

THE FONTAN PROCEDURE (Stage Three)

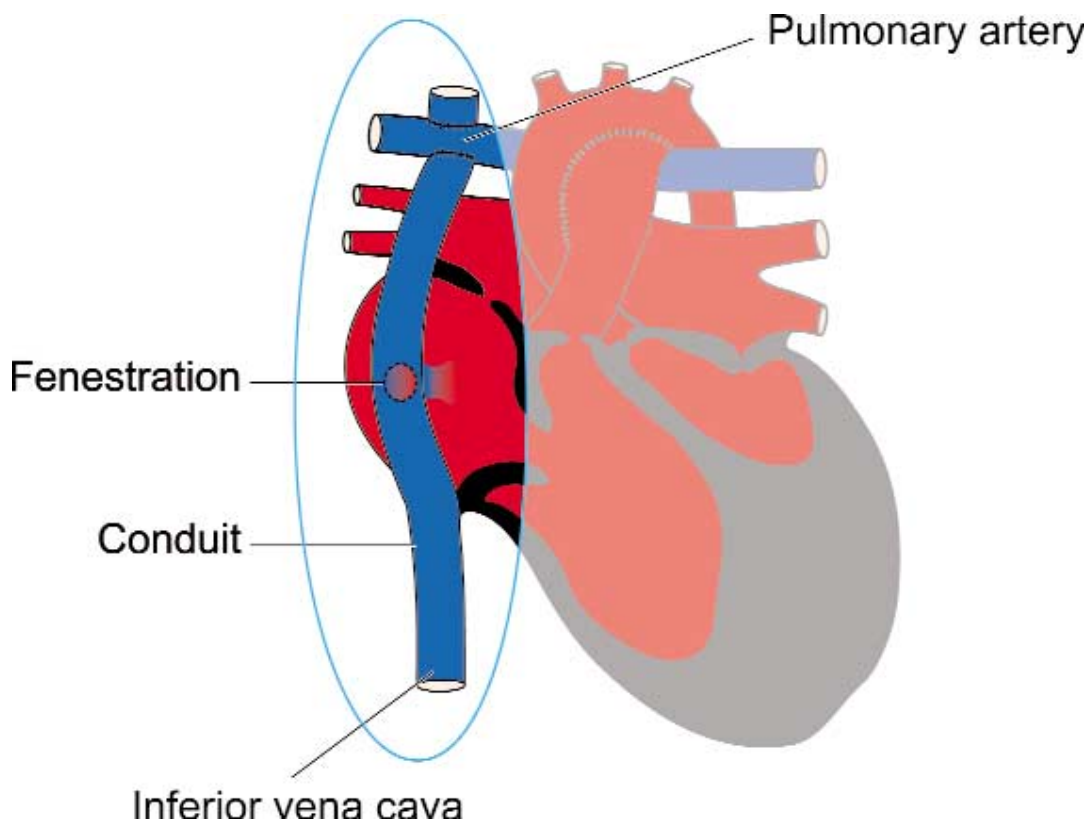
The final stage of surgery will be performed as the child starts to show that they need more blood flow to the lungs. They may become more breathless on exercise or their growth may slow down. For some children this will occur before they start school. Others may be able to wait a little longer.

The Fontan Procedure aims to separate the blue (deoxygenated) blood supply and the red (oxygenated) blood supply. Although this does not make the heart function normal, it does allow the children to grow and enjoy more physical activity. The procedure can be performed in two ways.

Internal Fontan

This is done by creating a wall (baffle) in the right collecting chamber (Right Atrium) and then attaching the chamber to the base of the lung artery (Pulmonary Artery). This may partially have been completed at stage two, the Hemi-Fontan.

All the returning blue (deoxygenated) blood will now be flowing to the lungs, without a pump behind it. This causes an increase in pressure within the lung blood vessels, so, to aid circulation, a small hole (fenestration) may be created in the wall (baffle). This acts as a pressure release valve whilst the child's body adjusts to their new circulation.



External Fontan or External Conduit

This operation is done by attaching a tube of a special plastic (a conduit of Gore-Tex) from the lower body vein (Inferior Vena Cava) to the base of the lung artery (Pulmonary Artery) diverting blue (deoxygenated) blood away from the heart straight to the lungs.

A hole (fenestration) may be created between the tube and the right collecting chamber (Right Atrium). As with the Internal Fontan there can be a rise in pressure in the lung arteries after surgery and the hole acts as a pressure valve.

The child may be in hospital for some weeks after the third operation as it is important to give them time to adjust to their new circulation. For a more detailed understanding of the Fontan procedures and the aftercare needed post-operatively see Lifestyle and Treatment Information Sheets.