



Types of Bones

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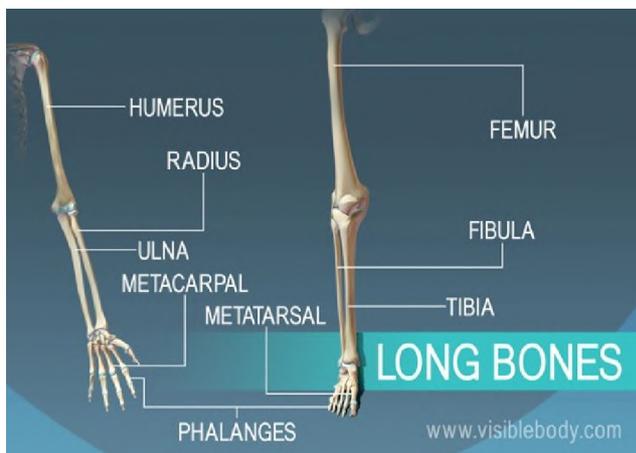
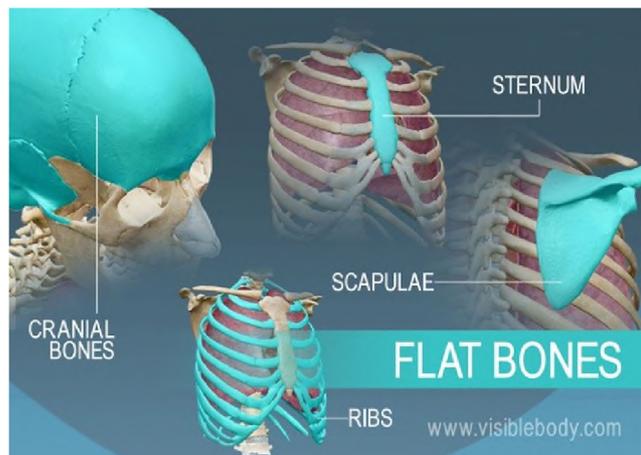
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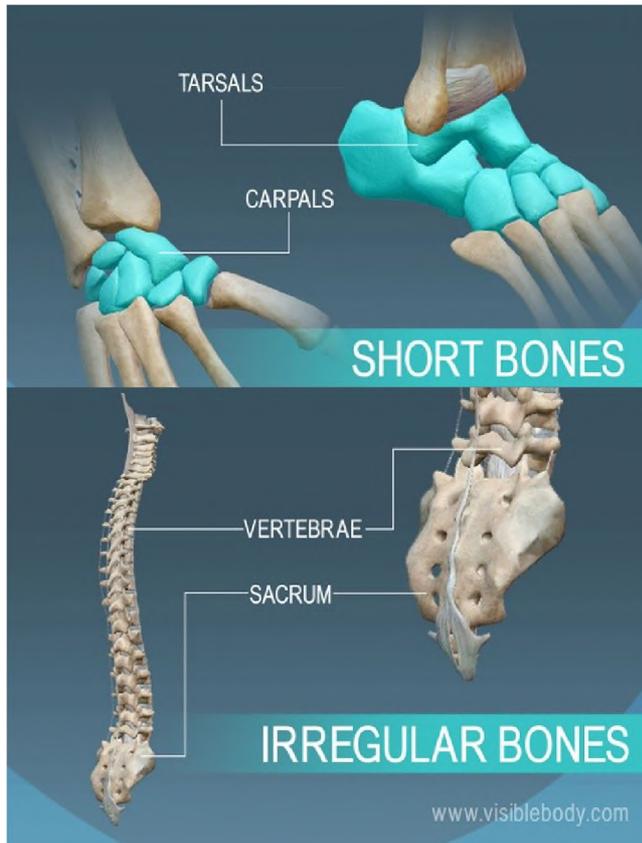
The human skeleton is the **internal scaffolding** of the body. The skeletal system in an adult body is made up of 206 individual bones (at birth it is composed of around 300 bones). There are six major functions of human skeleton: support, protection, movement, production of blood cells, storage of minerals and **endocrine regulation**. It is divided into **axial skeleton** (the vertebral column, the rib cage with sternum, the skull) and **appendicular skeleton** (the **shoulder girdle**, the **pelvic girdle** and the bones of the upper and lower limbs). The axial skeleton is made up of 80 bones, appendicular skeleton – 126. The bones are connected by joints with tough bands of white fibrous connective tissue known as ligaments. Muscles are attached to the bones by tendons.

The five types of bones

They may have a different size and shape, but **flat bones** have one common feature—they are very thin in one direction. There is not a **medullary cavity** inside like the long bones. The flat bones protect internal organs and provide large areas of attachment for muscle. They are located in the skull, thoracic cage (ribs, sternum and scapula) and the pelvis (**ilium**, **ischium**, and **pubis**).



Examples of **long bones** include the femur (the longest bone in the human body), tibia, fibula, ulna, radius, humerus, **metatarsal** and phalanges. Long bones are longer than they are **wide**. In the center of the long bones there is a medullary cavity with **bone marrow** inside. There are two main functions of long bones: supporting weight and facilitating movement.



Short bones are about as long as they are wide and are often **cubed** or **round** in shape. They provide stability and some movement. Short bones are located in the wrist (8 bones) and the tarsals in the ankle (7 bones).

Their shape does not fit into flat, short, long, or sesamoid bones. The vertebrae, sacrum, and coccyx of the spine are the **irregular bones**. The function of these bones is to protect internal structures of the human body. For example, the vertebral column (built of vertebrae's) protect the spinal cord against injuries.

The **sesamoid bones** are formed inside of tendons. These small and round bones are mostly located in the tendons of the hands, knees, and feet. The biggest sesamoid bone in the body is **patella**. The sesamoid bones are responsible for the protection of tendons from stress and wear.



Exercise 1

Answer the questions.

1. How many bones are there in our body ?
2. Name six major functions of the human skeleton.
3. How is the skeleton divided?
4. Name five types of bones.
5. Which bone is the longest bone in the human body ?
6. List 3 types of flat bones.
7. What is the biggest sesamoid bone in the body ?

Exercise 2

Complete the table with the names of bones under the appropriate heading.

femur	sternum	patella	vertebrae	rib	
metatarsal	carpal	sacrum	ischium	phalanges	
tarsals	radius	scapula	pubis	coccyx	
Type of bone	FLAT	LONG	SHORT	IRREGULAR	SESAMOID
Bones					

Vocabulary:

appendicular skeleton- szkielet obwodowy

axial skeleton- szkielet osiowy

bone marrow- szpik kostny

cube- sześcienny

endocrine regulation- regulacja endokrynologiczna

flat bones- kości płaskie

ilium- kość biodrowa

internal scaffolding- wewnętrzne rusztowanie

irregular bones- kości różnokształtne

ischium- kość kulszowa

long bones- kości długie

medullary cavity- jama szpikowa

metatarsal- kości śródstopia

patella- rzepka

pelvic girdle- obręcz miedniczna

pubis- kość łonowa

round- okrągły

sesamoid bone- trzeszczka

short bones- kości krótkie

shoulder girdle- obręcz barkowa

wide- szeroki

Bibliography:

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