

Shoulder Arthritis

Victoria Division of Family Medicine

"Dine and Learn"

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Objectives

1. Management of Shoulder OA
2. Imaging in Shoulder OA
3. Who gets a shoulder replacement
4. Types of shoulder replacement
5. Post-op Expectations

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Non-op Management

- **Activity Modification**
- **Physio**
- **Pain medication**
 - Acetaminophen
 - NSAID
 - Avoid opioids if possible
- **Injections:**
 - Corticosteroid
 - Viscosupplement
 - Do NOT do within 4-6 months of surgery (risk of infection)

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Who Gets a Shoulder Replacement?

- **Significant pain** and/or shoulder dysfunction associated with glenohumeral cartilage wear
- Have trialed a structured non-operative management protocol
- Typical age >60
 - But some young patients: recurrent dislocators, fracture, AVN

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Imaging Work-up

- Xray
 - Bone loss, cuff
- Surgeon Might Order:
 - U/S or MRI
 - If concerned about rotator cuff integrity
 - CT
 - For surgical planning/templating

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Imaging - Xray

Primary GH OA



Normal Shoulder Xray

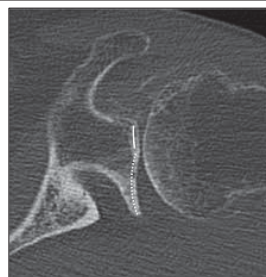


Cuff Tear Arthropathy

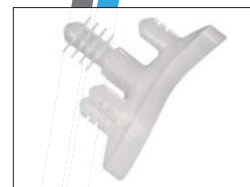


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CT Imaging – Glenoid Anatomy

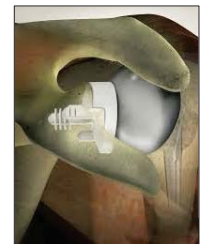
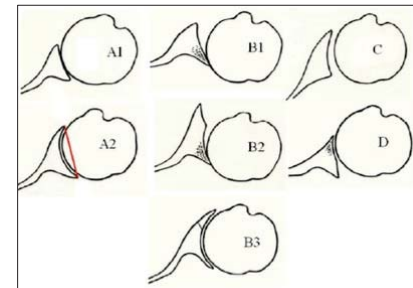


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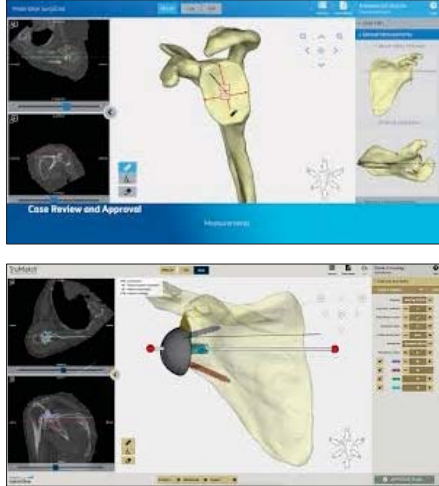
Bone Stock

Walch Classification



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CT for Surgical Templating



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Types of Shoulder Arthroplasty

Normal Cuff
Adequate Bone Stock

Anatomic TSA or Hemi



Deficient Cuff
Poor Bone Stock

Reverse TSA

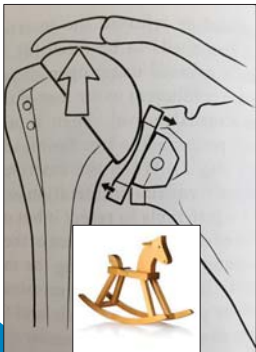


Also more common in RA, fracture sequelae

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Poor Rotator Cuff → Early Failure of *anatomic* TSA!

- If cuff is deficient or tears we see rapid glenoid loosening with "anatomic" TSA
- In these situations we do a "reverse" TSA instead



Don't want rocking horse!

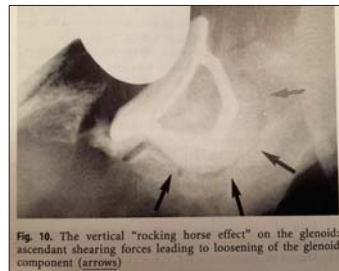


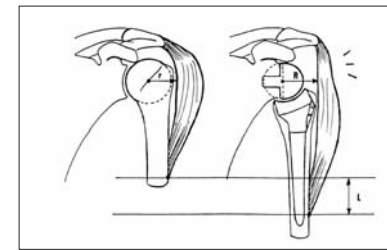
Fig. 10. The vertical "rocking horse effect" on the glenoid: ascendant shearing forces leading to loosening of the glenoid component (arrows)

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Reverse TSA - Biomechanics

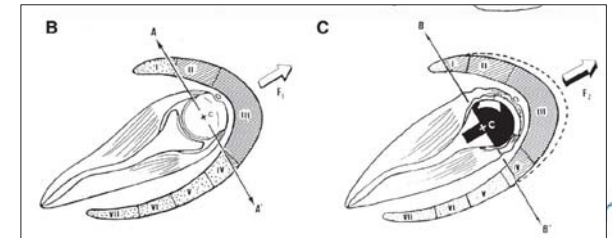
1) Increased Deltoid Tension

Lowered center of rotation (COR)



2) More Deltoid Fibers Engaged

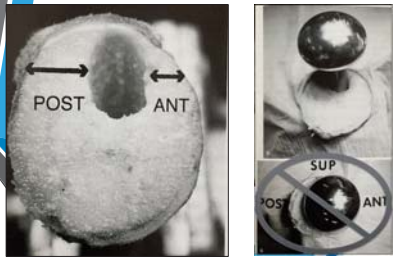
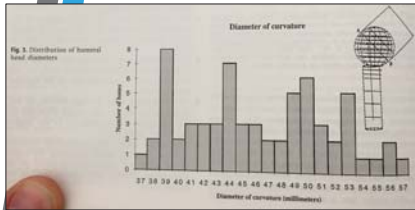
Medialized COR



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Modular Implants

Shoulder Anatomy is VARIABLE



So need MODULAR IMPLANTS



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Shoulder Immobilizer

Simple Sling



Neutral Rotation Sling



Abduction Sling



- Baumgarten et al. *JSES* (2018) 27, 2120–2128
- Improvement in ROM (ER and adduction), less pain with neutral rotation sling

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Post-op Recovery

- **Weeks 0-6 in sling:**
 - Rx for dilaudid +/- gabapentin
 - Should be off by week 2
 - Exercises (3-5x/day):
 - Passive elbow/hand/wrist ROM
 - Pendulum shoulder
 - Avoid ER beyond neutral
- **Weeks 6-12:**
 - Remove sling
 - Physio begins
 - Focus on ROM
- **Weeks 12-24:**
 - Focus on re-training shoulder function
- **Full recovery typically expected around 6-9 months post-op**
- **Shoulder X-rays: 2 weeks, 6 weeks, 3 months, 6 months then yearly**
 - Ensure no complications

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