SNS COLLEGE OF ALLIED HEALTH SCIENCE

Affiliated to The Tamil Nadu Dr MGR Medical University, Chennai

DEPARTMENT OF CARDIOPULMONARY PERFUSION CARE TECHNOLOGY

COURSE NAME: Anatomy

UNIT II – Anatomy of Bones

TOPIC: Clavicle

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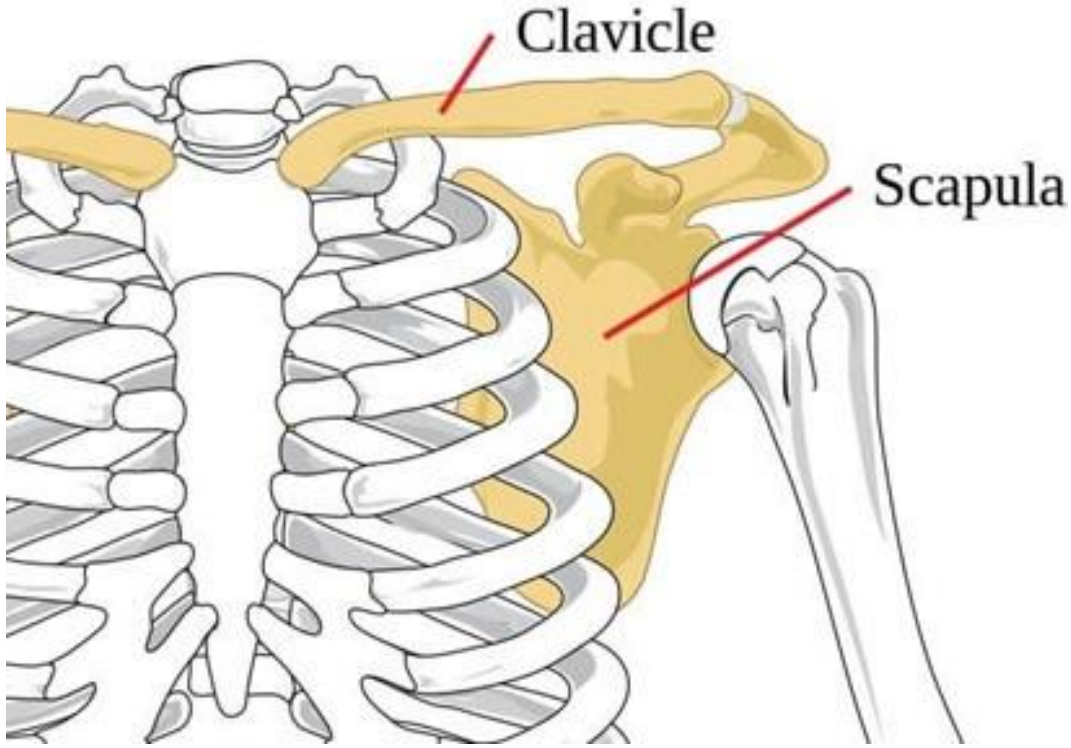
Introduction to the Clavicle

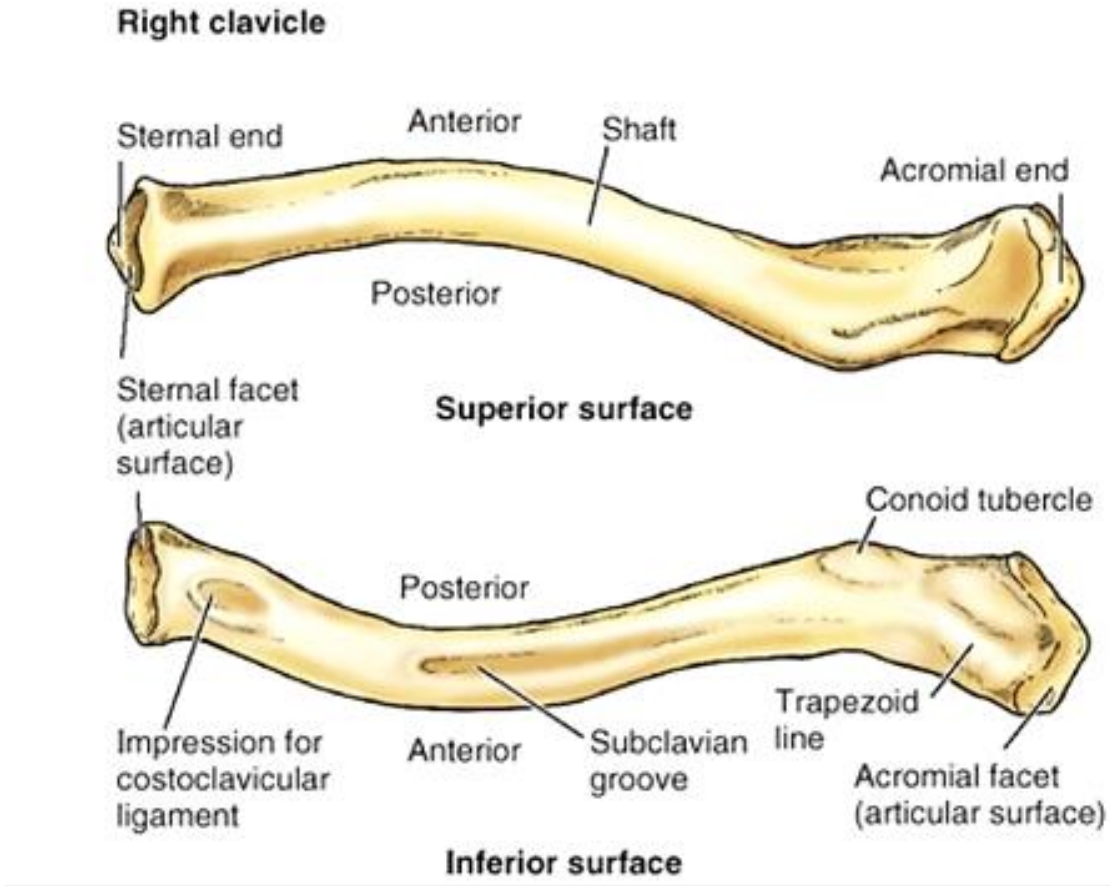
- The clavicle, or collarbone, is the only long bone lying horizontally in the body and is subcutaneously palpable.

- It connects the axial skeleton (sternum) to the appendicular skeleton (scapula), forming the pectoral girdle



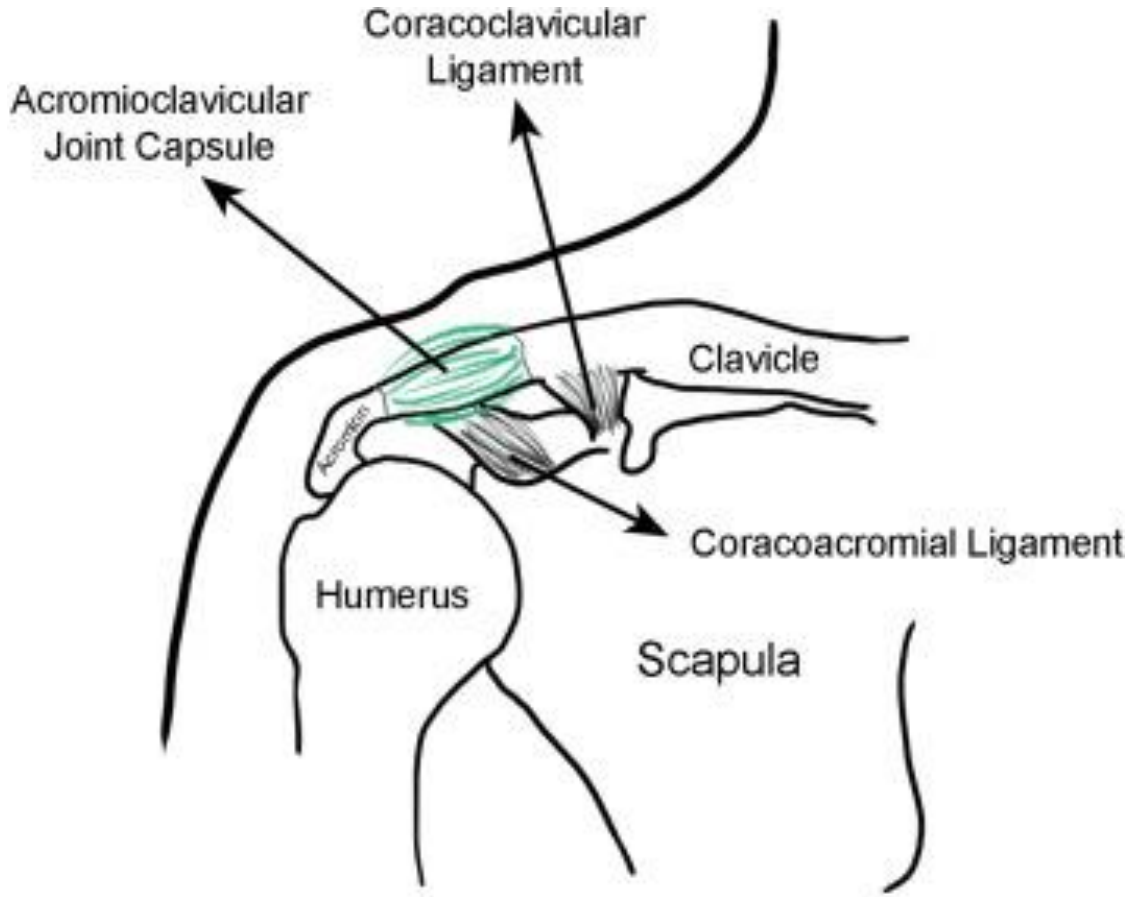
Shape and Structure

- The clavicle is S-shaped with a convex medial end and concave lateral end.
- It has a cylindrical shaft, divided into medial two-thirds and lateral one-third.



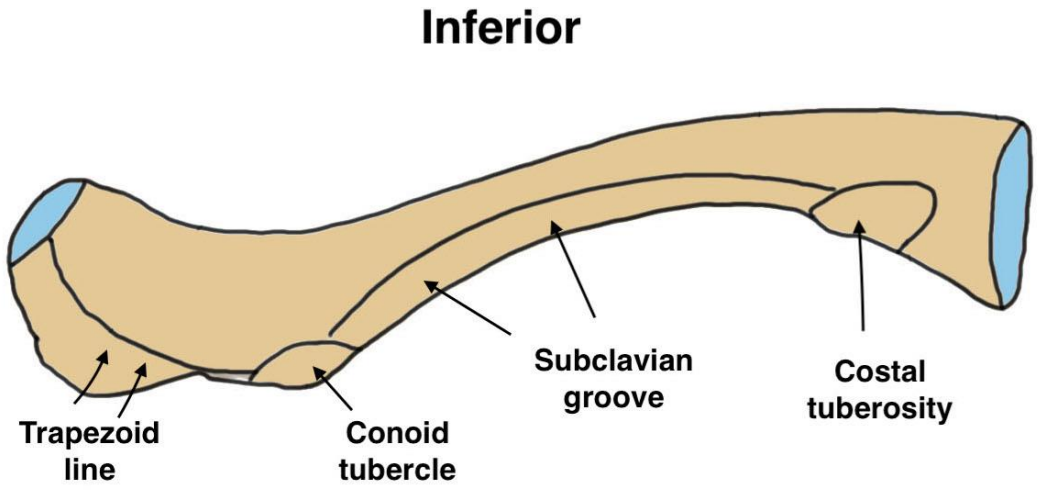
Articulations

- **Medial end:** Articulates with the manubrium of the sternum, forming the sternoclavicular (SC) joint.
- **Lateral end:** Articulates with the acromion of the scapula, forming the acromioclavicular (AC) joint.



Parts of the Clavicle

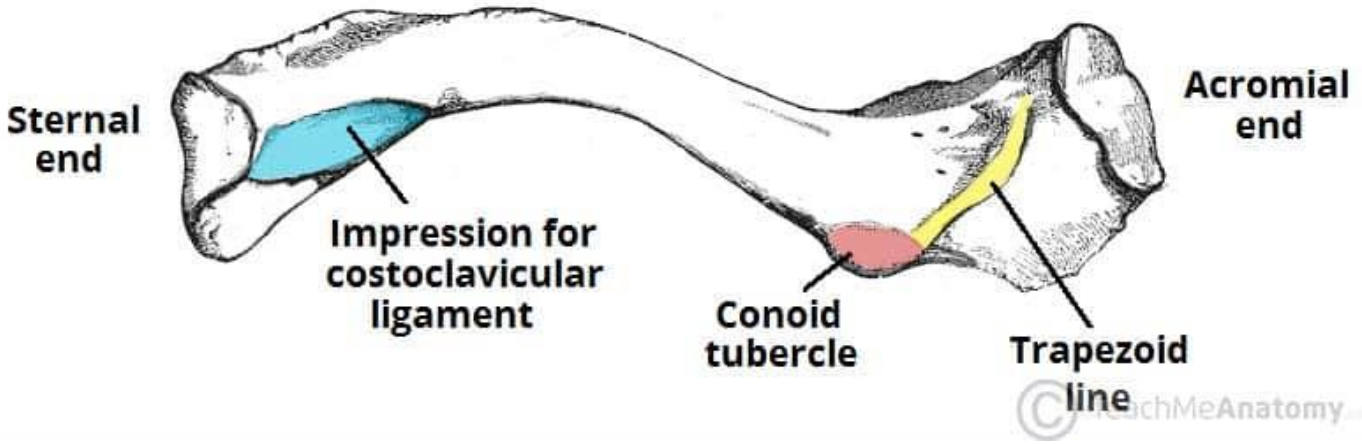
- **Medial (sternal) end**: Enlarged, articulates with sternum.
- **The costal tuberosity**, located at the sternal end of the bone. It is distinguished as a broad rough surface over 2 cm in length
- **Lateral (acromial) end**: Flattened, articulates with acromion.
- **Conoid tubercle** – attachment point of the conoid ligament, the medial part of the coracoclavicular ligament.



Parts of the Clavicle

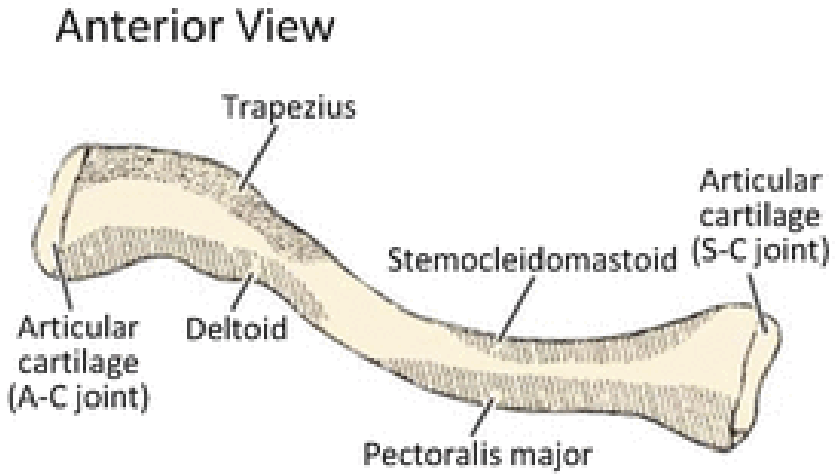
- **Trapezoid line** – attachment point of the trapezoid ligament, the lateral part of the coracoclavicular ligament.

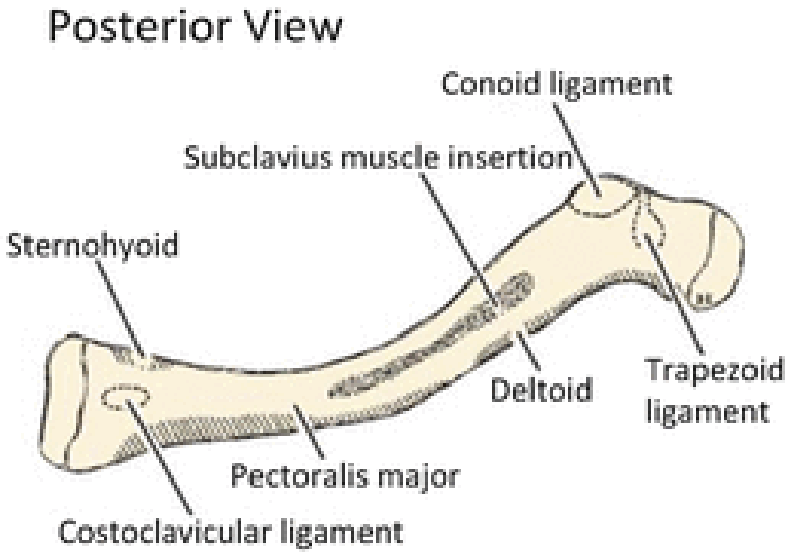
- **Shaft:** Divided into medial and lateral thirds; the junction is the weakest point and most common site of fracture



Muscle Attachments

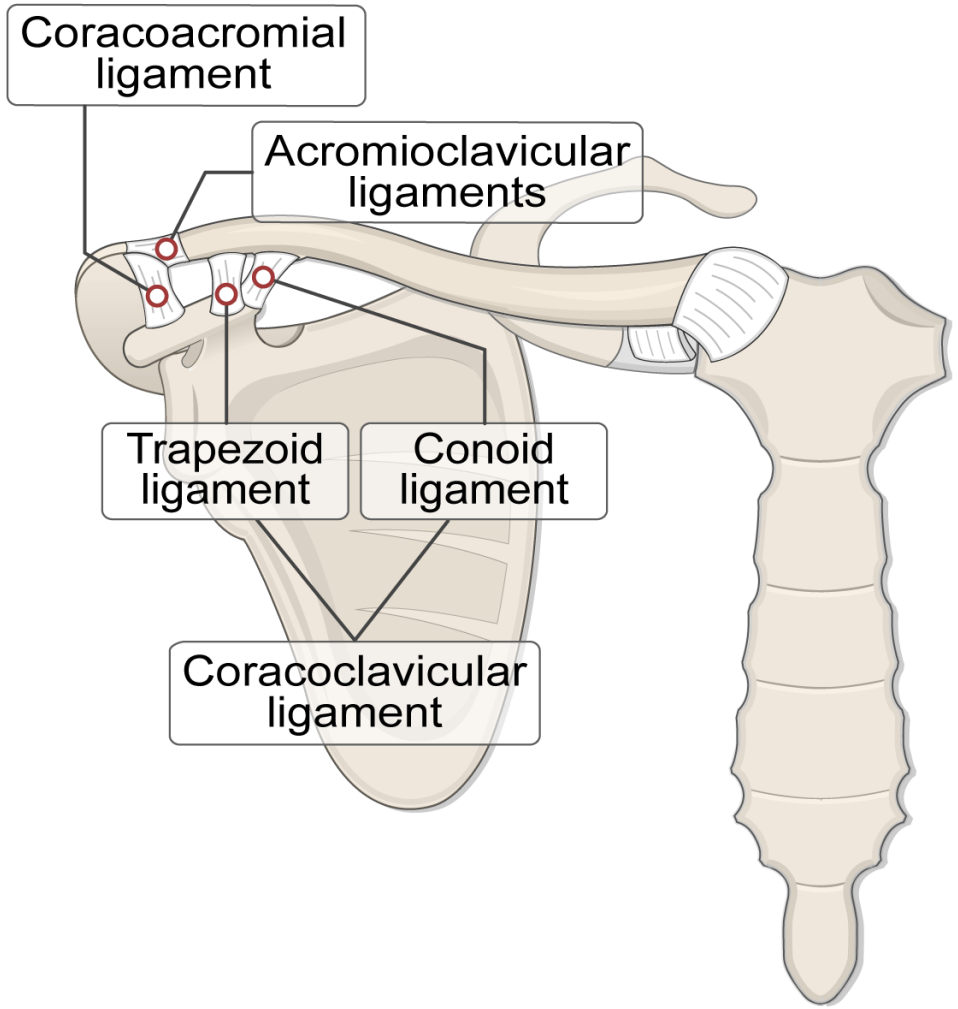
- **Medial third:** Attachments for sternocleidomastoid, deltoid, and pectoralis major.
- **Lateral third:** Attachments for deltoid, trapezius, and subclavius.





Ligamentous Attachments

- **Sternoclavicular ligament**: Stabilizes sternoclavicular (SC) joint.
- **Acromioclavicular ligament**: Stabilizes AC joint.
- **Coracoclavicular ligament:** Consists of trapezoid and conoid ligaments, providing vertical stability to the AC joint.

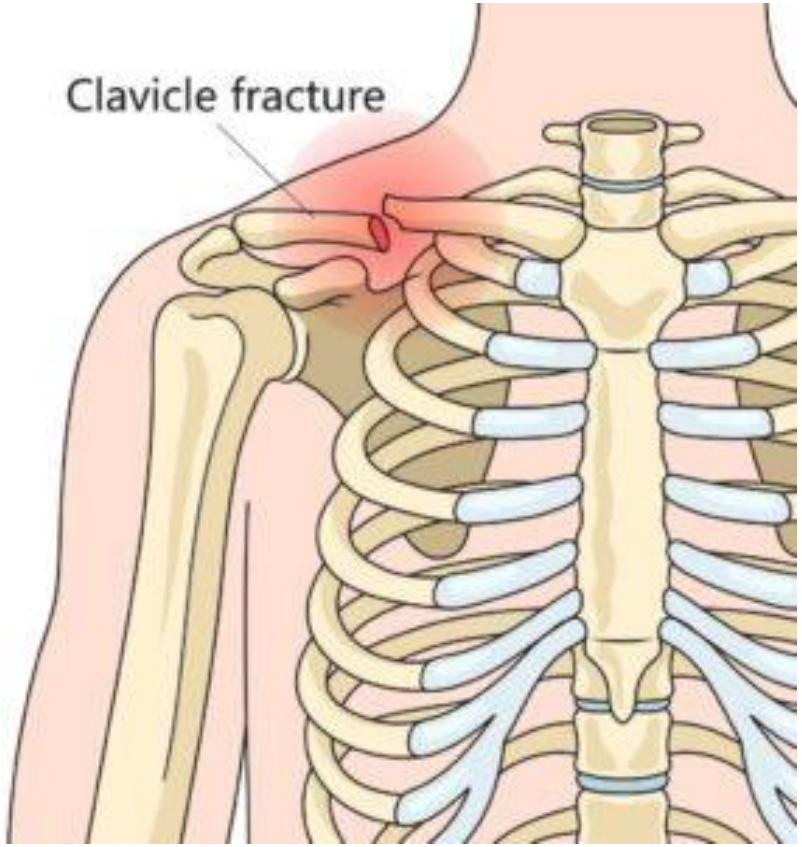


Functions of the Clavicle

- Supports the shoulder, allowing maximum range of arm movement.
- Acts as a brace, transmitting weight and impacts from the upper limb to the axial skeleton.
- Protects underlying neurovascular structures (brachiocephalic trunk, internal jugular vein, vagus nerve).

Clinical Significance

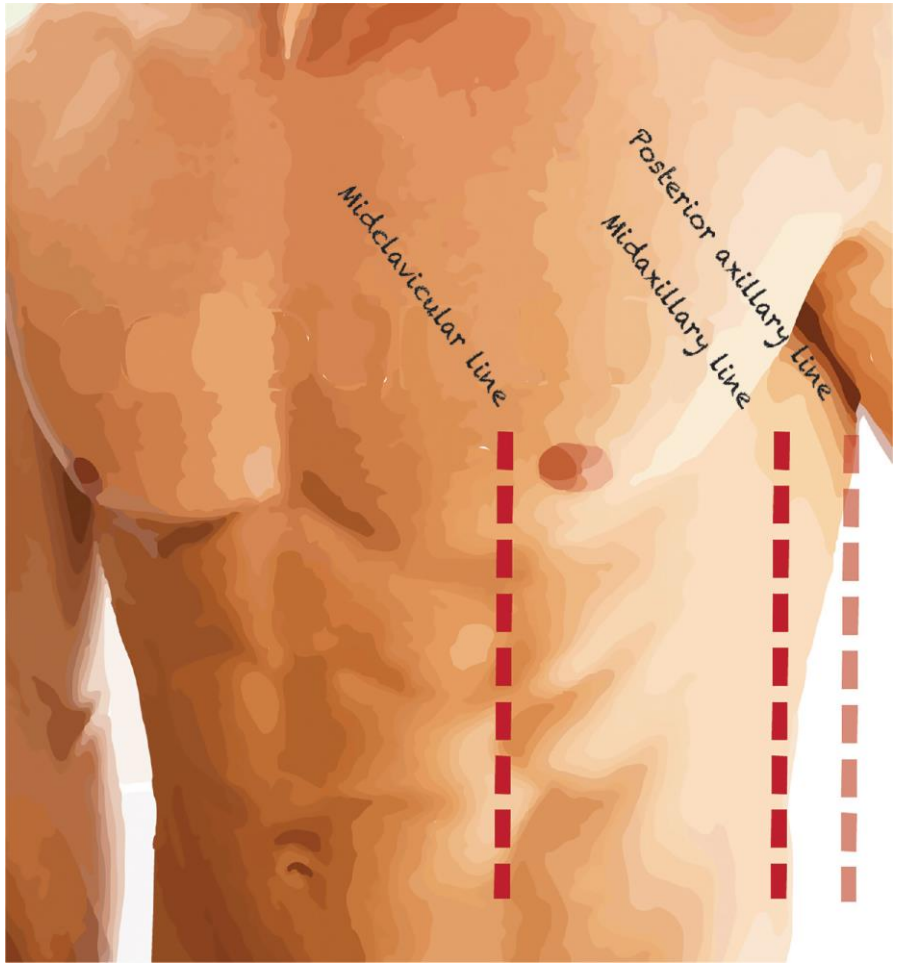
- **Fractures:** Most common in the middle third due to trauma; can lead to displacement and functional impairment.
- **Dislocations:** AC joint dislocation ("shoulder separation"), SC joint dislocation.
- **Osteolysis:** Degenerative changes, often in athletes



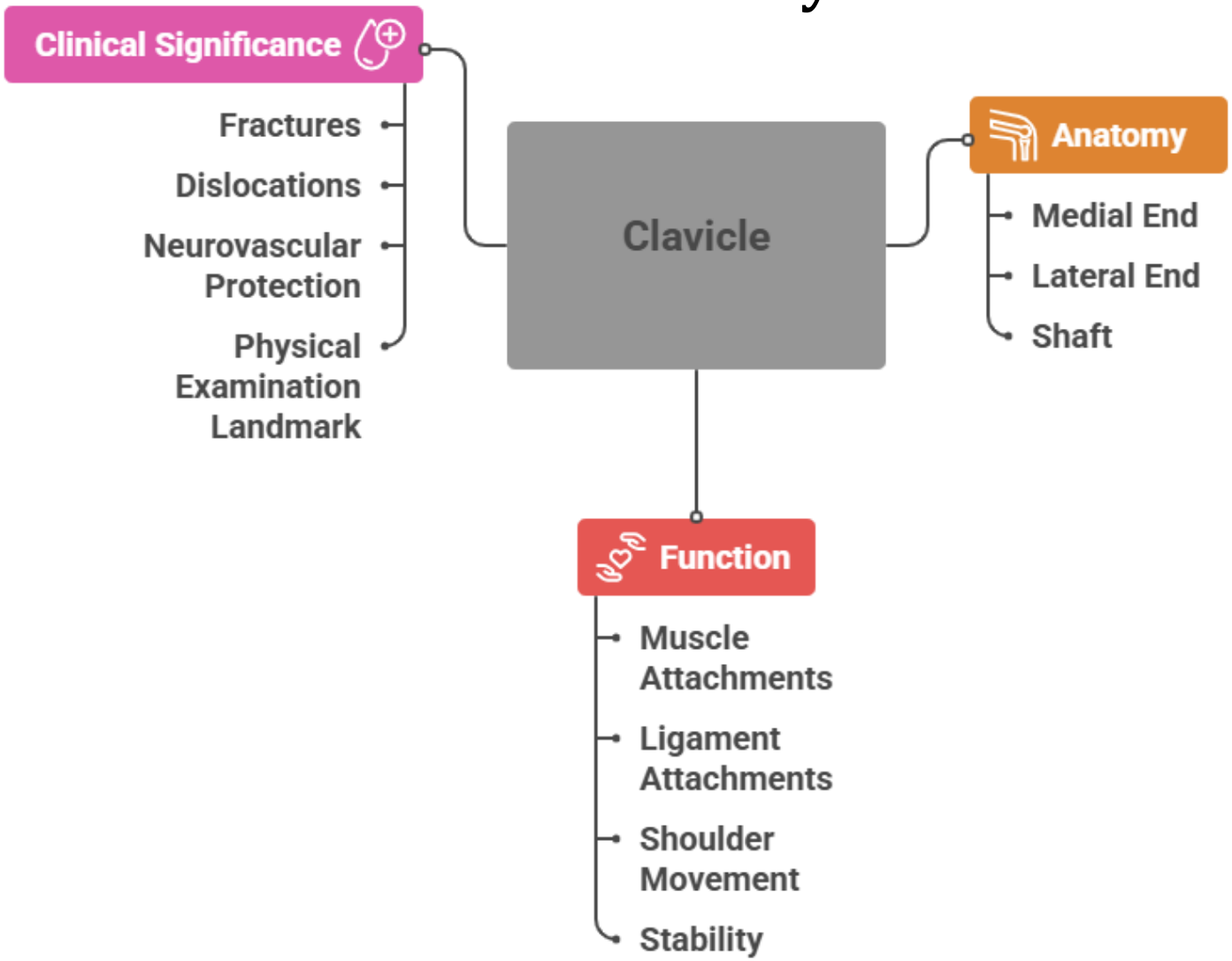
Clinical Applications and Landmarks

- **Mid-clavicular line:** Used as a landmark for cardiac apex beat, liver size, and gallbladder location.

- **Surgical relevance:** Operative management (plate/screw fixation) improves short-term outcomes in clavicle fractures.



Summary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Shoulder Movement
Stability

References

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THANK YOU