

The femur (Os femoris), the bone of the thigh, is the longest bone in the body.

Proximal End

Its upper (proximal) end comprises a **head**, neck, greater trochanter and lesser trochanter. The head of the femur is hemi-spheroidal in shape, and has a smooth articular surface for articulation with the acetabulum of the hip bone. The medial aspect of the femoral head has a pit termed the 'fovea'. Attached to the fovea is the ligament of the head of femur (ligamentum teres). Passing infero-laterally and somewhat backwards from the head of femur to join the shaft is the neck of femur. Thus the femoral neck is anteverted in relation to the femoral shaft apart from subtending an angle with the shaft in the coronal plane. The surface of the femoral neck is characterized by many small vascular foramina, and by the presence of many grooves and ridges. Below the neck, and continuous with it, is the femoral shaft.

The junction between the neck and shaft of the femur displays on the anterior aspect an oblique and somewhat rough ridge, termed the 'intertrochanteric line', while the posterior aspect of the junction between the neck and shaft of the femur is marked by a prominent and smooth elevation called the 'intertrochanteric crest'.

Ossification

The femur begins to ossify in the center of the future shaft at the end of the second month of intrauterine life (IUL). The secondary ossification center for the femoral condyles is usually present by the time of birth. It appears in boys between the eighth months of IUL and birth, but in girls may appear as early as the seventh month of IUL. The lower femoral epiphysis fuses with the shaft around the age of 17 years in girls, and around 18 to 19 years in boys. Fusion is signified by ossification of the epiphyseal line.

The Hip Joint

The hip joint is a synovial ball and socket joint between the **acetabulum of the hip bone** and the head of the femur. The articular surface of the femoral head forms two-thirds of a spheroid and is covered in hyaline articular cartilage. The cartilage is interrupted at the pit on the head of the femur, and extends to the junction of the head and the neck.

For more information on the Hip and Knee, see 'The Interactive Hip and 'The Interactive Knee'.