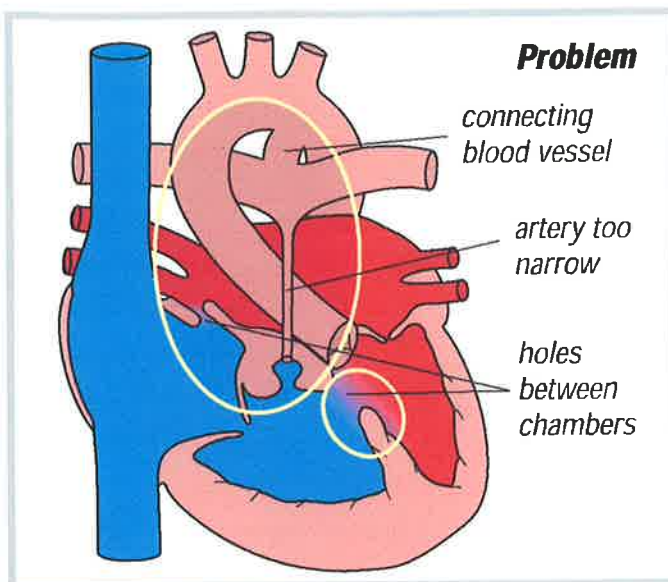


Pulmonary Atresia (PA)

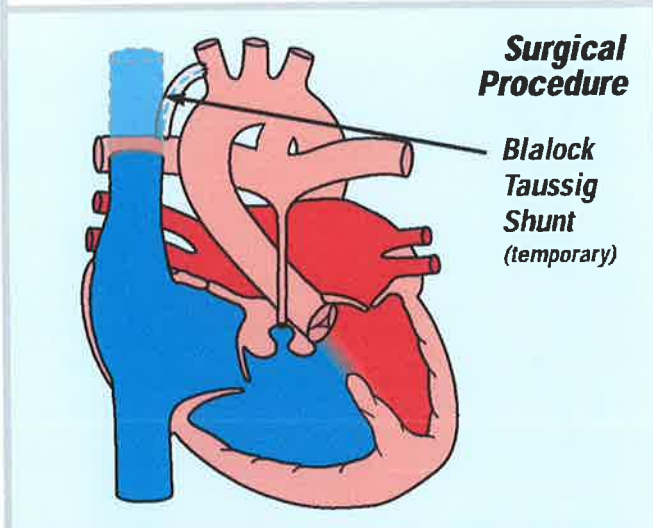
With Ventricular Septal Defect



PA occurs when the pulmonary valve does not develop. The main pulmonary artery is very small. The branch arteries from the main pulmonary artery may be small as well. There is a hole between the bottom two chambers of the heart (ventricular septal defect) and there may be a hole between the top two chambers (atrial septal defect).

There is a connecting blood vessel from the aorta to the pulmonary artery (patent ductus arteriosus—PDA). When the main pulmonary artery and its branches are small, it is hard for blood to get to the lungs to pick up oxygen.

Most of the time, infants with PA have several operations. The first operation is most often the placement of a small tube (shunt) from the aorta or one of its branch vessels to the pulmonary artery branch (Blalock Taussig Shunt). The shunt is put in to give more blood to the lungs so the infant will have more oxygen-rich blood to the body. The shunt is done through a thoracotomy (side) incision. The shunt may be placed on the left, right or both sides of the pulmonary artery branch. The shunt(s) will be removed at the time of the corrective operation when no longer needed.



The corrective surgery is aimed at directing the blood from the bottom right chamber of the heart to the branch arteries going to the lungs. A tube is placed in the bottom right heart chamber and sewn into the branch pulmonary arteries. This tube is often a homograft (human tissue vessel) but can also be from man-made materials. The PDA is removed. The ventricular septal defect and atrial septal defect are closed with a patch or stitches. This surgery is done through a median sternotomy (chest) incision.

