta is severe, infants will develop severe heart failure after the patent ductus arteriosus (PDA) closes in the first several days after birth. If the problem is not diagnosed promptly, the infant may die.



Above:

1. Coarctation of the Aorta, distal to the left subclavian artery.

Left: Normal Heart