

# INTRODUCTION

## Osteology



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# Osteology

- Osteology is the **study of bones**, the hardest structure in the body excepting teeth.
- Bones support and protect the tissues of the body and form the framework or skeleton of the body. They also act as levers to which muscle or their tendons are attached and serve as parts of locomotor apparatus. It serves as a storehouse for calcium in the body. In addition, the bone marrow found inside the bones forms one of the important sources of blood corpuscles. •
- ❑ The skeleton is generally classified as
  - **Exo-skeleton**
  - **Endo-skeleton**



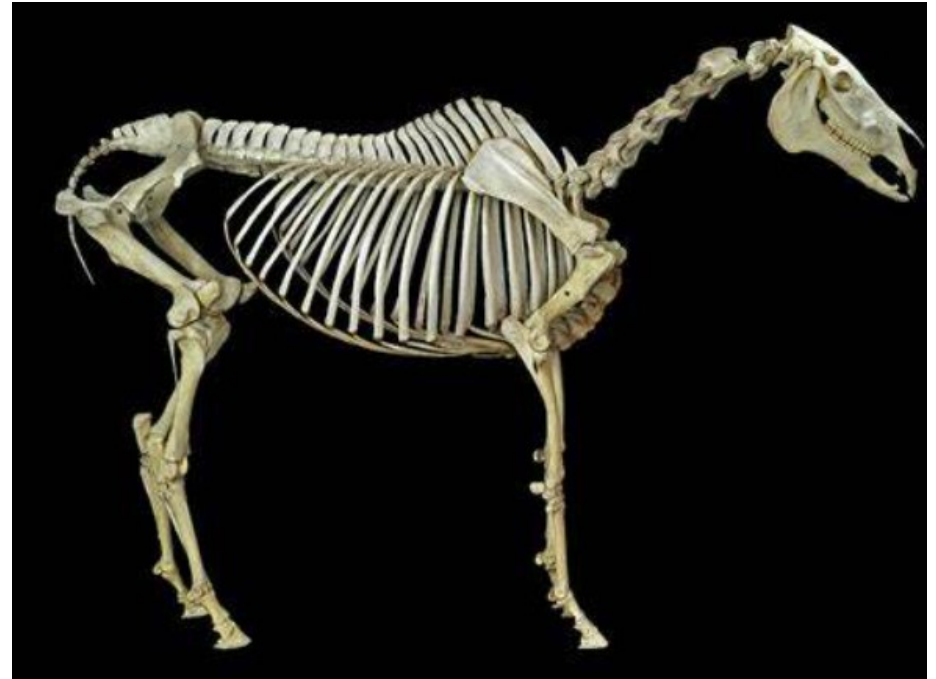
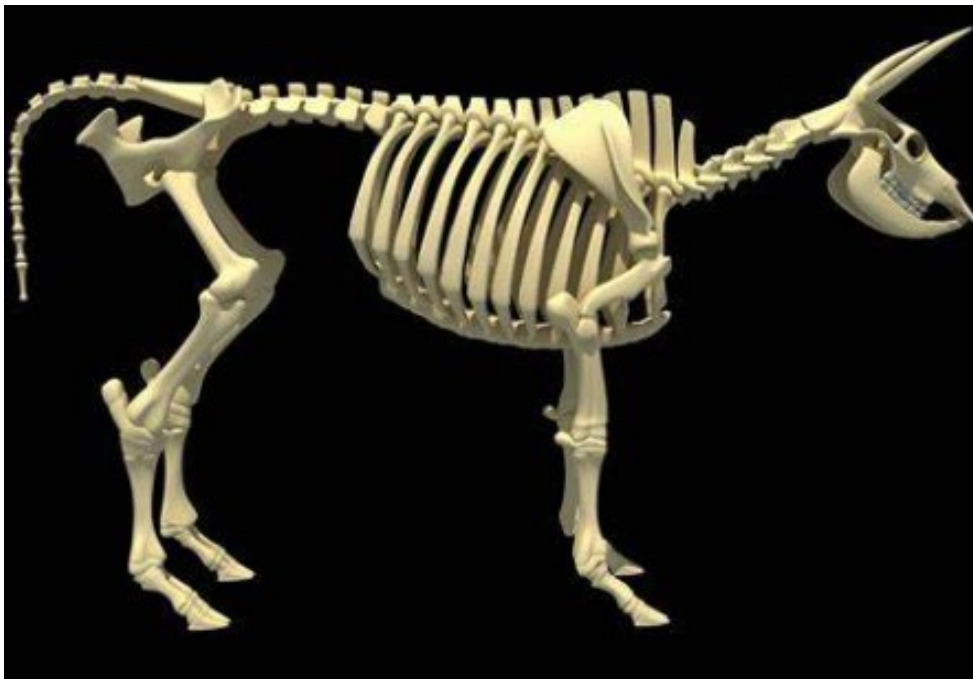
# Exo-skeleton:

- Exo - skeleton found on the surface of the body.
- It is characteristic of invertebrates. In higher vertebrates, it is represented by nails on the digits, horns, hooves, etc., seen in some of the mammals and also shell of crab and tortoise.



# Endo-skeleton:

- Endo-skeleton found embedded in soft tissues within the body. It forms the supporting framework consists of two parts:
  - ❖ **Axial skeleton:** Consisting of the skull, the vertebral column, ribs and sternum.
  - ❖ **Appendicular skeleton:** Consisting of the bones in the pectoral (forelimb) and pelvic (hind limb) limbs.



# Heterotropic bones

- In addition to this arrangement of bones, small bones occur in the tissues of an organ or other structures, which do not form a part of the regular skeleton.
  - These small bones are called Heterotropic bones and occur only in particular sites in particular species of animals only.
  - The typical examples are
    - ❑ **os cordis**; in the heart of cattle
    - ❑ **os penis**; in the penis of the dog, also in bats, rodents and some primates
    - ❑ **os rostri**; in the snout of pigs
    - ❑ **os phrenic**; in the diaphragm in camels.
- (The terms **planchnic** or **visceral bone** is also used to refer to these heterotropic bones).

# Heterotropic bones

PIG: Snout prominent  
(contains the **os rostri** or  
rostral bone): for rooting,  
quite powerful and  
sensitive.- Forms part of  
upper lip



**Thank You**