There is an interruption of the main blood vessel leaving the left side of the heart (aorta). The interruption occurs between the innominate artery and the left common carotid artery. The flow of blood from the left side of the heart to the blood vessels of the body is interrupted.

As a result of this interruption, blood flow to the lower body is reduced because it has to move through an open connection between the aorta and the pulmonary artery (patent ductus arteriosus or PDA).

There is also a hole between the bottom two chambers of the heart (ventricular septal defect or VSD). The red blood from the high-pressured left side of the heart goes across the hole to the lower pressured right side. The heart is overworked with the extra blood pumping to the lungs. The lungs can be damaged from the extra supply of blood flowing into them.

The goal of surgery is to reconnect the aorta to allow a smooth flow of blood from the heart to the blood vessels of the body. Most of the time the two parts of the aorta can be sewn together end-to-end. Other times the connection may be made with a patch or part of another blood vessel.

The hole between the bottom two chambers is closed with stitches or, more often, with a patch of material called Dacron®.

The surgery is done through a median sternotomy (chest) incision.