ANATOMY OF CLAVICLE

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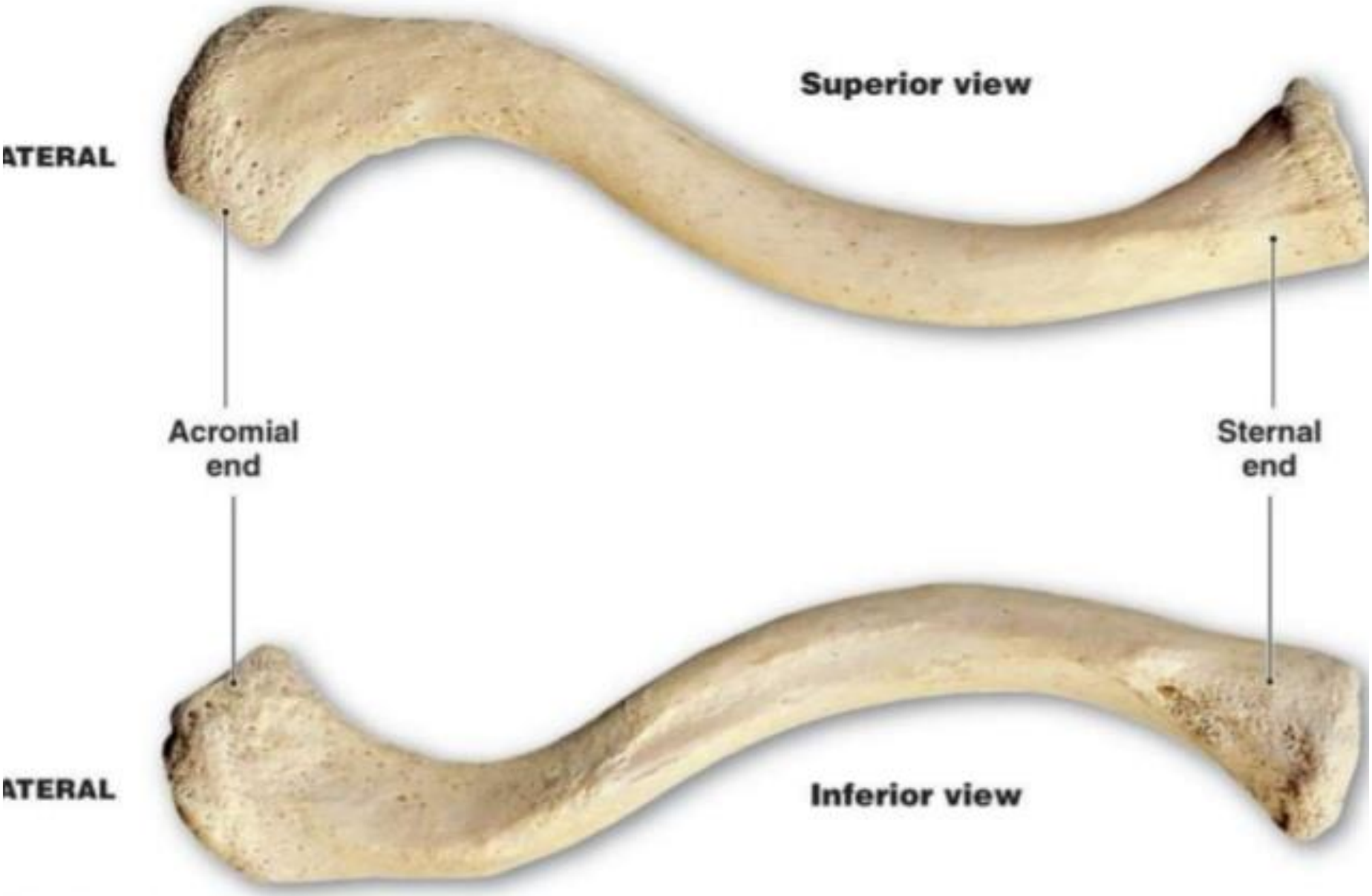
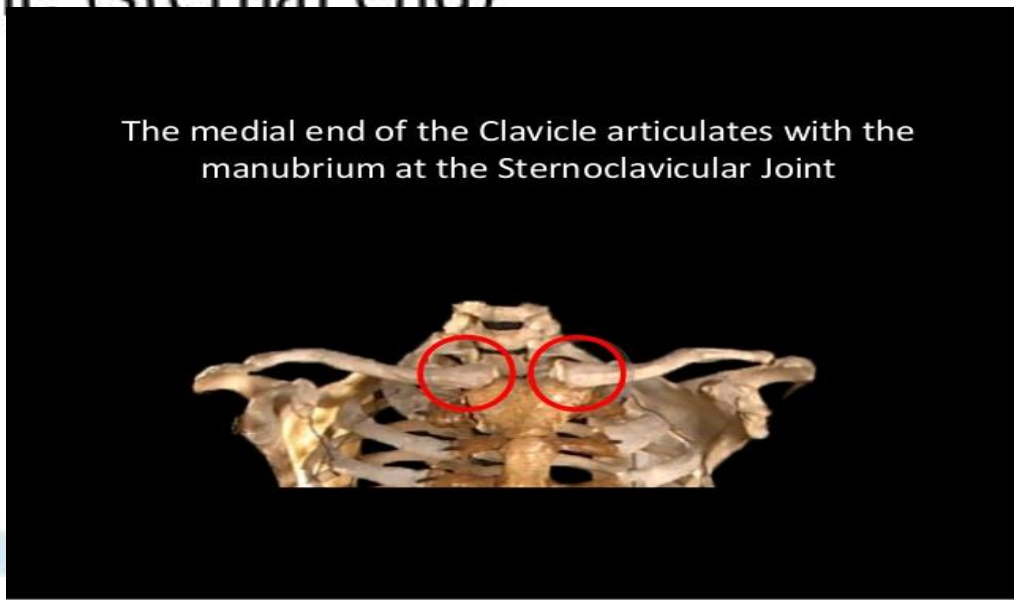
wo views of the right clavicle

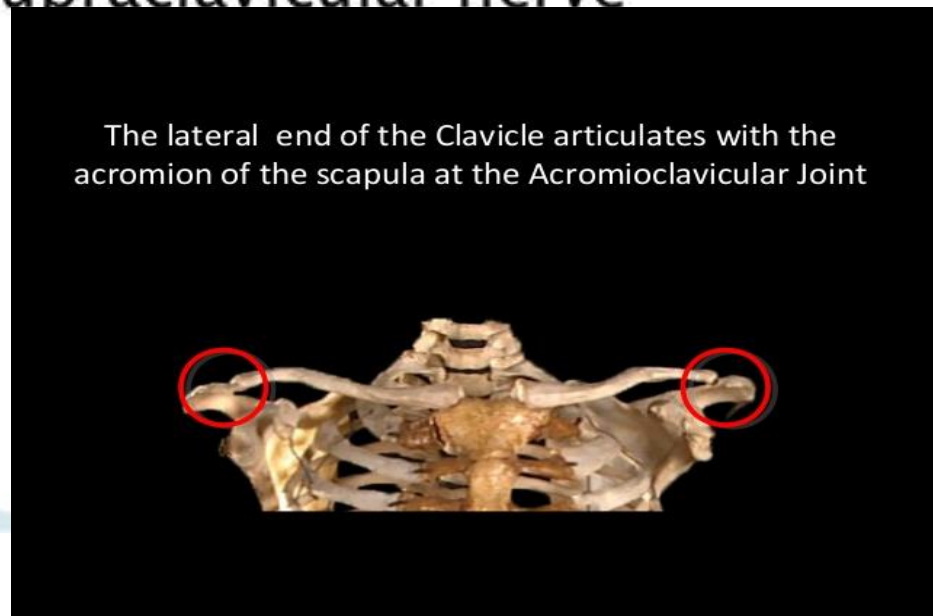


Clavicle

- Latin , it means small key
- modified long bong placed horizontally
- Has a cylindrical part called shaft
- Medial end articulates with the clavicular notch of manubrium sterni to form sternoclavicular joint (sternal end)



- Lateral end articulates with the acromion process to form the acromioclavicular joint
- No medullary cavity
- First bone to start to ossify (membrane)
- Two primary centre of ossification
- Pierced by the middle supraclavicular nerve



- Support the shoulder so that the arm can swing clearly away from the trunk.
- Receive the weight of the weight of upper limb via lateral one third through the coracoclavicular ligament
- Transmit weight of upper limb the axial skeletal via medial 2/3 part

Side determination

- Lateral end = flat
- Medial end = large and quadrilateral
- Shaft is curved slightly
- Medial 2/3 = convex forwards
- Lateral 1/3 = concave forwards
- Inferior surface is grooved longitudinally in its medial third

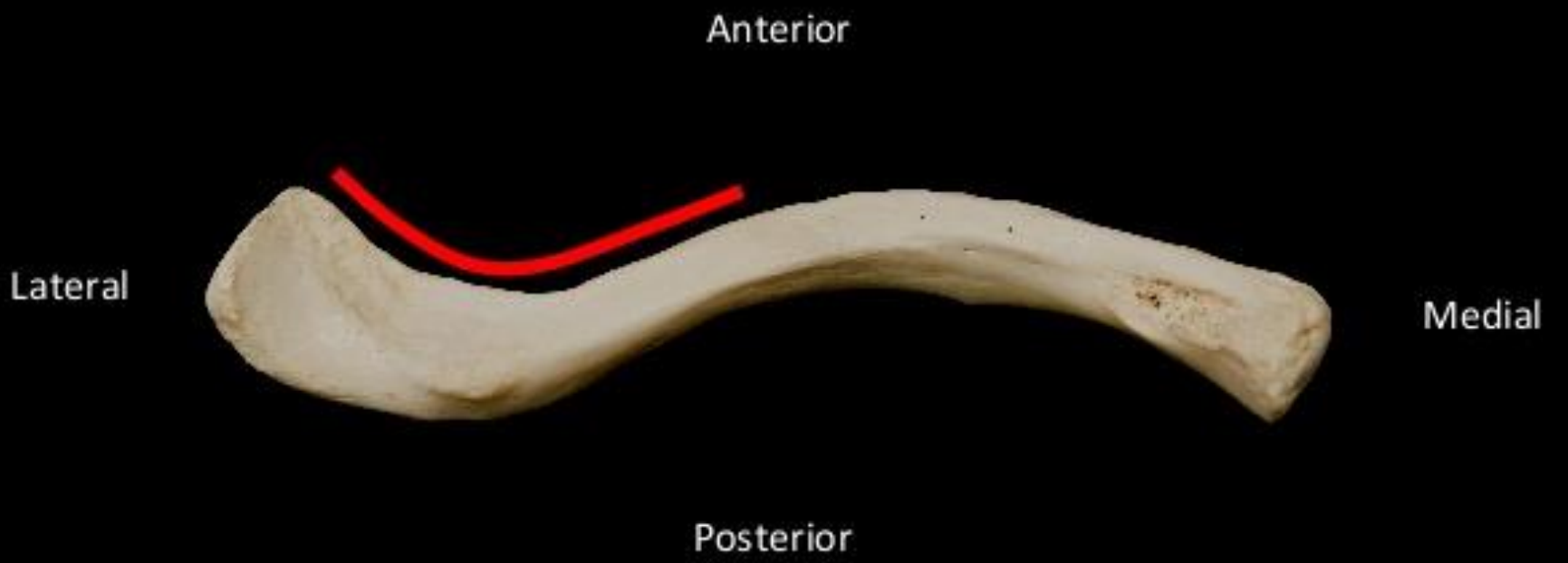
The Clavicle is divided into thirds along its length

Undersurface of Right Clavicle

The lateral third is flattened and expanded

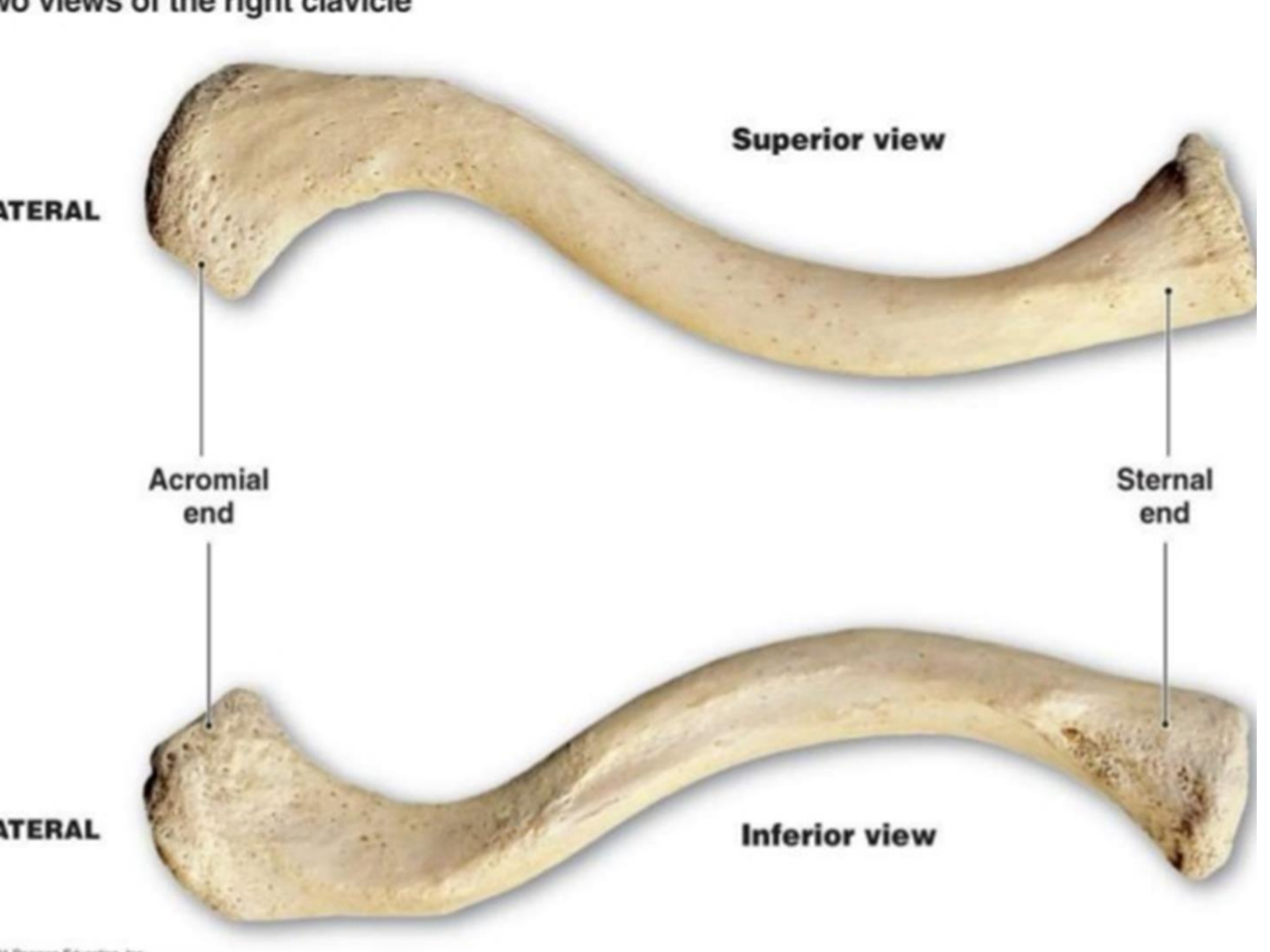
Undersurface of Right Clavicle

The Clavicle is concave forwards at its lateral end



Lateral 1/3rd

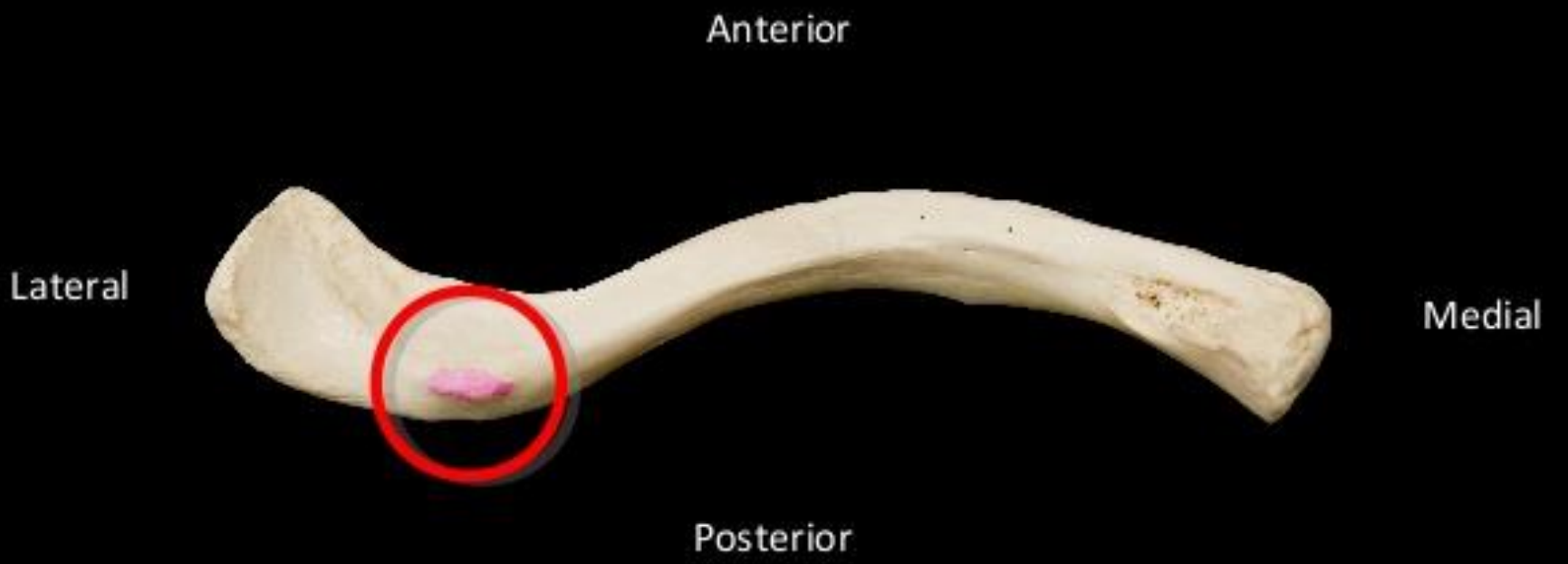
- 2 border , anterior (concave forward) and posterior (convex backward)
- 2 surface , superior (subcutaneous) and inferior (conoid tubercle and trapezoid ridges)
- Origin in anterior border = deltiod
- Insertion in posterior border = trapezius
- Conoid tubercle and trapezius ridges give attachment to coracoclavicular ligament


Superior view
ATERAL
Acromial end
Sternal end
ATERAL
Inferior view

This area gives attachment to the **Trapezoid** ligament

This is one of the two coracoclavicular ligaments that stabilise the acromioclavicular joint

This area gives attachment to the **Conoid** ligament



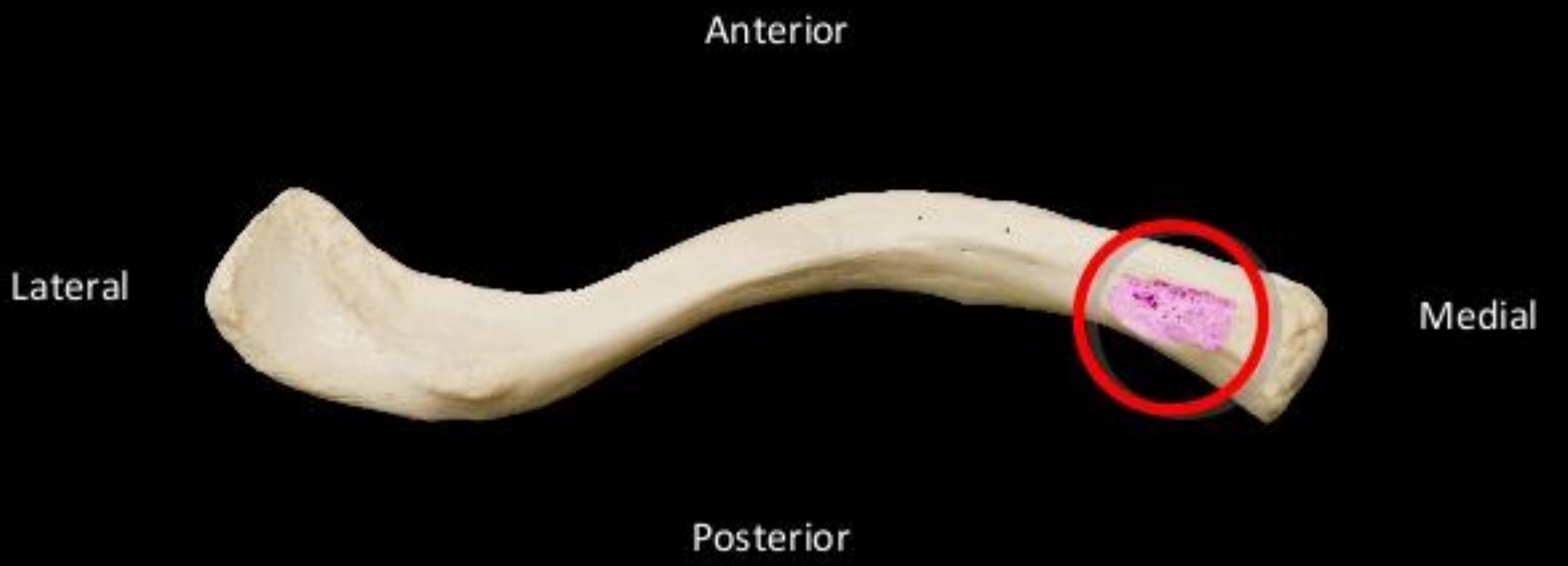
This is one of the two coracoclavicular ligaments that stabilise the acromioclavicular joint

The medial third is rounded

Undersurface of Right Clavicle

The Clavicle is curved convex forwards at its medial end

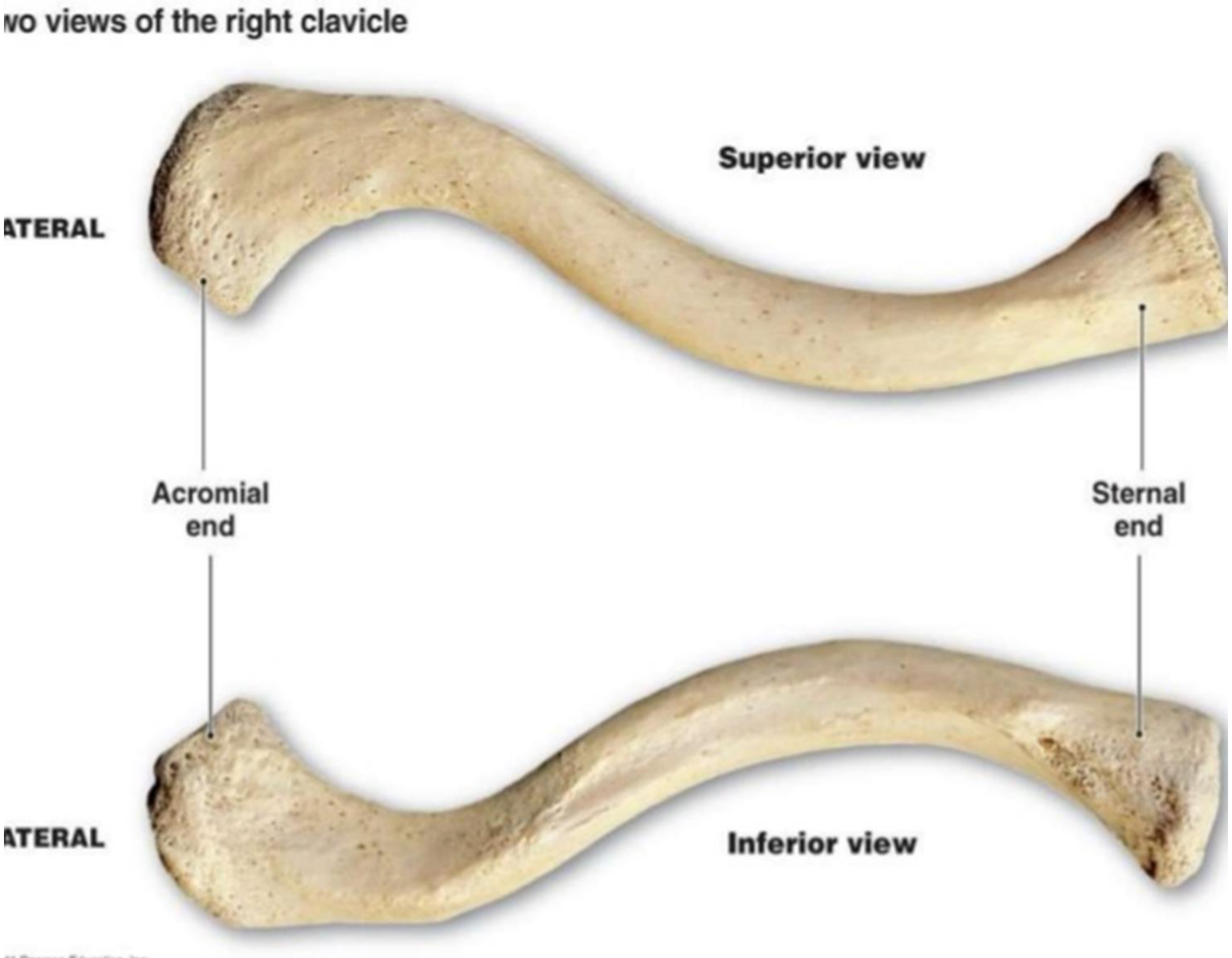
This area gives attachment to the costoclavicular ligament that arises from the first costal cartilage and first rib



It stabilises the sternoclavicular joint

Medial 2/3rd

- 4 surface , anterior (convex forward) , posterior (smooth) , superior (rough), inferior (rough oval impression)
- Lateral half of the inferior surface = subclavian groves
- Nutrient foremen lies at the lateral end of grooves


wo views of the right clavicle
ATERAL
Superior view
Acromial end
Sternal end
ATERAL
Inferior view

- Anterior surface give origin to the pectoralis major
- Half of rough superior surface give origin to clavicular head of sternocleidomastiod
- Oval impression on the inferior surface gives attachment to costoclavicular ligament
- Posterior surface close to medial end gives origin to sternohyoid muscle

- Subclavian grooves is for insertion of subclavius muscle.
- Subclavian vessel and cord of brachial plexus pass toward the axilla lying between the inferior surface of clavicle and upper surface of 1st ribs.

Summary of Muscles that attach to Clavicle

Deltoid

Pectoralis Major

Subclavius

Sternohyoid

Sternocleidomastoid

Trapezius

Clinical aspect

- Fracture by falling on the outstreched hand
- Common site of fracture is junction between the two curvature of the bone (weakest point)
- Lateral fragment is displaced downward by the weight of limbs
- Cliedocranial dysostosis , clavicle may be congenitally absent or imperfectly developed

Fracture of clavicle

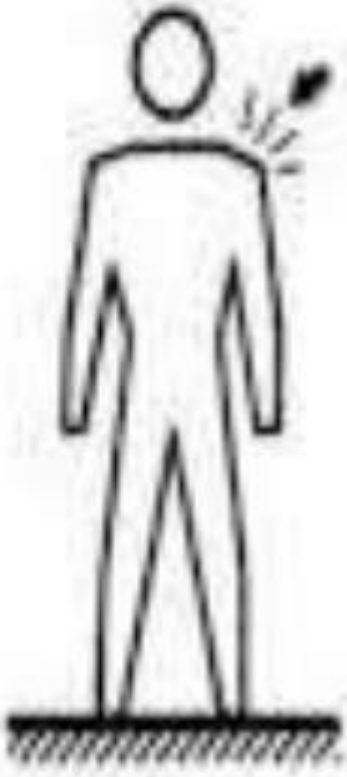
- Observed in 0,03-0,1% of newborns
- Possible with spontaneous delivery without aid from obstetric . Fracture form in the giant fetus, when pelvic present with fall back arm.
- Violent or weak uterine contraction, delayed exit of fetus shoulder, narrow pelvis of parturient women promote fractures. Always lead to right clavicle fracture.
- Subperiosteum fracture in the middle third of the clavicle without dislocation.
- Diagnosis: movement of the hand on the side of fracture is limited, there is a local swelling, the Moro reflex on the side of lesion is absent, crepitation during palpation

MECHANISM OF INJURY

a) Fall with arm out, onto hand.

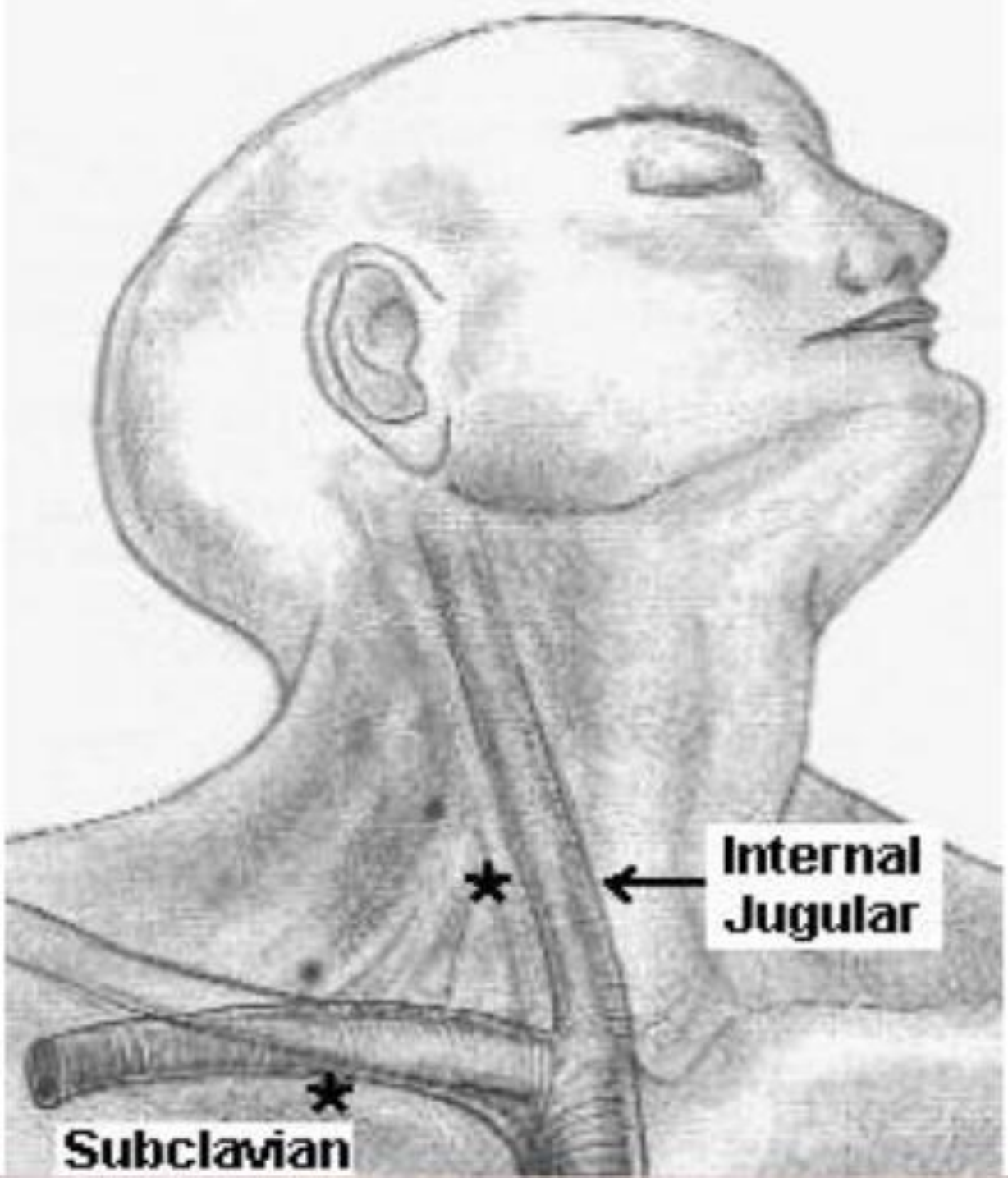
b) Fall onto shoulder.

c) Direct blow to shoulder.



Central Venous Line or Catheter

- A central venous catheter is a special IV line that is inserted into a large vein in the body. Several veins are used for central venous catheters including those located in the shoulder (subclavian vein), neck (jugular vein), and groin (femoral vein)


Internal
Jugular
Subclavian

PURPOSE

- These special IVs are used when the patient either does not have adequate veins in the arms or needs special medications and/or nutrition that cannot be given through the smaller arm veins.
- Serve as a guide of fluid balance in critically ill patients.
- Determine the function of the right side of the heart