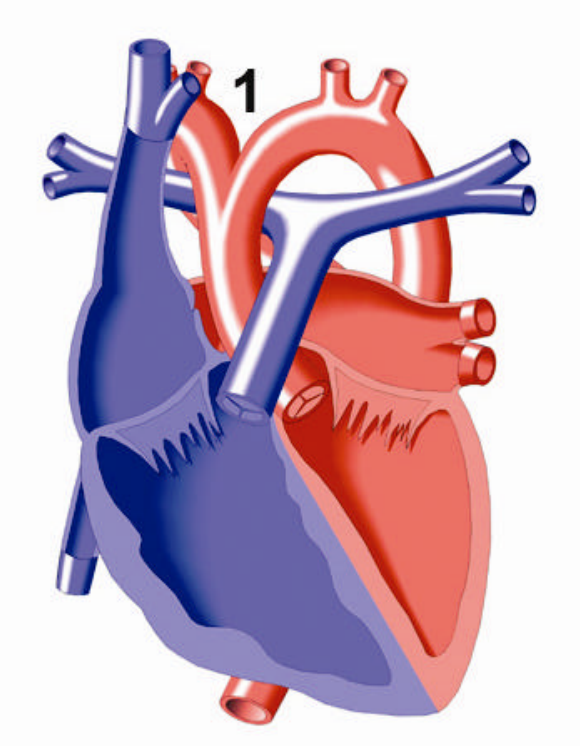
Double Aortic Arch

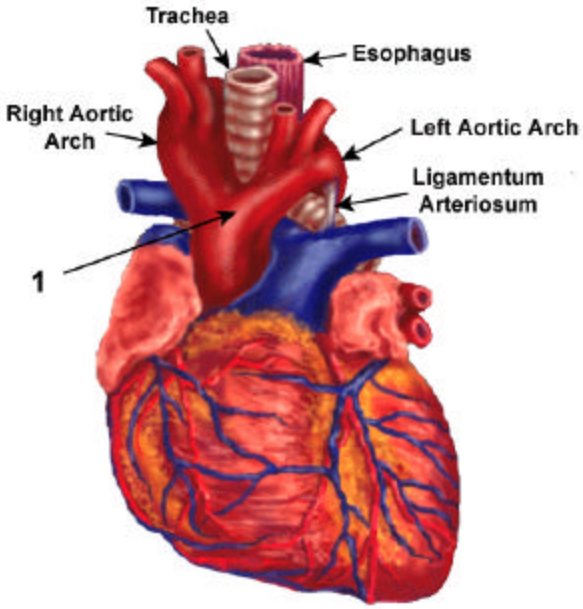
In this defect, the aorta, the large vessel that carries blood from the heart to the body, separates into two branches above the heart. This splitting occurs where the aorta begins its curve downward on its way to the lower body - known as the aortic arch. Normally, the aortic arch consists of a single vessel, from which minor arteries carry blood to the upper body. In this case, the aortic arch consists of two vessels, each of which has smaller arteries leaving it.

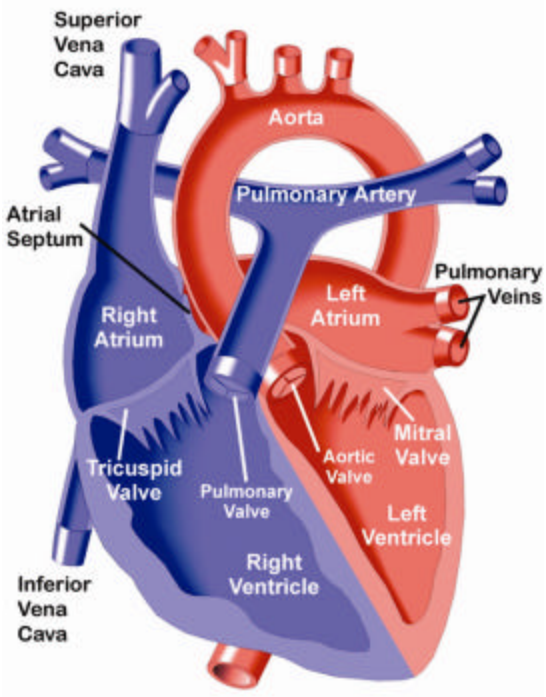
The two branches of the aortic arch surround the esophagus (the tube which carries food to the stomach) and the trachea (the tube which carries air to and from the lungs). Before descending to the lower body, the two branches merge into one vessel, the descending aorta, as in a normal circulatory system.

This rare defect, which is one of the so-called vascular ring anomalies, affects boys and girls equally.

The symptoms associated with this defect involve the constriction of the trachea (wind-pipe) and/or esophagus by the surrounding branches of the aorta. In the former case, breathing may be difficult as the trachea is compressed, resulting in wheezing or other respiratory distress. In the latter case, solid food may not be easily swallowed as the aortic branches narrow the esophagus, and vomiting or choking may occur.







Above:
1. Double aortic arch.

Left: Normal Heart