



Shoulder Rehab
Proximal Humeral Fracture
Stiffness, Dysfunction, Weakness

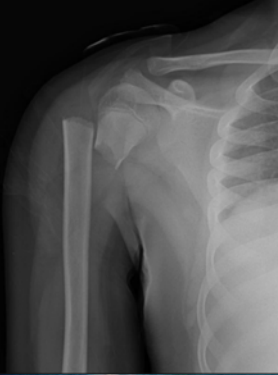
Brad Dale, PT, Cert MDT, Cert DN

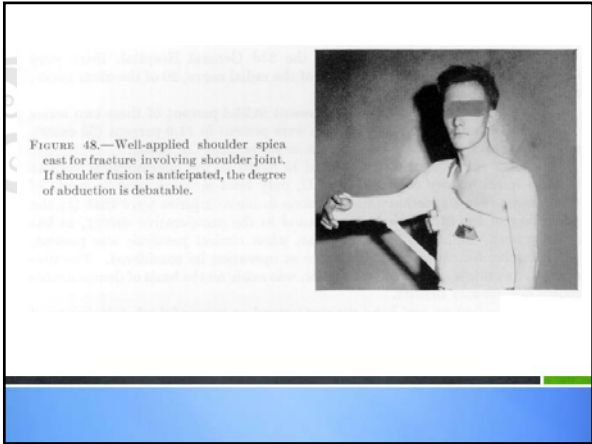


Disclaimer

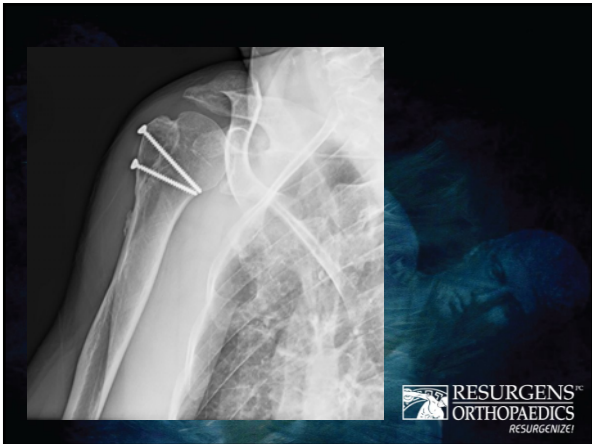
I acknowledge no affiliations with or financial involvement in any organization or entity with a direct financial interest in the subject matter discussed














Rehabilitation

- Early and aggressive rehabilitation program designed to :
 - Prevent stiffness and restore normal ROM.
 - Maintain normal relationship between head of Humerus and glenoid cavity.
 - Provide stability at Fracture site
 - Regain strength of shoulder muscles
- Rehabilitation exercise needs to begin within 14 days of injury to increase likelihood of acceptable outcome and reduce chance for motion complications



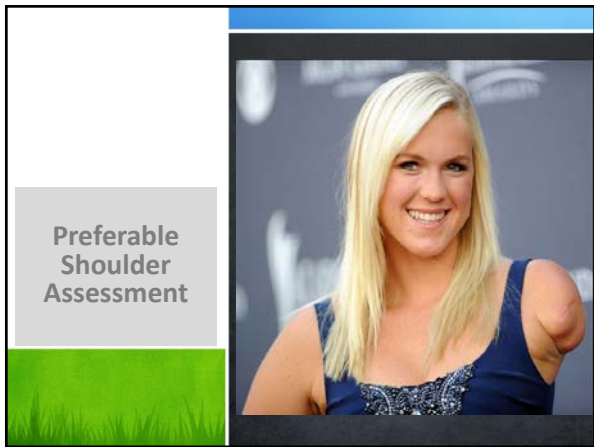
OBJECTIVES

Assessment
Plan of care
Clinical vs Home Based
After care programming

Goals:
Design program to assist patient ability to return to daily activities and enjoy an active and healthy lifestyle


Program design to structured to help return to work, recreation/sport





ASSESSMENT

- Prescription / Precautions
- Surgical Report
- Patient History / Subjective
- Disability of Arm Shoulder Hand
- Posture
- PROM / AROM
- MMT
- Goals






PATIENT EDUCATION

He who moves not forward, goes backward
Johann Wolfgang von Goethe

Symptom management
Emphasis on compliance



SYMPTOM MANAGEMENT



Rest	Stay off the injured joint or muscle. When this is not possible, a cane, walker, or crutches may be needed. Avoid activities that cause severe pain.
Ice	Ice the affected area every 2 to 3 hours for no longer than 20 minutes per application. Ice packs/gels are better than frozen peas.
Compression	Use an elastic compression support/wrap to secure the injured joint, add support, and help reduce swelling.
Elevation	Raise the affected limb above your heart to promote good circulation. This position also helps reduce swelling and pain.

RANGE OF MOTION

PROM / AAROM / AROM

Home exercise program
Patient / Family education

Avoidance of contracture / Adhesive Capsulitis



Shoulder Pain and Mobility Deficits

Clinical Practice Guidelines Linked to the International Classification of Functioning, Disability, and Health From the Orthopaedic Section of the APTA

J Orthop Sports Phys Ther 2013;43(5):A1-A31

Clinicians may utilize joint mobilization procedures primarily directed to the GHJ to reduce pain and increase motion and function



Stretching exercises appear to influence pain and improve ROM

No evidence exists to guide the optimal frequency, number of repetitions or duration of stretching exercises

Stretching beyond painful limits may result in poorer outcomes

Stretching intensity that matches the given level of tissue irritability is indicated

EMPHASIS ON RANGE OF MOTION

Range of Motion

Ways to incorporate ROM to ADL's

Joint exercised	ADL	Movement
Neck	Nodding head yes Shaking head no Moving right ear to right shoulder Moving left ear to left shoulder	Flexion Rotation Lateral flexion Lateral flexion
Shoulder	Reaching to turn on overhead light Reaching to bedside table Rotating shoulders toward chest Rotating shoulders toward back	Flexion, extension Hyperextension Abduction Adduction
Elbow & Wrist	Eating, bathing	Flexion, extension







MANUAL THERAPIES

It is recommended that joint mobilization techniques be delayed until 6 to 8 weeks after injury or fracture union is evident



MANUAL THERAPIES

Cervicothoracic Manual Therapy Plus Exercise Therapy Versus Exercise Therapy Alone in the Management of Individuals With Shoulder Pain: A Multicenter Randomized Controlled Trial

JOURNAL OF ORTHOPAEDIC & SPORTS PHYSICAL THERAPY | VOLUME 46 | NUMBER 9 | AUGUST 2016

CONCLUSION: Adding 2 sessions of high-dose cervicothoracic manual therapy to an exercise program did not improve pain or disability in patients with shoulder pain, but did improve patients' perceived success at 4 weeks and 6 months and acceptability of symptoms at 4 weeks. More research is needed on the use of cervicothoracic manual therapy for treating shoulder pain.

MANUAL THERAPIES

The Effect of Anterior Versus Posterior Glide Joint Mobilization on Glenohumeral External Rotation Range of Motion

J Orthop Sports Phys Ther 2007;37(3):88-99

Objective: To compare the effectiveness of anterior versus posterior glide mobilization techniques for improving shoulder external rotation range of motion (ROM) in patients with adhesive capsulitis.

Conclusions: A posteriorly directed joint mobilization technique was more effective than an anteriorly directed mobilization technique for improving external rotation ROM in subjects with adhesive capsulitis. Both groups had a significant decrease in pain.

MANUAL THERAPIES

The Immediate Effects of Soft Tissue Mobilization with Proprioceptive Neuromuscular Facilitation on GHJ External Rotation and Overhead Reach

J Orthop Sports Phys Ther • Volume 33 • Number 12 • December 2003

The purpose of this study was to evaluate the immediate effect of soft tissue mobilization (STM) with proprioceptive neuromuscular facilitation (PNF) to increase GHJ external rotation at 45° of shoulder abduction and overhead reach

STM and PNF was effective for producing immediate improvements in GHJ external rotation and overhead reach in patients with shoulder disorders.

MANUAL THERAPIES

The Effects of Passive Joint Mobilization on Pain and Hypomobility Associated with Stiffness of the Shoulder

J Orthop Sports Phys Ther 1995; 6 (4) 230-247

Purpose: to determine the effects of passive mobilization and active exercises in patients with painfully restricted shoulders

Experimental group received mobilization and active exercises 2-3x / wk
Controls received only active exercises at the same frequency

All motions increased in both groups
Passive abduction improved more in the mobilization group vs control
Pain scores decreased more in the mobilization group

Conclusion: **Results suggest that joint mobilization and exercises are clinically effective in the treatment of painfully stiff shoulders**

IF ALL ELSE FAILS

TRACTION



IF ALL ELSE FAILS








END RANGE OVERPRESSURE

WHY ADD THEREX



Shrug Sign **Scapular Dyskinesia**

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<p>SHOULDER - 17 Strengthening Isometric: External Rotation</p>  <p>Keeping right elbow at side, use other hand to resist to apply light resistance to external rotation. Hold 5 seconds.</p> <p>Repeat 10 times per set. Do 3 sets per session. Do 1-2 sessions per day.</p>	<p>SHOULDER - 18 Strengthening Isometric: Internal Rotation</p>  <p>Keeping right elbow at side, use other hand to resist to apply light resistance to internal rotation. Hold 5 seconds.</p> <p>Repeat 10 times per set. Do 3 sets per session. Do 1-2 sessions per day.</p>
<p>SHOULDER - 20 Strengthening Isometric: Flexion</p>  <p>Using other hand, apply light resistance to flexion. Hold 5 seconds.</p> <p>Repeat 10 times per set. Do 3 sets per session. Do 1-2 sessions per day.</p>	<p>SHOULDER - 19 Strengthening Isometric: Abduction</p>  <p>Keeping right elbow bent, use other hand to resist to apply light resistance to abduction. Hold 5 seconds.</p> <p>Repeat 10 times per set. Do 3 sets per session. Do 1-2 sessions per day.</p>
<p>SHOULDER - 11 Strengthening Isometric: Extension</p>  <p>Using wall to resist, press back of right arm into wall, using light resistance. Hold 5 seconds.</p> <p>Repeat 10 times per set. Do 3 sets per session. Do 1-2 sessions per day.</p>	<p>Elbow Isometrics</p> <p>Flexion</p> <ul style="list-style-type: none"> Elbow bent 90 degrees Use other hand to resist flexing Hold 5 seconds <p>Extension</p> <ul style="list-style-type: none"> Elbow as straight as possible Use arm against wall Hold 5 seconds <p>Do 10-20 reps of each in an alternating fashion. Do 1-2 sets / day.</p>

Isometrics

Shoulder & Elbow

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