

the muscles and [spinal cord](#). Branches of the [external iliac artery](#) provide the blood supply for the [lower extremity](#). The [internal iliac artery](#) supplies the pelvic viscera.

Major Systemic Arteries

All systemic arteries are branches, either directly or indirectly, from the [aorta](#). The aorta ascends from the left ventricle, curves posteriorly and to the left, then descends through the thorax and [abdomen](#). This geography divides the aorta into three portions: ascending aorta, aortic arch, and [descending aorta](#). The descending aorta is further subdivided into the thoracic aorta and abdominal aorta.

Major Systemic Veins

After blood delivers oxygen to the tissues and picks up carbon dioxide, it returns to the heart through a system of veins. The capillaries, where the gaseous exchange occurs, merge into [venules](#) and these converge to form larger and larger veins until the blood reaches either the [superior vena cava](#) or [inferior vena cava](#), which [drain](#) into the right atrium.

Foetal Circulation

Most circulatory pathways in a [foetus](#) are like those in the adult but there are some notable differences because the lungs, the [gastrointestinal tract](#), and the kidneys are not functioning before birth. The foetus obtains its oxygen and nutrients from the mother and also depends on maternal [circulation](#) to carry away the carbon dioxide and waste products.

The [umbilical cord](#) contains two umbilical arteries to carry foetal blood to the [placenta](#) and one umbilical vein to carry oxygen-and-nutrient-rich blood from the placenta to the foetus.

The ductus venosus allows blood to [bypass](#) the immature [liver](#) in [foetal circulation](#). The [foramen ovale](#) and ductus arteriosus are modifications that permit blood to bypass the lungs in fetal circulation.