Cheatography

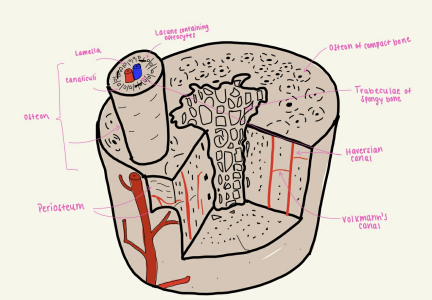
Skeletal System Cheat Sheet

by ashleyk via cheatography.com/182291/cs/37915/

Osseous Tissue

	Spongy Tissue	Compact Tissue
TYPE		
STRUCTURE	Contains lamellae arranged randomly within plates called trabeculae aligned on stress lines with irregular cavities filled with red bone marrow in the interspaces	Contains osteons and lamellae containing lacunae filled with osteocytes
MATRIX	Porous	Hard/calcified
FUNCTION	reduce weight while maintaining strength	provide protection

Compact Osseous Tissue

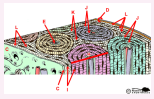


Contains osteons which involve a central canal, also referred to as the osteonic/Haversian canal. This canal is surrounded by lamellae which are concentric rings of matrix that contain osteocytes, osseous cells, in lacunae, between the rings

Lamellae

Concentric	Interstitial	Circumferential
Surround the osteon	space in between osteons	around circumference of bone (inner and outer)

Lamellae cont.



C: Endosteum
D: Periosteum: outer fibrous periosteum in black, inner osteogenic layer in orange)
E: Haversian canal (= central canal)
H: Osteon
I: Osteocytes in lacunae
J: Concentric lamellae
K: Interstitial lamellae
L: Circumferential lamellae

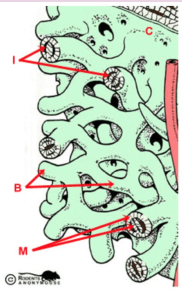
Spongy Osseous Tissue

Osseous Tissue Matrix

Inorganic	Organic (the osteon)
Mineral salts such as hydroxyapatite, calcium carbonate, magnesium hydroxide, fluoride, and sulphate	contains proteoglycans, glycoproteins, and collagen fibres
makes tissue hard and allows for strength and protection (resistance to compression)	allows the tissue to be strong and flexible (resistance to strenching/twisting)

Structures

Periosteum	Endosteum	Diaphysis	Epiphysis



B: Trabeculae of Spongy bone tissue C: Endosteum	I: Osteocytes in lacunae M: Lamellae of the trabeculae

Involves plates called trabeculae, a bundle of fibres aligned on lines of stress, along with irregular cavities containing red bone marrow. The trabeculae allow the bone to withstand stress by providing strength. The irregular cavities containing red bone marrow connect to the canaliculi, allowing for nutrients to be delivered through blood supply.

By **ashleyk**
cheatography.com/ashleyk/

Not published yet.
Last updated 1st April, 2023.