



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

SHSS5062

Shoulder Arthrokinematics

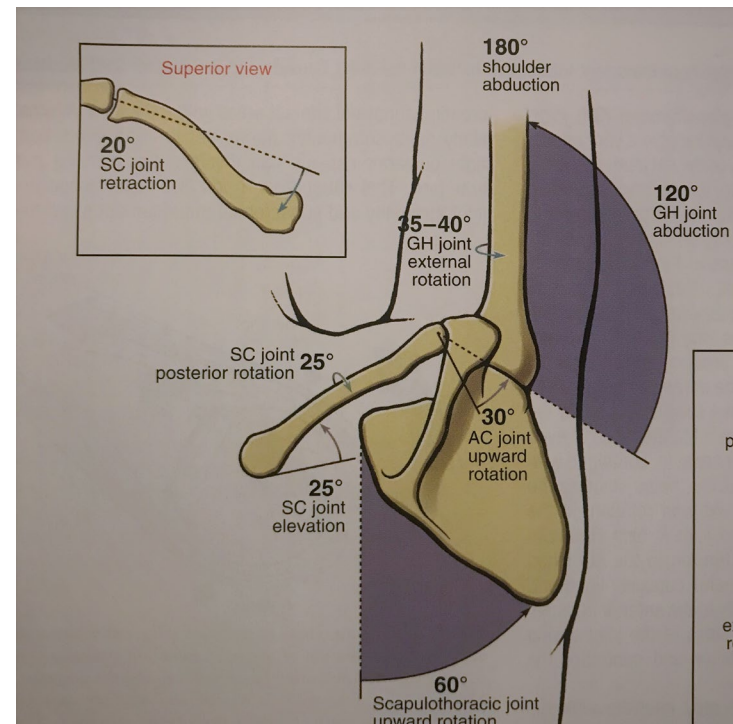
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Anatomy and Biomechanics

- *Glenohumeral Joint*
- *Acromioclavicular Joint*
- *Sternoclavicular Joint*
- *Scapulothoracic Joint (not a true joint)*



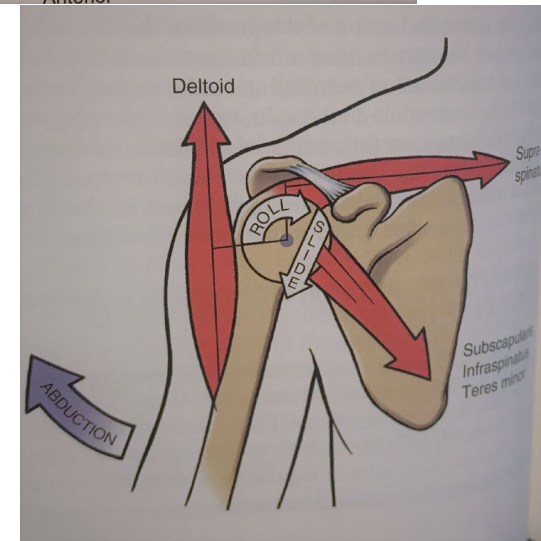
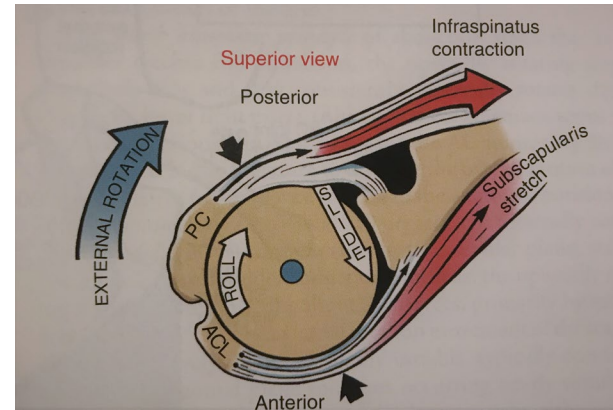
Glenohumeral Joint

- ***Osteokinematics***

- Flexion/Extension
- Abduction/Adduction
- Medial/ Lateral Rotation

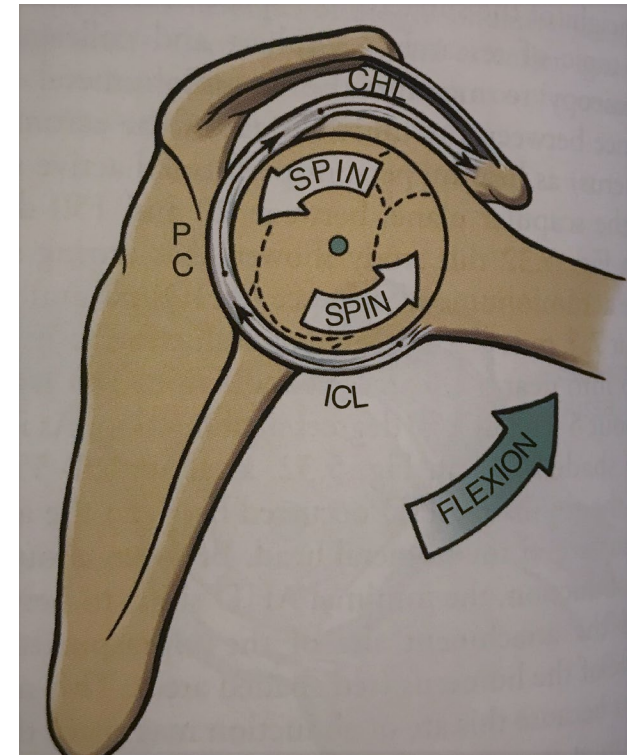
- ***Arthrokinematics***

- Spin (Flexion and Extension)
- Inferior glide (Abduction)
- Superior glide (Adduction)
- Posterior glide (Medial rotation)
- Anterior glide (Lateral rotation)



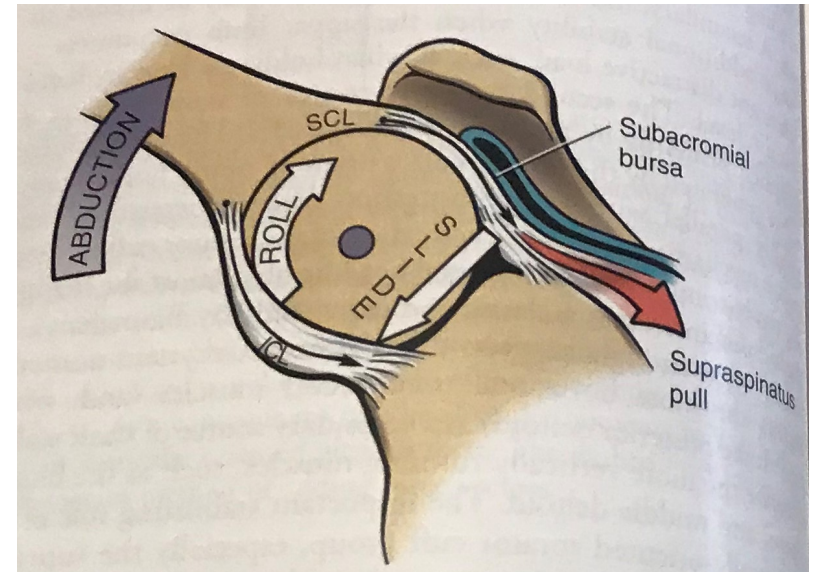
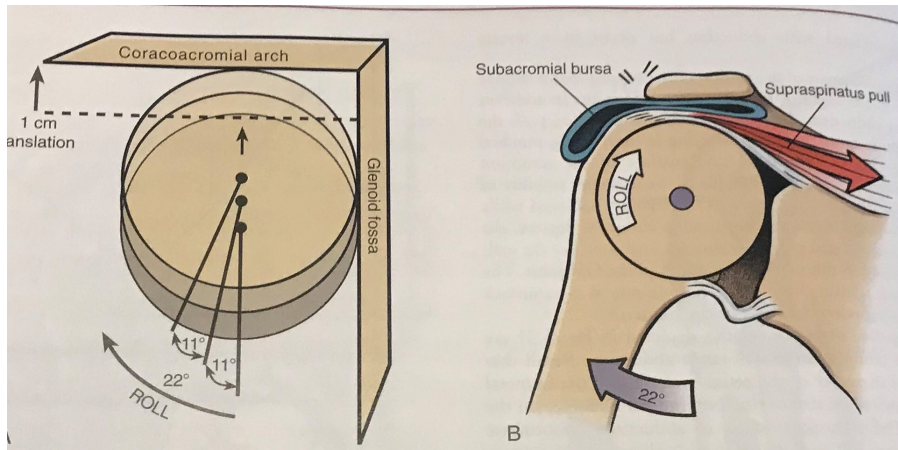
Glenohumeral Joint

- ***Arthrokinematics***
 - Spin (Flexion and Extension)



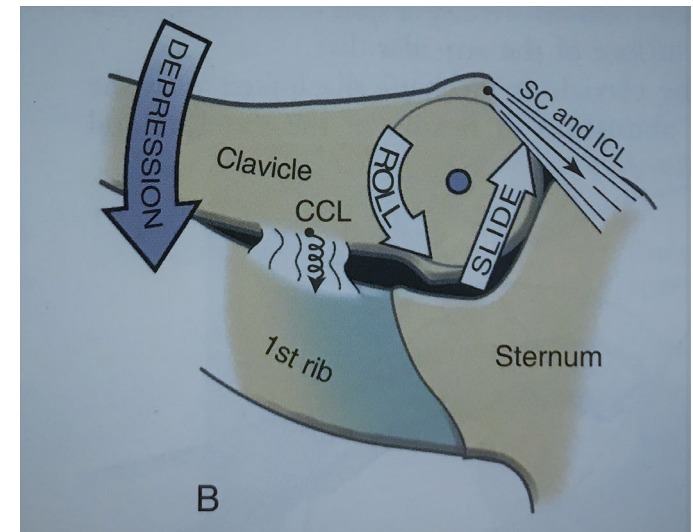
Glenohumeral Joint

- ***Arthrokinematics***
 - Spin (Inferior slide)



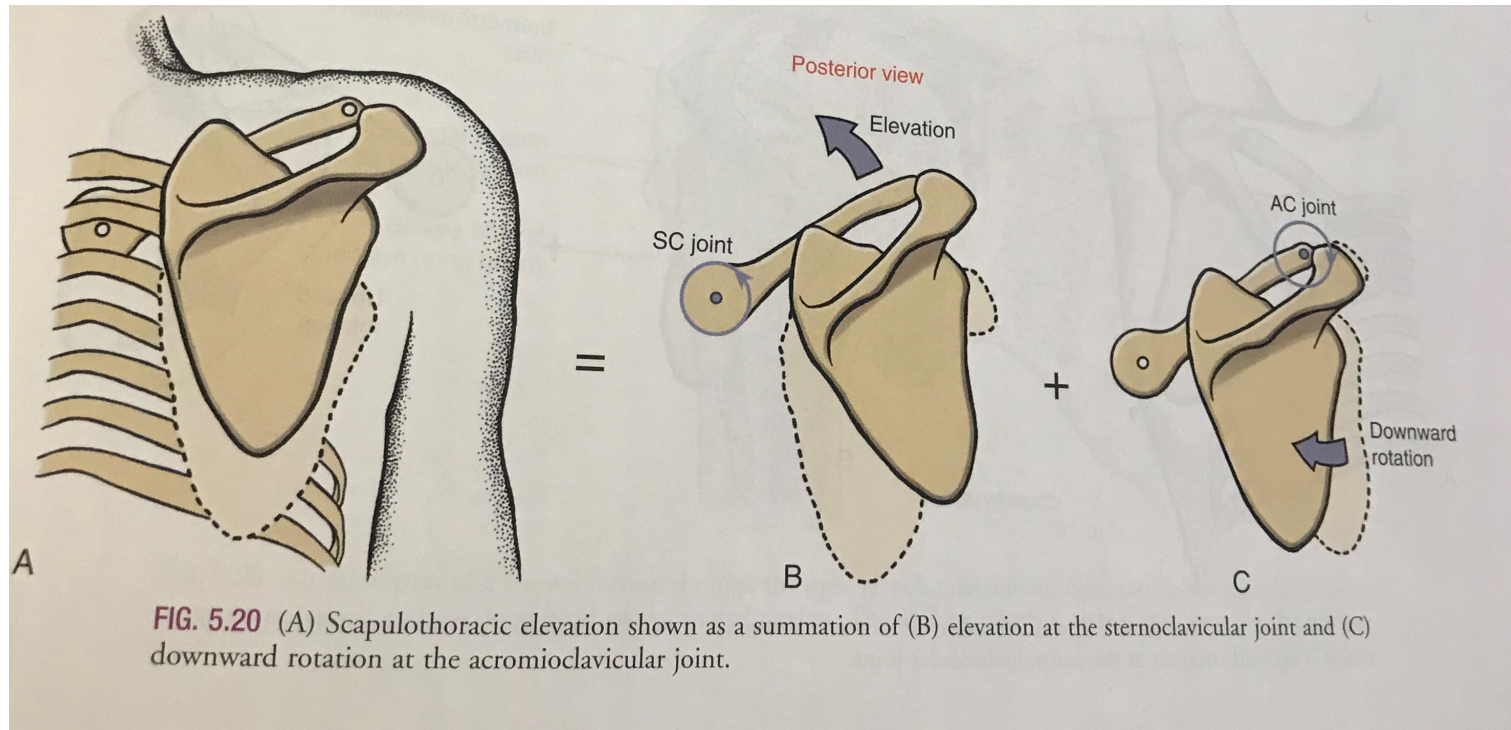
Acromioclavicular and Sternoclavicular Joints

- ***Osteokinematics***
 - Flexion/Extension
 - Abduction/Adduction
 - Medial/ Lateral Rotation
- ***Arthrokinematics***
 - Posterior/ anterior spin
 - Inferior/ superior spin
 - Anterior/ posterior glide



Acromioclavicular and Sternoclavicular Joints

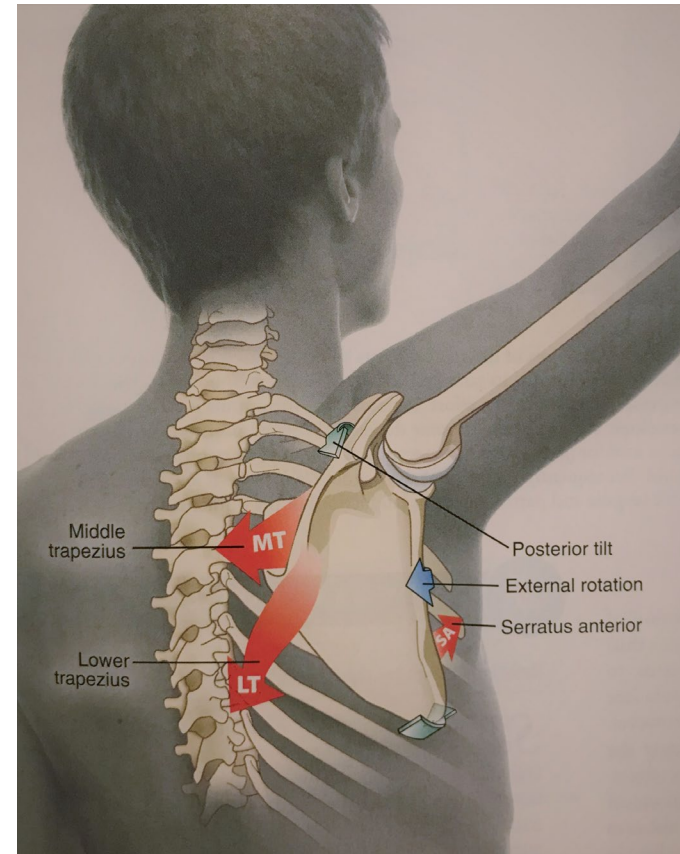
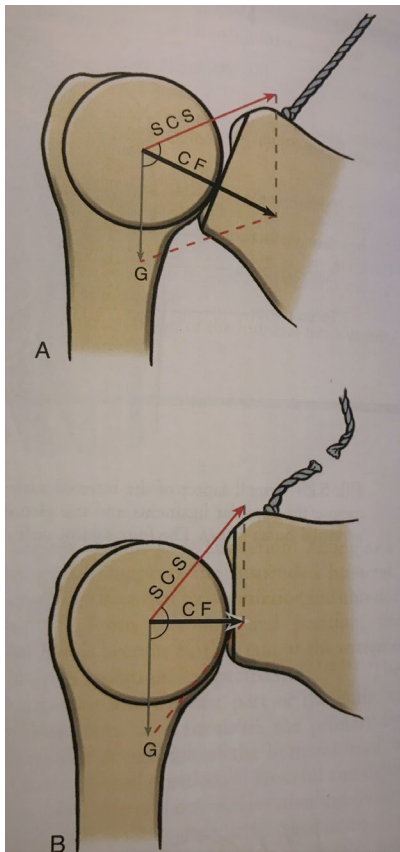
- ***Arthrokinematics***



Scapulothoracic Joint

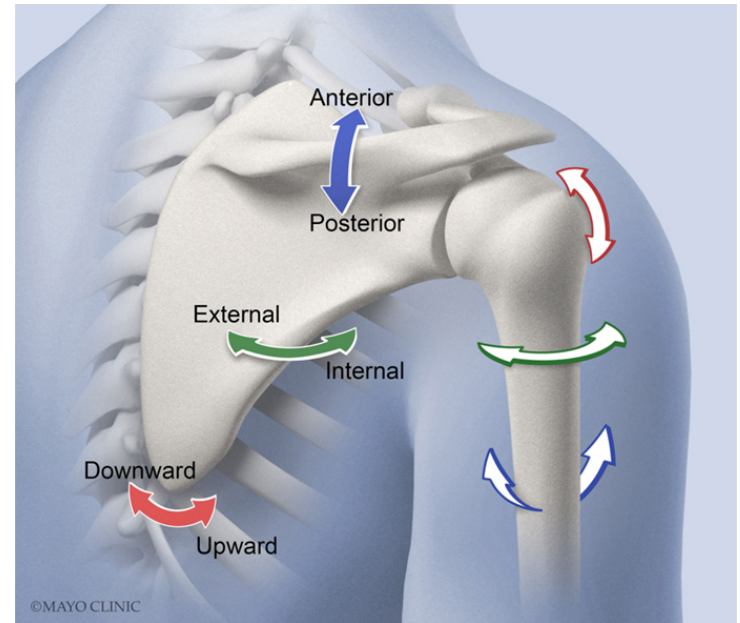
- ***Scapulothoracic complex movements***
 - Elevation and protraction = anterior elevation
 - Elevation and retraction = posterior elevation
 - Depression and protraction = anterior depression
 - Depression and retraction = posterior depression

Scapulothoracic Joint



Shoulder and the Thoracic Spine

- During flexion 1/2nd ribs descend
- During flexion 4-6th ribs ascend
- 3rd rib is an axis



Key components of shoulder arthrokinematics

- Appropriate joint/ accessory movement individually through the shoulder complex (TSp, CSp, SCJ, ACJ and GHJ)
- Optimal neuromuscular function (major focus on position of the joints to allow appropriate function force production).