The common iliac arteries are the terminal branches of the abdominal aorta, which bifurcates at the level of the fourth lumbar vertebra, just to the left of the midline. The common iliac arteries descend inferolaterally and terminate anterior to the sacro-iliac joint, at the level of the sacral promontory, by dividing into the internal and external iliac arteries. They are covered in peritoneum anteriorly and medially and lie anterior to the sympathetic trunk, obturator nerve, lumbosacral trunk and iliolumbar arteries. The superior hypogastric plexus lies anterior to the upper ends and the ureters pass anterior to the arteries near or at their point of division.

The right common iliac artery lies medial to the lower end of the inferior vena cava, right common iliac vein and psoas major muscle, while the left common iliac artery lies postero-medial to the common iliac vein and medial to the psoas major muscle.