

SKELETAL SYSTEM



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SKELETAL SYSTEM INCLUDES

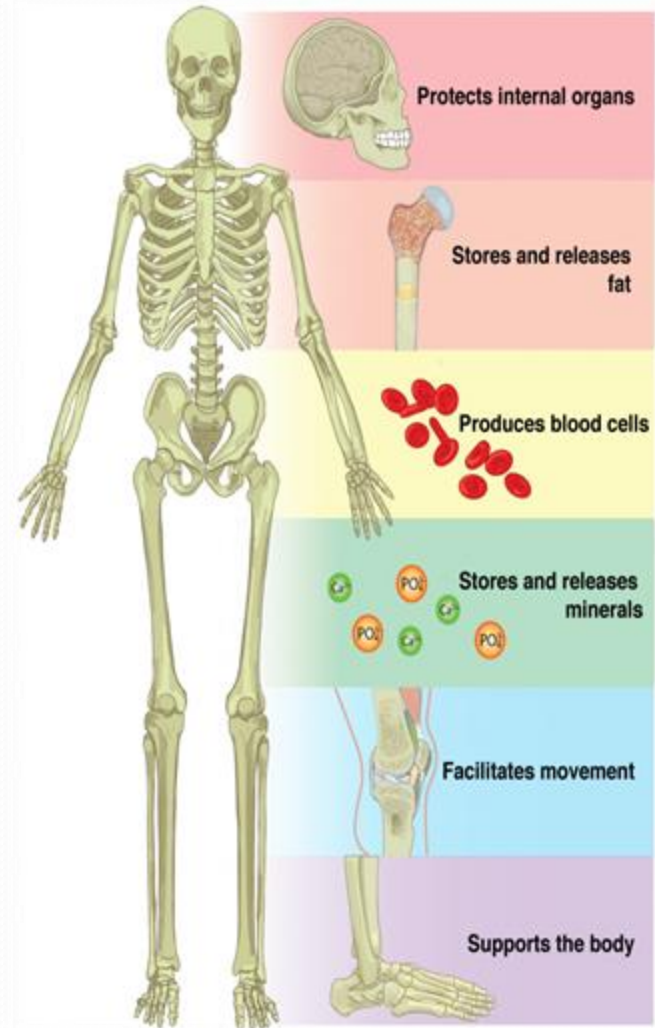
- ❖ bones of the skeleton
- ❖ cartilages
- ❖ ligaments
- ❖ connective tissues



<https://www.poradnikzdrowie.pl/zdrowie/anatomia/szkielet-czlowieka-budowa-funkcje-choroby-oraz-roznice-miedzy-szkieletami-kobiet-i-mezczyzn-aa-7FPP-yzFL-CxmQ.html>

FUNCTIONS OF THE SKELETAL SYSTEM

- ❖ Support
- ❖ Storage of minerals (calcium)
- ❖ Storage of lipids (yellow marrow)
- ❖ Protection
- ❖ Leverage (force of motion)

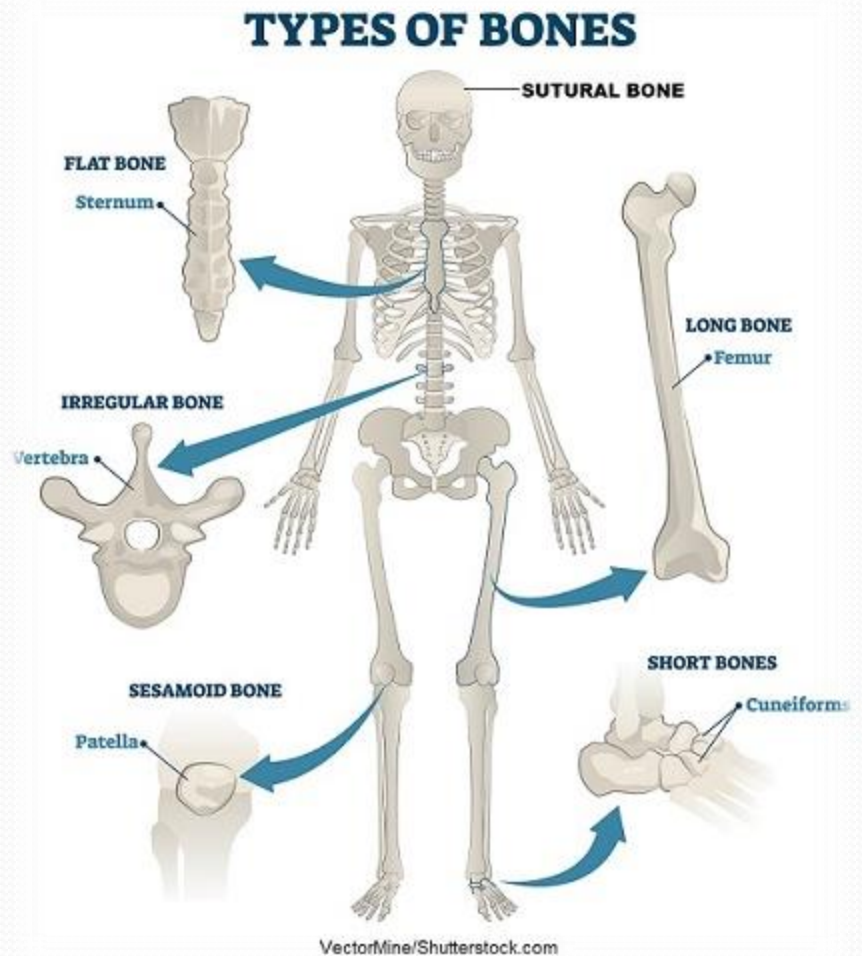


BONE SHAPES

long bones - femur, tibia, fibula, humerus, radius, ulna and collarbone

flat bones - skull bones, shoulder blades and sternum

short bones - wrist bones and tarsal bones



BONES SHAPE

pneumatic bones – frontal bone, ethmoid bone, sphenoid bone and jaw bone

irregular shaped bones - vertebrae of the spine and auditory ossicles



Long bone



Short bone



Irregular bone

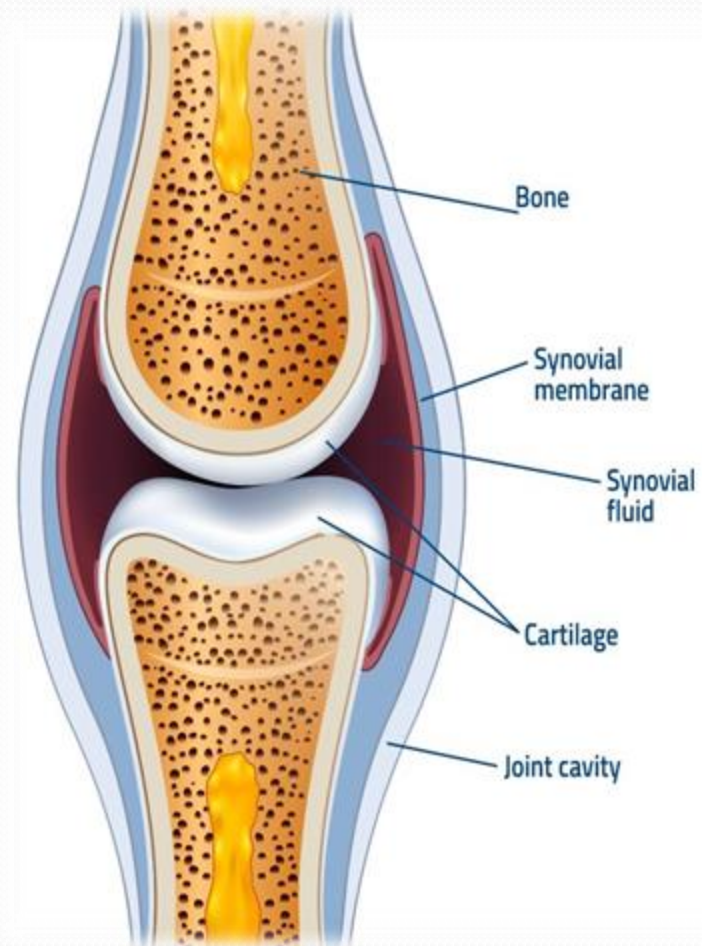


Flat bone

CONSTRUCTION OF THE JOINT

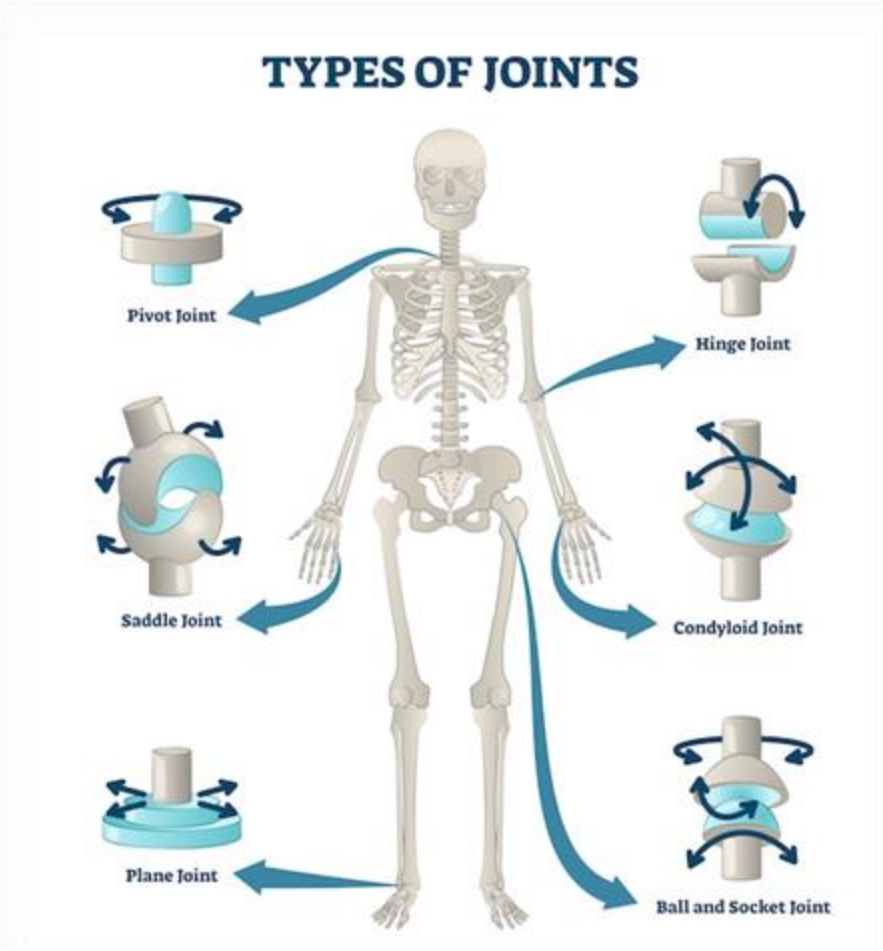
The joint consists of

- ❖ an articular surface
- ❖ an articular capsule
- ❖ an articular cavity



TYPES OF JOINTS

- ❖ pivot joint
- ❖ saddle joint
- ❖ plane joint
- ❖ hinge joint
- ❖ ball and socket joint
- ❖ ellipsoidal joint



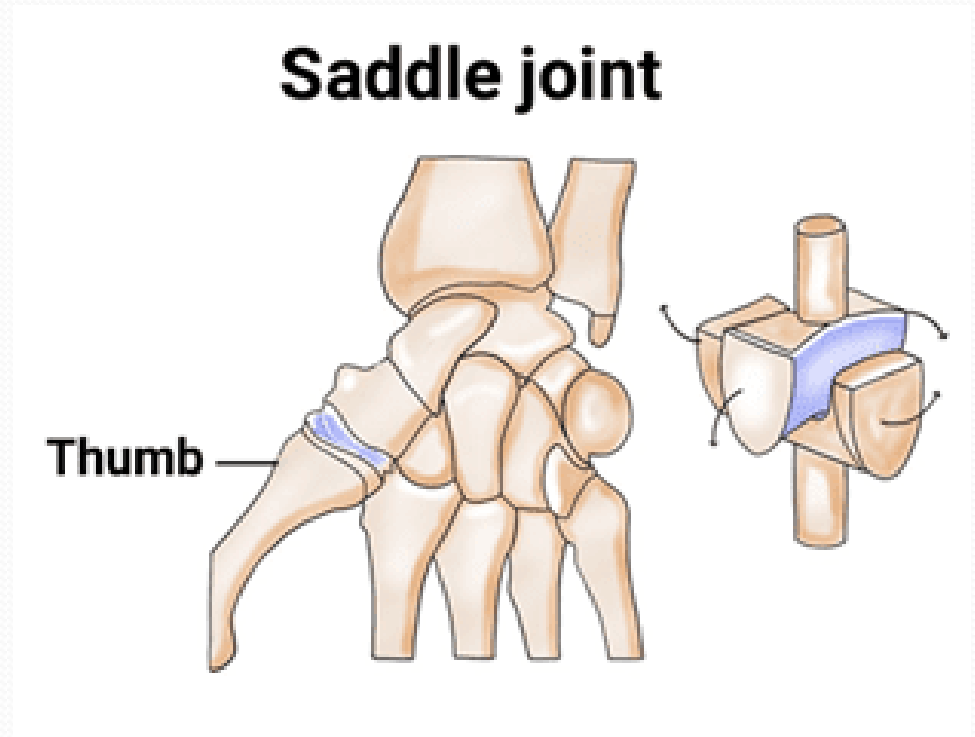
PIVOT JOINT

- ❖ A type of joint in which one cylindrical articular surface rotates relative to the other.



SADDLE JOINT

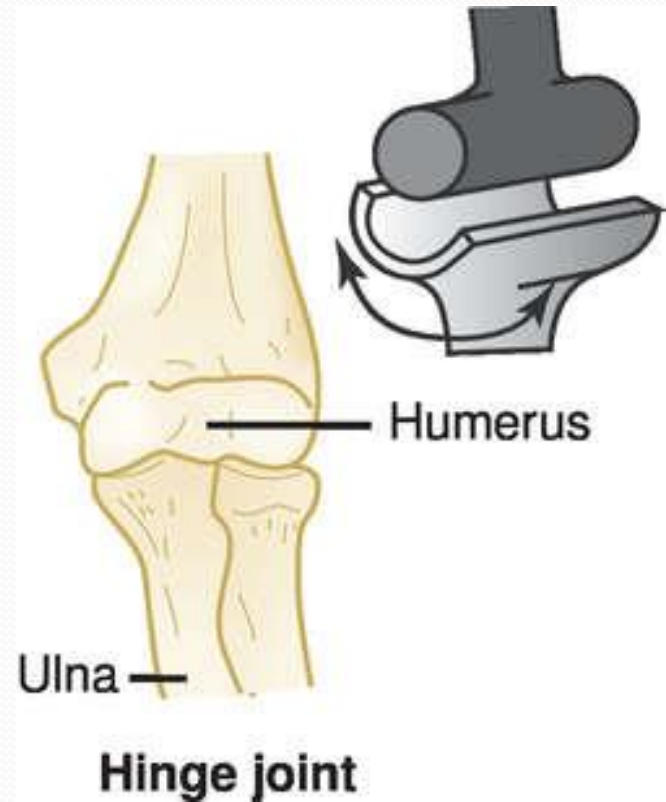
- ❖ A type of joint in which both articular surfaces are concave in the direction of one axis and convex in the direction of the perpendicular axis, resembling a saddle.



<https://www.biologyonline.com/dictionary/diarthrodial-joint>

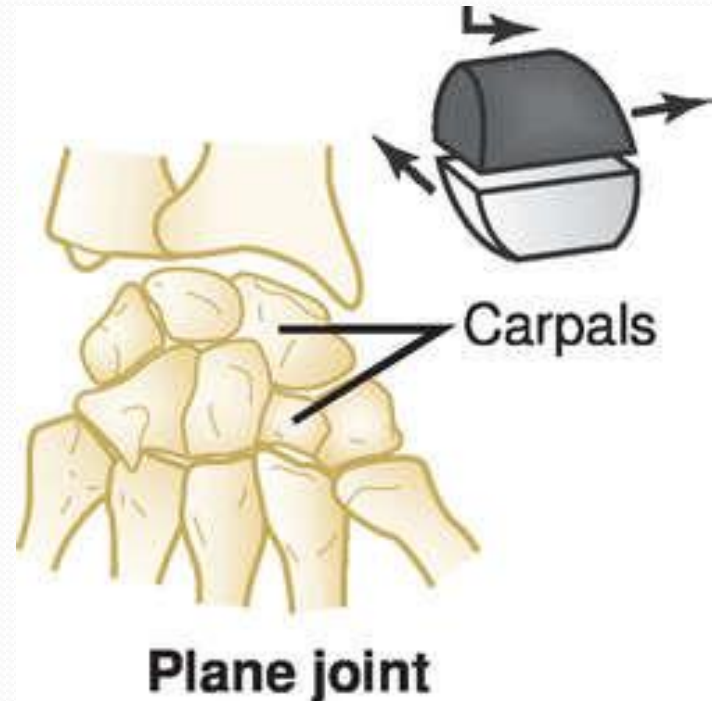
HINGE JOINT

- ❖ A type of joint in which one articular surface is formed in the form of a block, the other is its indentation.



PLANE JOINT

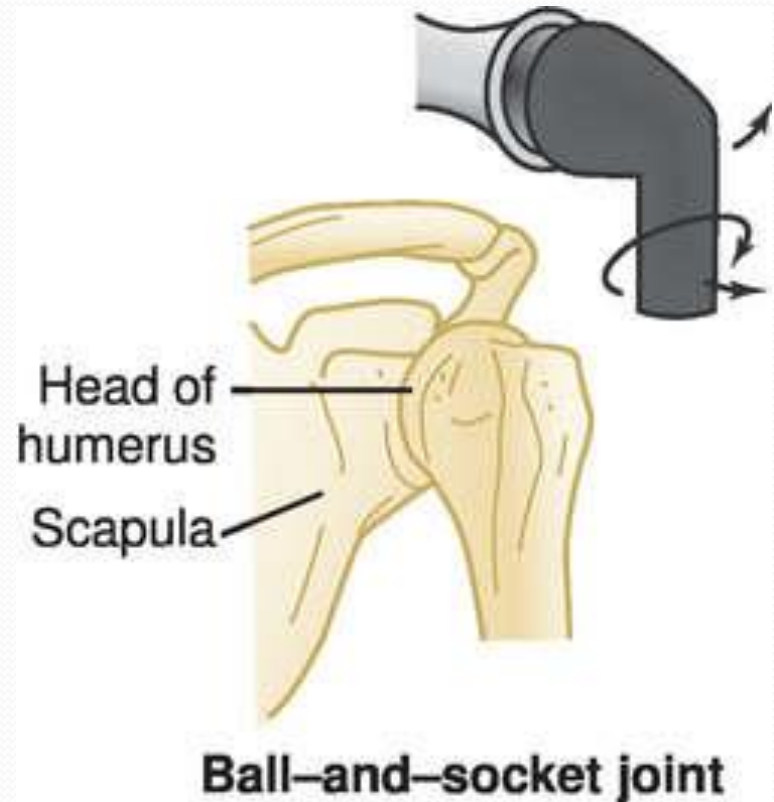
- ❖ A type of joint where the articular surfaces are nearly flat, equal, or nodular, and usually the same size.



BALL AND SOCKET JOINT

A type of joint characterized by spherical articular surfaces :

- ❖ concave socket
- ❖ convex head



ELLIPSOIDAL JOINT

- ❖ A type of joint where, in cross-section, one face is elliptical in shape, convex with respect to its long and short axis, and the other face is concave.



VOCABULARY:

- ❖ collarbone - obojczyk
- ❖ ethmoid bone – kość sitowa
- ❖ sphenoid bone – kość klinowa
- ❖ equal - równy
- ❖ nodular - guzkowaty
- ❖ concave - wklęsła
- ❖ convex - wypukła
- ❖ perpendicular - prostopadły
- ❖ spherical - kulisty
- ❖ indentation - wcięcie
- ❖ resembling - przypominający

LITERATURE:

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- ❖ Osseous tissue & bone structure, B. Markings
- ❖ A. Huysseune, Skeletal System, The Laboratory Fish, Handbook of Experimental Animals 2000, Pages 307-317.
- ❖ Zhang M, Chen P, Li B, Du J, Pan T, Chen J. Approach to the patient with pregnancy and lactation-associated osteoporosis: A case report and a review of the literature. Medicine (Baltimore). 2017