Arteries of Upper Limb

The arteries of the upper limb receive blood from the subclavian artery which takes blood to the axillary artery. Blood in the axillary artery travels to the anterior scapula by the subscapular artery to the external chest wall by the lateral thoracic artery, to the upper humeral region by the posterior circumflex humeral artery, and to the distal regions of the arm by the brachial artery. The brachial artery is the major artery of the arm and it divides distally to form the radial and ulnar arteries. The radial artery is frequently palpated at the wrist to determine the pulse rate. The radial and ulnar arteries rejoin (called collateral circulation) in the hand as the superficial and deep palmar arch arteries. These arteries take blood to the fingers as digital arteries.

Arteries of Lower Limb

Blood in the lower limb comes from the branches of the iliac arteries. Blood in the common iliac artery flows into the internal iliac artery and into the external iliac artery. Once it passes by the inguinal ligament (a connective tissue band that stretches from the ilium to the pubis) the external iliac artery becomes the femoral artery. The femoral artery takes blood down the anterior thigh but there is a branch called the deep femoral artery that takes blood closer to the bone. The femoral artery moves posteriorly to become the popliteal artery and branches of the popliteal artery become the anterior and posterior tibial arteries and the peroneal (fibular) artery. The tibial arteries take blood to the dorsal arcuate artery, the dorsalis pedis artery, and the dorsal metatarsal arteries which take blood to the digital arteries.

Abdominal and Thoracic Arteries

The aorta starts at the ascending aorta and curves via the aortic arch. The thoracic aorta is a portion of the descending aorta. It has several branches that take blood to most of the ribs and intercostal muscles. These are the posterior intercostal arteries. Below the diaphragm the descending aorta is known as the abdominal aorta and it has several branches. The first of these is the celiac trunk and it branches to take blood to the stomach, spleen and liver. The next branch is the superior mesenteric artery. Below this are the renal arteries that take blood to the kidneys. The gonadal arteries are found inferior to the renal arteries and they take blood to the testes in males or the ovaries in females. A single inferior mesenteric artery is found below the gonadal arteries. The aorta terminates as it divides into the common iliac arteries.

Arteries of the Digestive System

The celiac trunk splits into three branches, the common hepatic artery, the left gastric artery and the splenic artery. There are other branches to the stomach which have collateral circulation (two or more arteries taking blood to one area). One of these is the right gastroepiploic artery and another is the left gastroepiploic artery. Below the celiac trunk is the superior mesenteric artery which takes blood to the small intestine and to several of the colic arteries that supply blood to the proximal portion of the large intestine. These are the middle colic artery, the intestinal branches, the right colic artery and the ileocolic artery. The inferior mesenteric artery takes blood to the distal portion of the large intestine via the left colic artery, sigmoid artery and the rectal artery.

Male and Female Pelvic Arteries

The common iliac artery takes blood to the external iliac artery and the internal iliac artery that takes blood to the pelvis. In females, branches of the internal iliac artery take blood to the inner pelvis. The vesical arteries take blood to the bladder, the uterine arteries take blood to the uterus, the vaginal arteries feed the vagina, the rectal arteries feed the rectum, and the sacral arteries go to the sacrum. The pudendal artery takes blood to the external regions where it supplies blood to the pelvic floor, the labia majora and