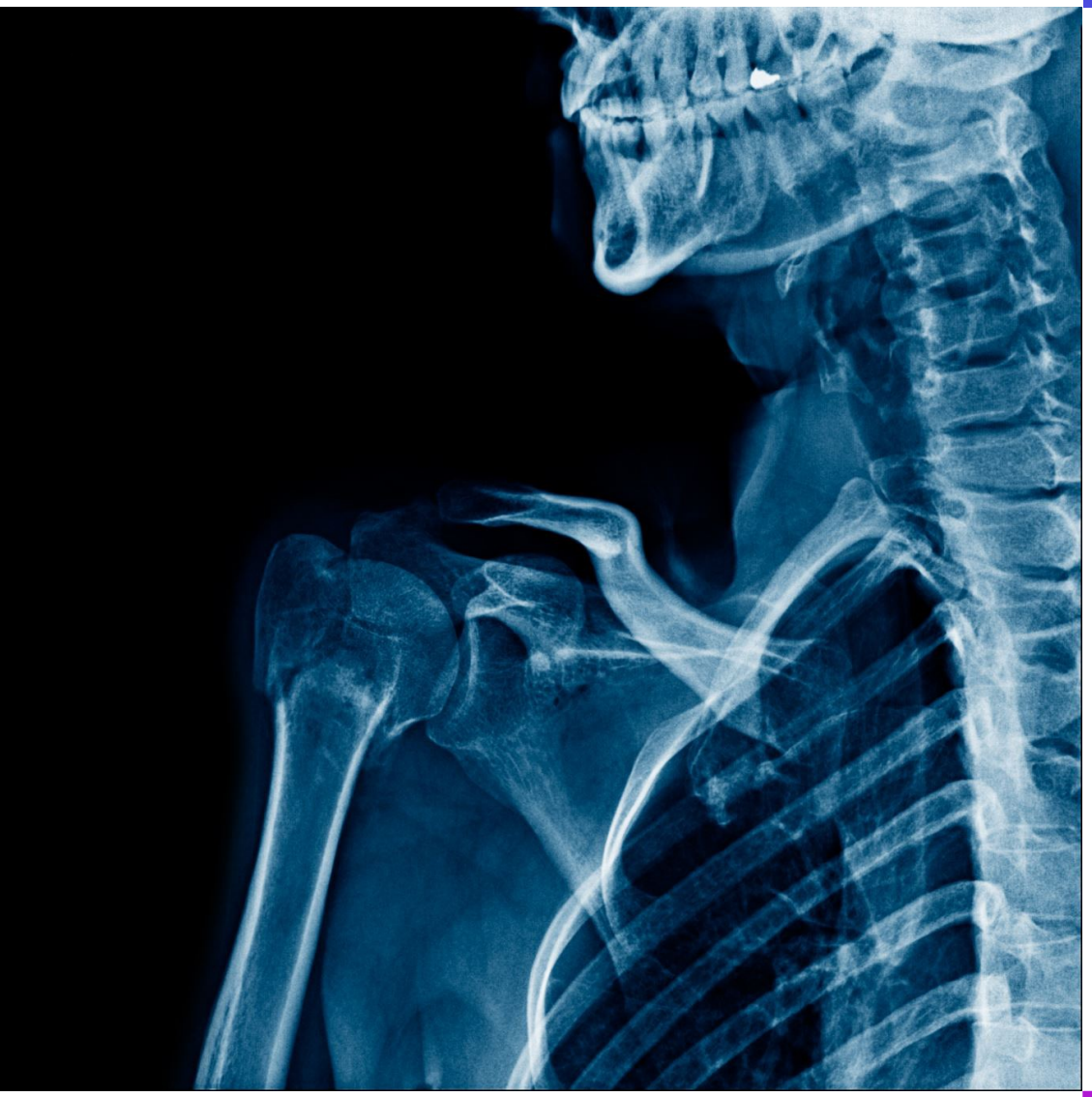
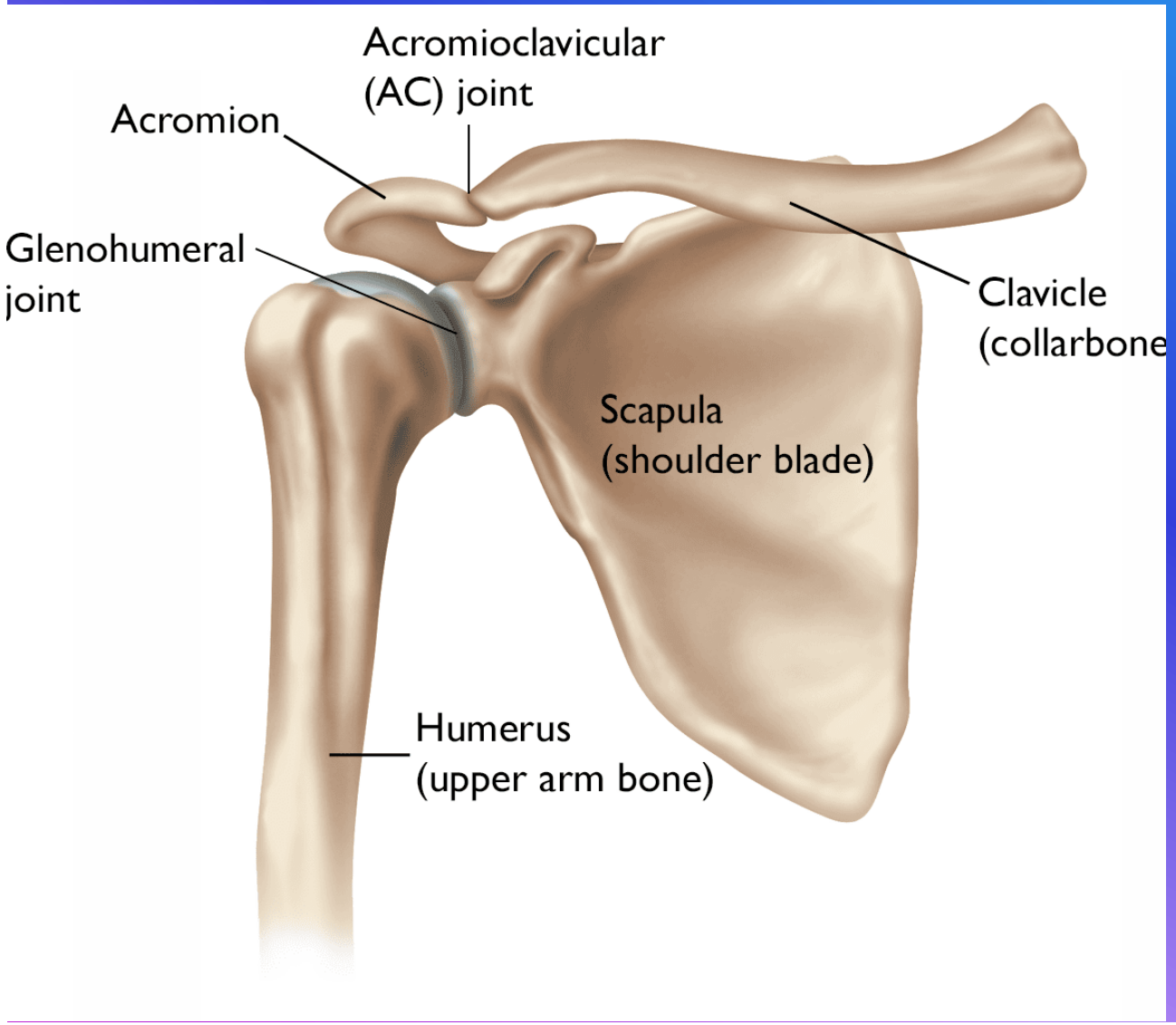


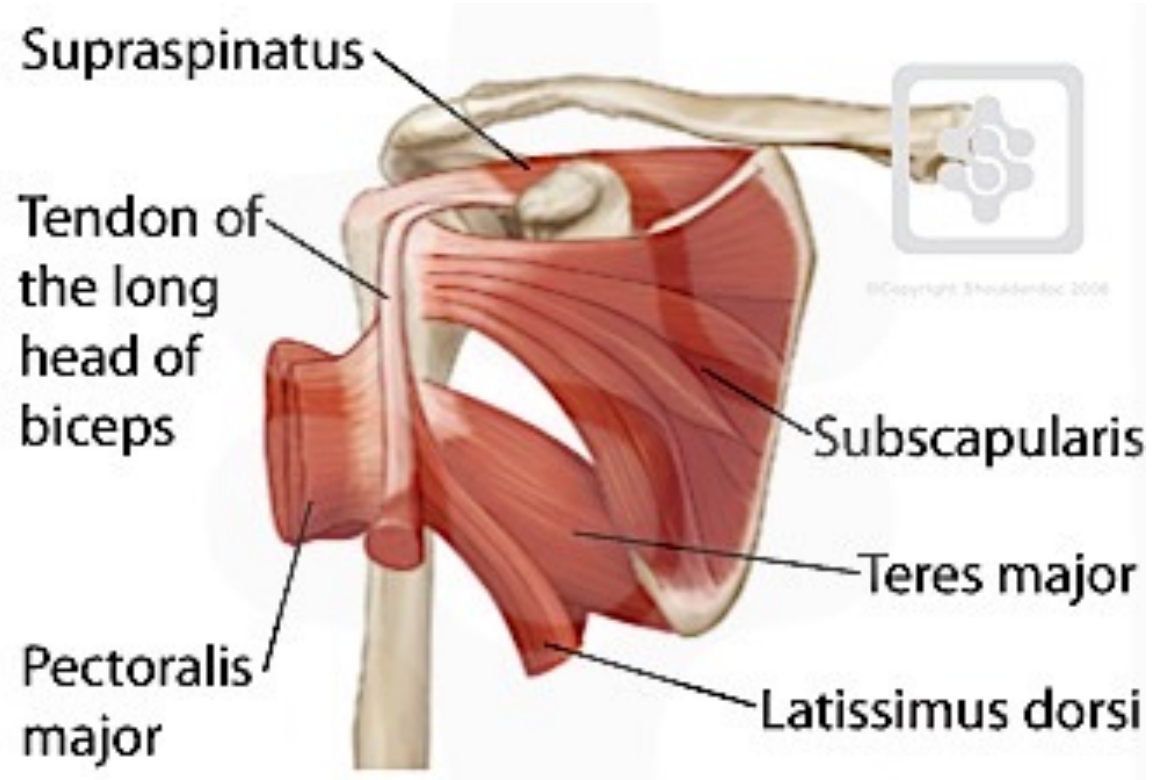
Shoulder Clinic for Swimmers

Mel MacPherson BSc PT
Registered Physiotherapist

Shoulder Anatomy



Shoulder Anatomy



Shoulder Joints

- **Glenohumeral joint** (ball & socket) – shallower then hip joint, allows for movement in all planes, requires ++ muscle control

- **Scapulothoracic** – shoulder blade gliding on rib cage, needs to glide nicely for full range of motion. If not it increases forces through GH joint

Prevalence of Shoulder Injuries in Swimming

- Shoulder pain is the most frequent orthopaedic injury in swimmers, with a reported prevalence **between 40% and 91% in elite swimmers** (Physiopedia)

- Of the 91% in the meta analysis, 84% of these swimmers had positive impingement signs and 69% demonstrated supraspinatus tendinopathy on MRI

- Swimmers likely under report shoulder pain as Hibberd (2013) indicated that only 14% with pain have been to a Physician or PT while 47% of this group use pain medication weekly for controlling shoulder pain

What is “swimmers shoulder?”

- Broad based term like ‘runners knee’, pain in the shoulder area (anterolateral) that results from swimming
- Technical term-’*impingement syndrome*’
- Repetition of swimming (1 hr w/o = 3000m ->12 strokes/25m = 1440 rotations total or 720 rotations per arm against resistance)
- Tendons around the shoulder become inflamed, get “pinched” or pressure from bones, leads to further inflammation, pain, weakness and breakdown of tissues
- Can lead to microtrauma and non traumatic tearing of tendons

What increases the risk of swimmers shoulder?

Poor technique

-*recovery*: elbow too close to ear

-*entry*: cross over, too wide, thumb down

-*catch*: make sure bent elbow, focus on large muscles (lats) to propel forward

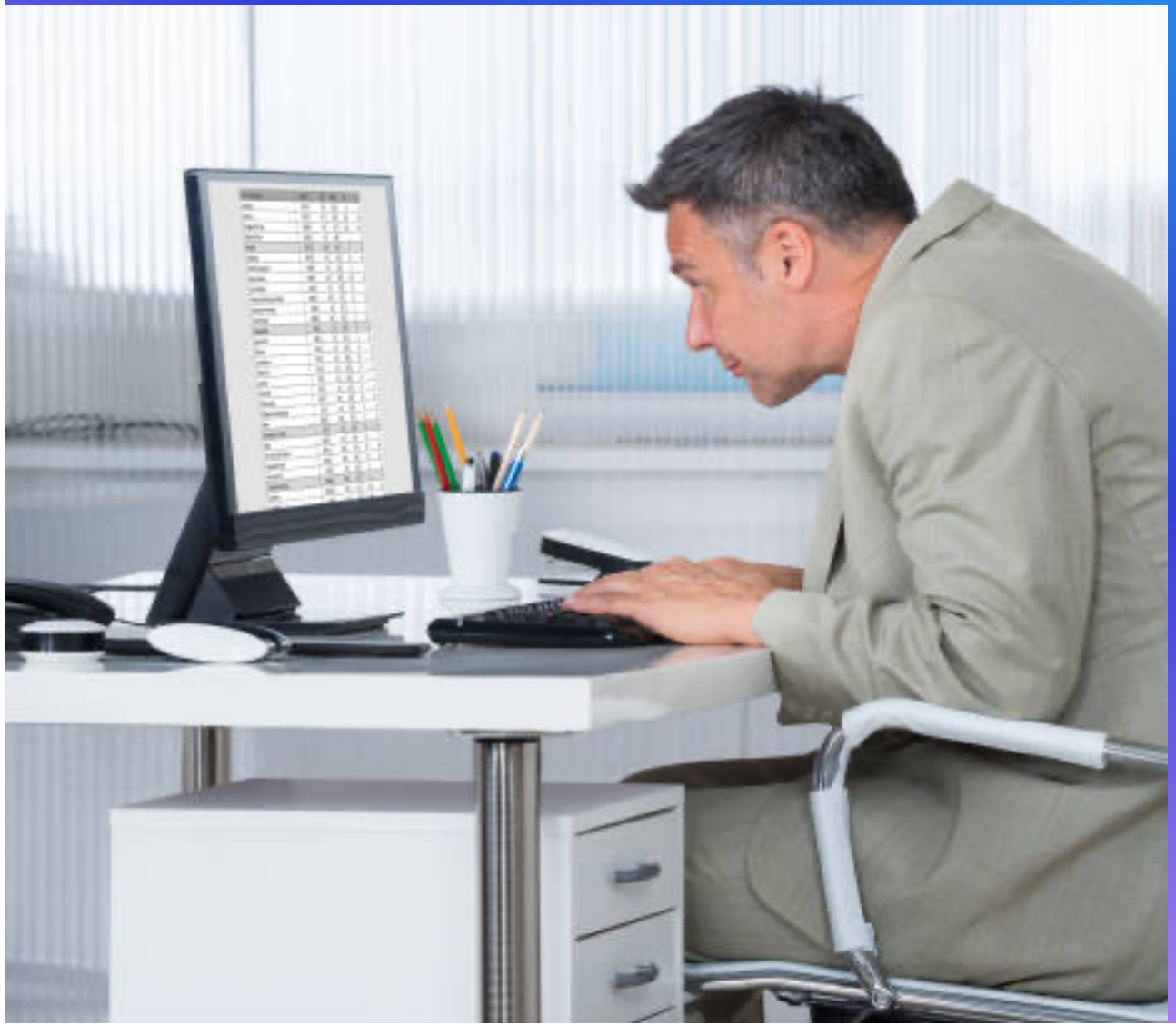
What increases risk of swimmers shoulder?

- Over training
- Fatigue
- Previous shoulder injury
- Arthritis – at GH and AC joint
- Hypermobility
- Poor posture / decreased thoracic mobility
- Too much pull with paddles/paddles too big

Tips for Prevention

Posture

- Typical flexed trunk, forward head posture and inward rotated shoulders increase risk of shoulder injury
- Decreased thoracic (mid back) mobility (extension + rotation) increases stress and reach requirements on shoulder



Exercise Recommendations

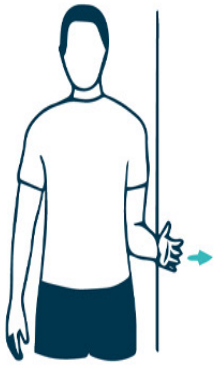
- ✓ *Postural exercises:* thoracic rotation & extension, scapular retraction, cervical retraction, chest opening
- ✓ *Rotator Cuff Strength/activation:* isometric IR/ER to activate without strain
- ✓ *Scapular control:* prone retraction -> standing rows
- ✓ *Mobility exercises:* banded or not – shoulder rotations, flexion + extension
- ✓ *Larger muscle strength program:* 2-3x/wk with focus on Lat dorsi

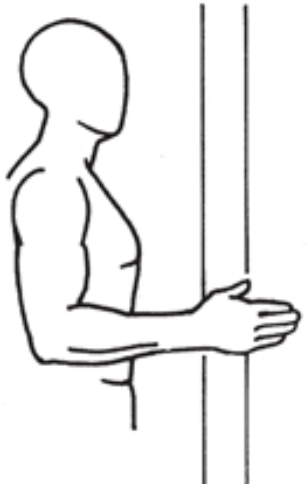
Postural Exercises

Thoracic extension

Pec stretch

Thoracic rotation

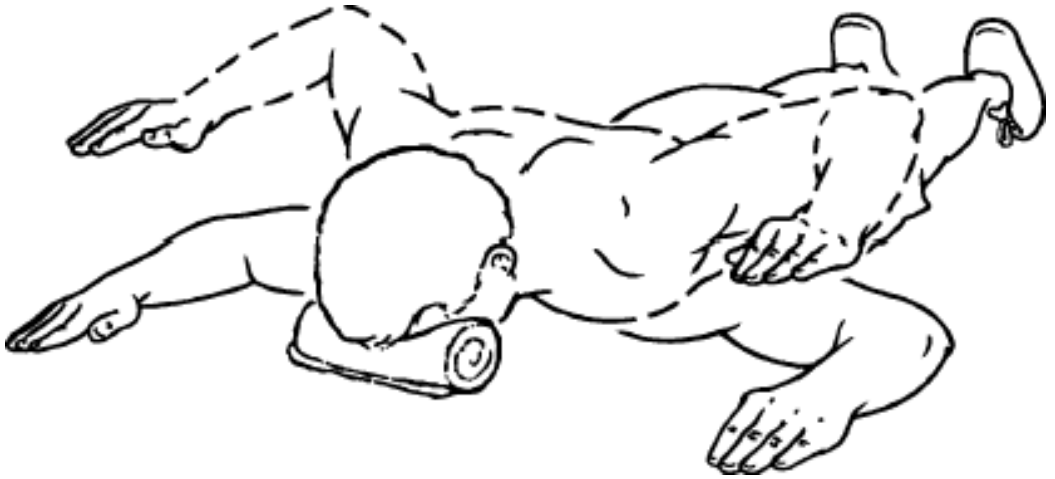




Rotator Cuff Strengthening

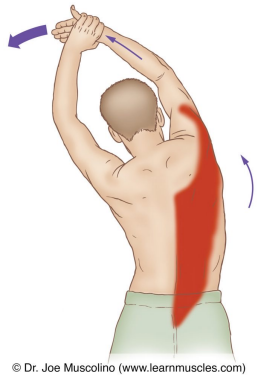
- Studies show that isometric strengthening is preferrable for on deck activation of rotator cuff muscles to ‘wake up the muscles’ without causing any strain

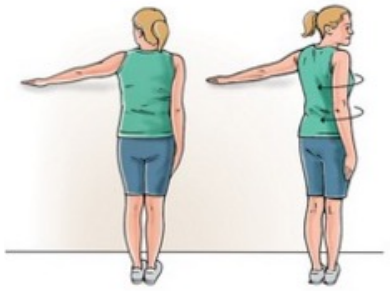
Scapular stability exercises

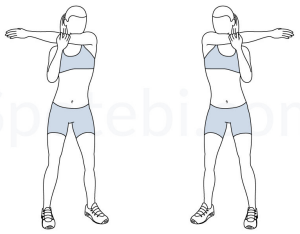


Shoulder mobility exercises

- Dynamic mobility: shoulder rotations, use of stick / elastic
- Major muscles to stretch: pecs, posterior shoulder, bicep, lats




Biceps stretch



Strength exercises

- Recommended 2-3x/wk to focus on prime mover muscles as well as stability muscles

Rules for the aging athlete:

1. Stretch daily to maintain flexibility/range of motion

2. Resistance training is priority to maintain bone density and prevent loss of muscle mass (prevent #'s/falls)

3.Incorporate interval training during cardio sessions (more fat burning/dec abdominal fat)

4. You may need more then 1 day between workouts – make sure previous workout fatigue/soreness is not impacting current workout

5. Always include a warm up – prepare the body for work and prevent injury


I'M SORRY,
WHAT COLOR THERA-BAND DID YOU SUGGEST?