

Bone Structure

Proximal to Distal:

Proximal Epiphysis

Articular Cartilage

Red bone marrow / spongy bone

[Proximal side] Metaphysis

Epiphyseal line / plate

Red bone marrow / spongy bone

Diaphysis

Outer to inner:

Periosteum (on non-articulating surfaces)

Compact bone

Endosteum

Medullary cavity

Various foramen for nutrient artery entry

[Distal side] Metaphysis

Red bone marrow / spongy bone

Epiphyseal line / plate

Distal Epiphysis

Red bone marrow / spongy bone

Articular Cartilage

Bone Tissue Histology.

Gen (generates) -> Blasts (sprouts tissue) -> Cytes (maintain cells of matrix)

Clasts (break down old tissue)

Osteogens - osteoblast production

Osteoblasts - create bone fibers and build themselves in to a matrix

Osteocytes - trapped osteoblasts maintaining the bone tissue

Osteoclasts - perform resorption, break down of old matrix during bone remodeling

Compact bone

tissue groups - osteons - circular bundles around a central canal

lamellae - rings of calcified matrix surround tissue groups

Spongy bone

tissue groups - trabeculae - irregular beams of tissue creating a spacious latticework

lamellae - irregular interstitial calcified matrix pockets

Bone Types

Long Bones - shaft and extremities

Short Bones - cube shaped

Flat Bones - thin flat bone

Irregular Bones - misc. shapes

Sesamoid Bones - flat disks to help with tendon friction