

Topographic Terms

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Topographic Terms.;In order to indicate precisely the position and direction of parts of the body, certain descriptive terms are employed, and must be understood at the outset. In the explanation of these terms it is assumed here that they apply to a quadruped such as the horse in the ordinary standing position

- **Topographic Terms;**

Directional terms come in opposing pairs (like East/West and North/South). Anatomical directional terms are used to describe relative position consistently within a cadaver, independent of how the cadaver is oriented in the East/West, North/South world.

Dorsal/Ventral:

Dorsal -- directed toward the back[head, trunk, tail]; also applied to manus & pes.

Ventral -- directed toward the belly [head, trunk, tail].

- **Medial/Lateral:**

Medial/Lateral:

Medial -- directed toward the midline (median plane) [head, trunk, tail, & limbs].

Lateral -- directed away from the median plane, toward the flank [head, trunk, tail, & limbs].

Cranial/Caudal:

Cranial -- directed toward the cranium (brain case) [trunk, tail, limbs].

Caudal -- directed toward the tail (& beyond) [head, trunk, tail, limbs].

Rostral/Caudal:

Rostral -- directed toward the nose (beak) [head].

Caudal -- directed toward the tail (& beyond) [head, trunk, tail, limbs].

Proximal/Distal:

Proximal -- directed toward the body [limbs & tail].

Distal -- directed away from the body [limbs & tail].

Descriptive Terms

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DESCRIPTIVE TERMS

The surfaces of the bones present a great variety of eminences and depressions, as well as perforations. The prominences and cavities may be articular, or non-articular, furnishing attachment to muscles, tendons, ligaments, or fascia. A number of descriptive terms are used to designate these features, and the following are some of those in general use:

Process (Processus) is a general term for a prominence.

A **tuberosity** (Tuber, Tuberositas) is a large, rounded non-articular projection; a **tubercle** (Tuberculum) is a smaller one.

The term **trochanter** is applied to a few non-articular prominences, *e. g.*, the trochanters of the femur.

A spine (Spina) or spinous process (Processus spinosus) is a pointed projection.

A crest (Crista) is a sharp ridge.

A line (Linea) is a very small ridge.

A head (Caput) is a rounded articular enlargement at the end of a bone; it may be joined to the shaft by a constricted part, the **neck (Collum)**.

A condyle (Condylus) is an articular eminence which is somewhat cylindrical; a non-articular projection in connection with a condyle may be termed an **epi-condyle (Epicondylus)**.

A trochlea is a pulley-like articular mass.

A glenoid cavity (Cavitas glenoidalis) is a shallow articular depression, and a **cotyloid cavity or acetabulum** is a deeper one.

The term **facet** is commonly applied to articular surfaces of small extent, especially when they are not strongly concave or convex.

The terms **fossa, fovea, groove or sulcus, and impression** are applied to various forms of depressions

A foramen is a perforation for the transmission of vessels, nerves, etc.

A sinus is an air-cavity within a bone or bones; it is lined with mucous membrane and communicates with the exterior.

Other terms, such as **canal, fissure, notch, etc.**, require no explanation.

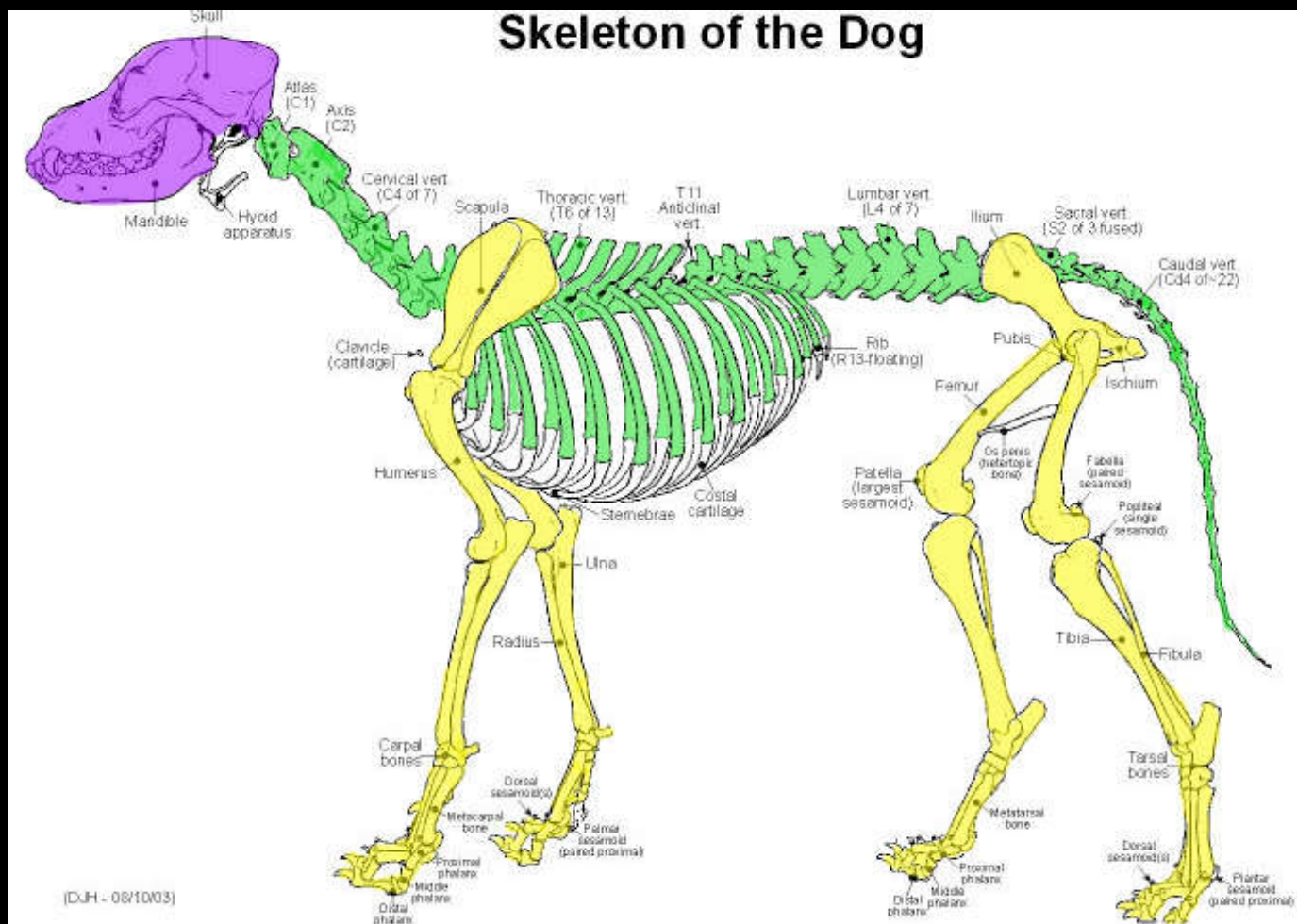
Osteology I

Osteology: The study of the bones that forms the skeleton of organisms.



- Function of the skeleton
 - Support the body
 - Levers for locomotion
 - Protect soft parts
 - Bone
 - Primary skeletal tissue
 - Mineral homeostasis (reserve of calcium, phosphate, and other ions)

- Bone Classification
 - Topographical
 - Cranial skeleton- purple
 - Postcranial skeleton
 - Axial Skeleton (trunk)- green
 - Appendicular skeleton (limbs)- yellow



**Equine Right Tibiae,
Caudal View**



- Shape
 - Long bones
 - 3 primary ossification centers (1 diaphysis and 2 epiphyses)
 - Example: Humerus, Femur

Long Bones



Whale



Equine



Sea turtle



Alligator



Dog

- Shape
 - Short bones
 - Usually a single center of ossification
 - Example: carpals and tarsals



Equine left carpus, cranial view



**Equine left
Thoracic limb,
Lateral view**

– Shape

- Flat bones

- No uniformity in development

- Example: scapula, pelvis, skull bones

Flat Bones



**Bovine left
Scapula,
Medial view**



**Bovine left
Scapula,
Lateral view**

- Shape

- Irregular bones

- No uniformity in development