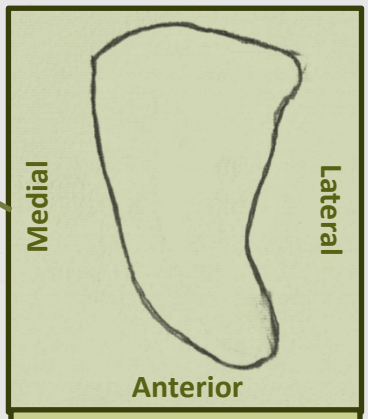
Anterior Tibia (L): Key Features

Crest: The anterior tibial shaft has a diagnostic, sharp crest that runs along most of the length of the diaphysis. This crest is one of the most distinctive features of the bone, and will help you to easily differentiate fragments of tibial shaft from the other larger long bones.

Tuberosity: The proximal and anterior tibia is characterized by a large, bulbous tuberosity. You can remember that the tibial tuberosity is anterior, because it looks a little like the bony version of what happens to your knee when you bang it against a desk or chair. As a result, the tuberosity provides a useful way to orient the bone even if only a small portion of it is preserved.



Crest curvature: This cross-sectional view of the midshaft provides another way to side the bone: the medial side of the shaft is convex, while the lateral side of the shaft is more concave.

Medial Malleolus: Touch the bumpy area on the inside of your ankle. That's the malleolus of your tibia, and this thick, pointed hook is the easiest way to side the bone. It is always on the medial side.

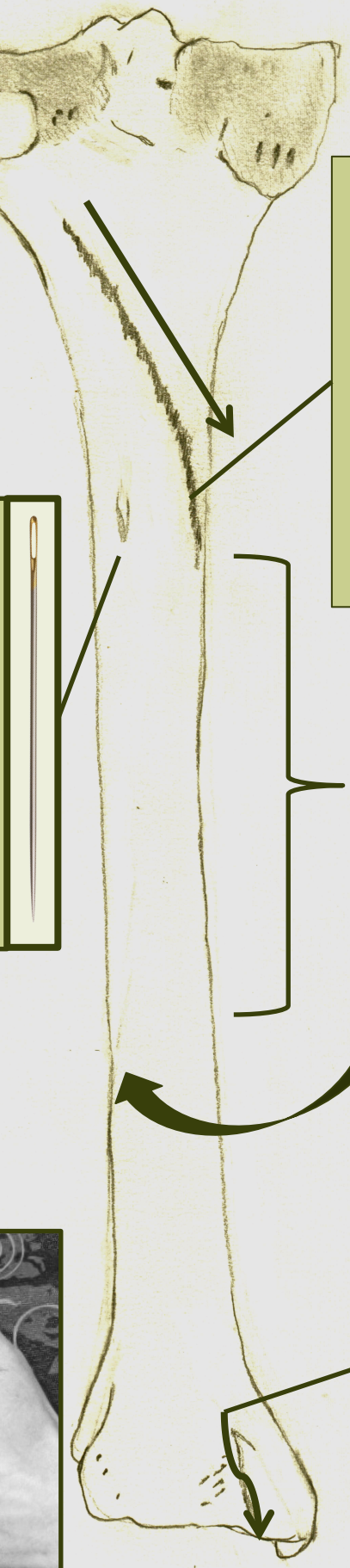
Medial ⟷ Lateral

Posterior Tibia (L): Key Features

Articular facet for fibula: This thumb print-sized oval is located on the posterior and lateral side of the bone. It's distinctly smooth texture makes it easy to differentiate from the roughened surface of the rest of the proximal end.

Soleal Line: This rugged , clearly delineated line is the attachment site for a variety of leg muscles. It dives obliquely from lateral-superior to medial-inferior. To remind yourself of its directionality sit in your chair with your feet planted firmly before you: you can trace the trajectory of the soleal line by starting at the outer edge of the back of your knee and tracing a diagonal line that angles down towards your feet.

Nutrient foramen: The tibia has an extremely distinctive foramen that occurs about a third of the way down its shaft. If you were to stick a pin in this opening, the pin would point towards your feet (giving you a way to orient the bone if you have a broken portion of shaft).



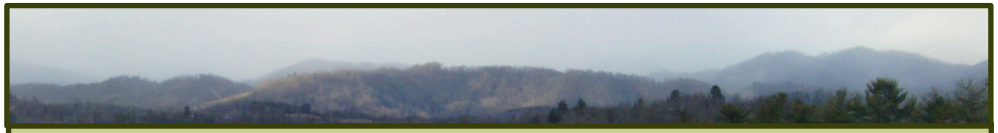
Posterior surface of shaft: Unlike the anterior surface of the tibia, the posterior shaft lacks a sharp triangular crest. However, there is a palpable (but non-triangular) *interosseous crest* on the lateral side of the bone. It is basically a steep, raised line that you can easily feel with a fingertip.

Lateral ⟷ Medial

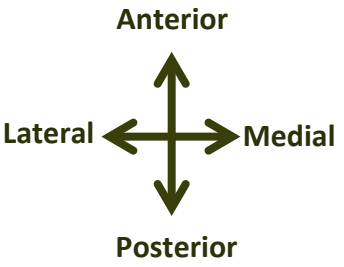
Rule of Thumb: On the posterior tibia, everything points inwards and down, towards the feet and the midline of the body. The malleolar process and the soleal line both point medially and inferiorly, while the nutrient foramen points inferiorly.

Malleolar groove: The posterior portion of the medial malleolus has a deep, palpable channel for tendons of leg and foot muscles. Running your finger along this groove can help you differentiate anterior from posterior.

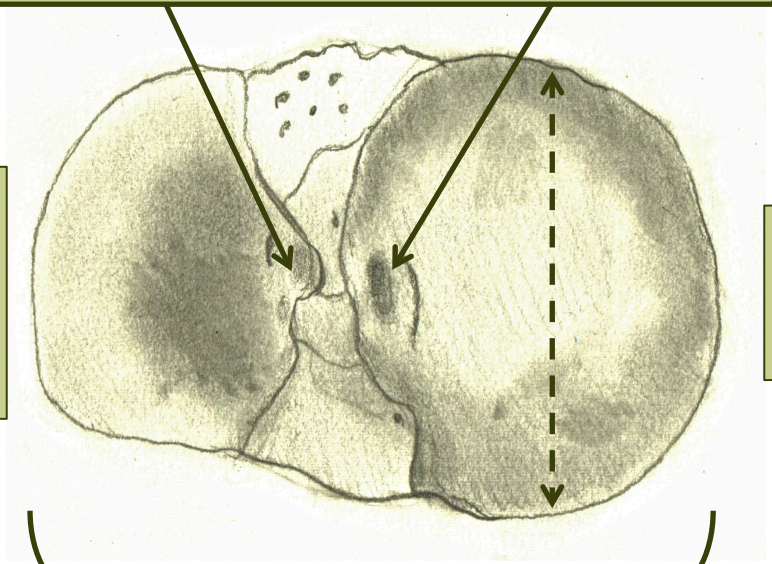
Proximal Tibia (L): Key Features



Proximal Tibia: The proximal end of the tibia is easily distinguished from the distal end, because it has two large, bean-shaped facets for the distal femur, and the *lateral* and *medial intercondylar eminences*, which look like little knobby mountains made out of bone.

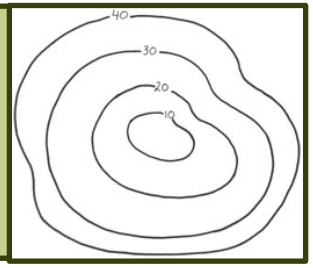


Lateral Condyle: Smaller and rounder than the medial condyle, the topography of this articular surface rises up at a slant towards the intercondylar eminences in the middle of the bone.

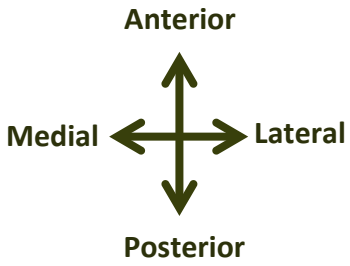


Medial Condyle: The medial condyle is a larger, oval facet; its greatest length is in an anterior-posterior dimension.

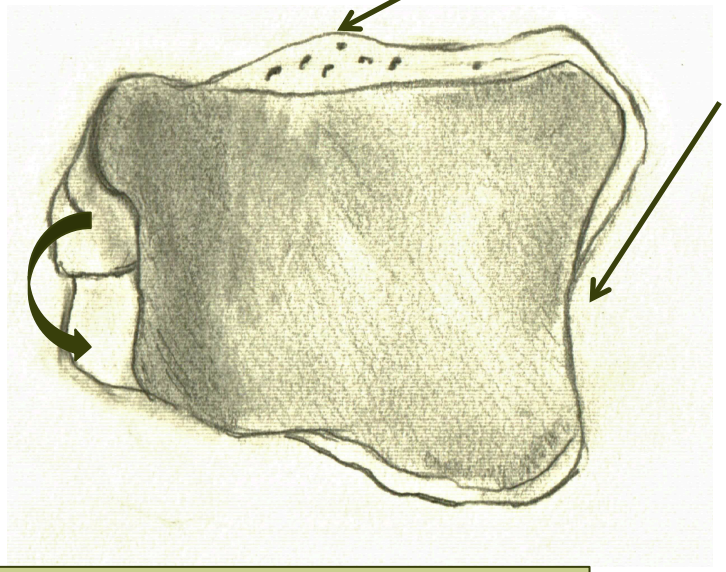
Medial and Lateral Condyles: To distinguish the medial and lateral condyles, think about elevation: the lateral condyle is largely flat, though it slopes upwards towards the center of the bone. In contrast, the medial condyle has an elevated lip that rings a slightly depressed center.
(Shaded areas in the drawing indicate higher areas on the bone).



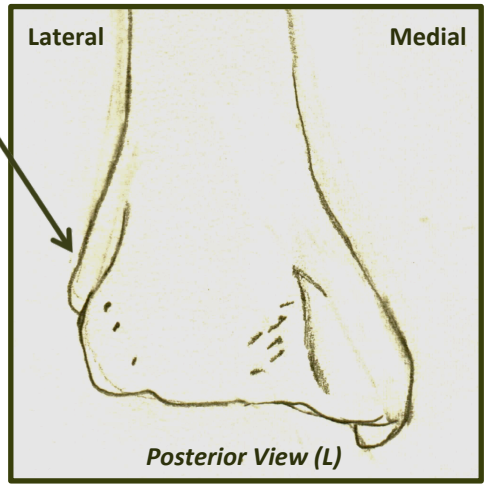
Distal Tibia (L): Key Features



Distal end: The distal end of the tibia only has a single articular surface that is roughly rectangular in shape. To orient it, there is often a rounded bump anteriorly, and a divot for the distal fibula laterally.



Step down, step back: A trick that I always use to orient isolated distal tibiae is the "step down, step back" rule. There are two non-articular, tiered knobs of bone on the medial side of the distal tibia. If you run your finger over them in an inferior perspective, the higher "step" is always anterior, and the lower "step" is always posterior.



Fibular notch: The lateral half of the distal tibia has a scooped depression for the distal fibula and tibiofibular ligament. This wide, curving, non-articular notch provides a useful way to differentiate the medial and lateral sides of the distal tibia.