

which is derived from the Rectus femoris and Vastus intermedius. The **medial** and **lateral borders** are thinner and converge below: they give attachment to those portions of the Quadriceps femoris which are derived from the Vasti lateralis and medialis.

**Apex.**—The apex is pointed, and gives attachment to the ligamentum patellæ.

**Structure.**—The patella consists of a nearly uniform dense cancellous tissue, covered by a thin compact lamina. The cancelli immediately beneath the anterior surface are arranged parallel with it. In the rest of the bone they radiate from the articular surface toward the other parts of the bone.

**Ossification.**—The patella is ossified from a single center, which usually makes its appearance in the second or third year, but may be delayed until the sixth year. More rarely, the bone is developed by two centers, placed side by side. Ossification is completed about the age of puberty.

**Articulation.**—The patella articulates with the femur.

### The Tibia (Shin Bone).

The **tibia** (Figs. 258, 259) is situated at the medial side of the leg, and, excepting the femur, is the longest bone of the skeleton. It is prismoid in form,

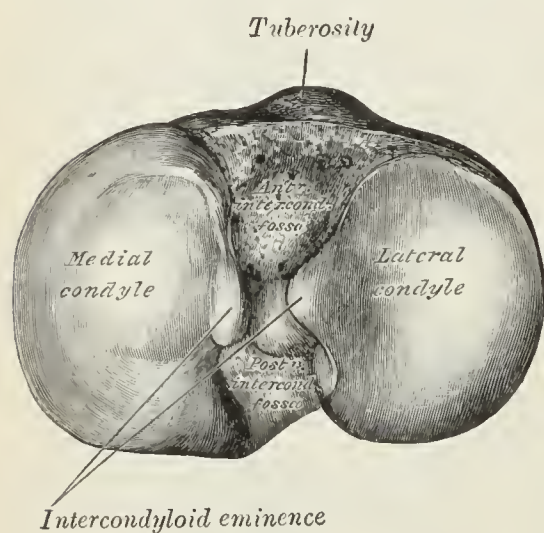


FIG. 257.—Upper surface of right tibia.

expanded above, where it enters into the knee-joint, contracted in the lower third, and again enlarged but to a lesser extent below. In the male, its direction is vertical, and parallel with the bone of the opposite side; but in the female it has a slightly oblique direction downward and lateralward, to compensate for the greater obliquity of the femur. It has a **body** and **two extremities**.

#### The Upper Extremity (*proximal extremity*).

—The upper extremity is large, and expanded into two eminences, the **medial** and **lateral condyles**. The **superior articular surface** presents two smooth articular facets (Fig. 257). The medial facet, oval in shape, is slightly concave from side to side, and from before backward. The lateral, nearly circular, is

concave from side to side, but slightly convex from before backward, especially at its posterior part, where it is prolonged on to the posterior surface for a short distance. The central portions of these facets articulate with the condyles of the femur, while their peripheral portions support the menisci of the knee-joint, which here intervene between the two bones. Between the articular facets, but nearer the posterior than the anterior aspect of the bone, is the **intercondyloid eminence** (*spine of tibia*), surmounted on either side by a prominent tubercle, on to the sides of which the articular facets are prolonged; in front of and behind the intercondyloid eminence are rough depressions for the attachment of the anterior and posterior cruciate ligaments and the menisci. The **anterior surfaces** of the condyles are continuous with one another, forming a large somewhat flattened area; this area is triangular, broad above, and perforated by large vascular foramina; narrow below where it ends in a large oblong elevation, the **tuberosity of the tibia**, which gives attachment to the ligamentum patellæ; a bursa intervenes between the deep surface of the ligament and the part of the bone immediately above the tuberosity. *Posteriorly*, the condyles are separated from each other by a shallow depression, the **posterior intercondyloid fossa**, which gives attachment to part of the posterior cruciate ligament of the knee-joint. The **medial condyle** presents posteriorly a deep transverse groove, for the insertion of the tendon of