Rehab Practice Guidelines for:
Repair of Large Rotator Cuff Tears Without Retraction

Assumptions
1. Tears > 2.5 centimeters
2. No retraction
3. Arthroscopic assisted mini-open procedure

Primary surgery:
- Repair of supraspinatus tendon & infraspinatus tendons
- Subacromial decompression

Secondary surgeries (possible):
- Distal clavicle excision

Expected # of visits: 19-36

Precautions
- For all passive IR/ER guidelines check with surgeon
- Primary repair (supraspinatus & infraspinatus) - NO BEHIND THE BACK INTERNAL ROTATION (TOWEL STRETCH)
- Primary repair – (subacromial decompression) - No heavy resisted flexion for 6 weeks
- Primary repair (supraspinatus & split deltoid) - No resisted abduction for 8 weeks
- Primary repair (supraspinatus & infraspinatus) - No resisted external rotation for 8 weeks
- No additional precautions for distal clavicle excision
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<tr>
<th>Timeline</th>
<th>Treatment</th>
<th>Milestones</th>
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<tbody>
<tr>
<td>Weeks 1-2 Dates: ______ to ______</td>
<td>▪ Ice for pain and inflammation control  &lt;br&gt;▪ Remove Sling TID for Pendulum exercises (Codman’s)²</td>
<td>▪ Sleep comfortably through the night wearing sling</td>
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<td>▪ No formal PT  &lt;br&gt;▪ Use sling with ABD pillow 24 hrs/day²  &lt;br&gt;▪ No driving</td>
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<td>Weeks 3-5 Dates: ______ to ______</td>
<td>▪ Modalities for pain and inflammation control as needed³  &lt;br&gt;▪ Scar Mobilization when incisions healed  &lt;br&gt;▪ Joint Mobilization  &lt;br&gt; o If hypomobile - grade III/IV mobilizations  &lt;br&gt; o If normal - grade I/II mobilizations PRN  &lt;br&gt;▪ PROM and AAROM exercises in all planes only to restrictions stated in milestones; no IR in 0° abduction³, ⁶  &lt;br&gt;▪ Scapular control exercises³,⁴,⁶  &lt;br&gt; o Scap PNF  &lt;br&gt; o T-Band Rows, prone extension to plane of body  &lt;br&gt;▪ Rhythmic stabilization exercises²,³,⁷  &lt;br&gt;▪ Initiate HEP</td>
<td>▪ PROM:  &lt;br&gt; o ER/IR (90° ABD), HOR ADD: determined by the surgeon  &lt;br&gt; o Flexion, ABD: to tolerance up to 90° - 120°  &lt;br&gt;▪ Normal glenohumeral jt. Mobility  &lt;br&gt;▪ Normal scapulohumeral rhythm  &lt;br&gt;▪ No hypomobility or hypersensitivity of the scars</td>
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<td>▪ Begin PT 2-3 visits/week  &lt;br&gt;▪ Continue sling use 24 hrs/day²  &lt;br&gt;▪ D/C ABD pillow</td>
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<td>Total Visits: 6-9</td>
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<td>Week 6-10 Dates: ______ to ______</td>
<td>▪ Progress ROM to milestones²  &lt;br&gt; o PROM ➔ AAROM ➔ AROM  &lt;br&gt;▪ Begin pain-free sub-maximal isometrics at 8 wks³ for flexion, extension, ABD, IR, ER  &lt;br&gt;▪ Progress to ABD in gravity minimized positions progressing to gravity resisted³  &lt;br&gt;▪ Progress to PRE’s for all other shoulder motions (flexion, extension, IR),³,⁶  &lt;br&gt; o Can begin PRE if pain-free with isometrics  &lt;br&gt;▪ Progress rhythmic stabilizations²,³,⁶,⁷  &lt;br&gt;▪ Progress scapular strengthening exercises²,³,⁴,⁶  &lt;br&gt; o Progress serratus push-up plus to more horizontal surfaces  &lt;br&gt; o Bilateral ER/scap retraction in 0° ABD T-band  &lt;br&gt; o T-Band Rows  &lt;br&gt; o Prone mid-trap (MT) and low-trap (LT) exercises with scap retraction to plane of the body</td>
<td>▪ Full A/PROM for all motions except IR in 0° ABD</td>
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<td>▪ D/C use of sling  &lt;br&gt;▪ 1-3 visits/wk  &lt;br&gt;▪ May begin increasing resistance of flexion week 7  &lt;br&gt;▪ May initiate behind the back IR (towel stretch) week 7  &lt;br&gt;▪ May initiate resistance with ABD week 9  &lt;br&gt;▪ May initiate resistance with ER week 9</td>
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<td>Total Visits: 11-24</td>
<td>▪ Modify HEP accordingly</td>
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<td>Weeks 11-12 Dates: ______ to ______</td>
<td>▪ PRE’s for ALL shoulder motions²,³,⁶  &lt;br&gt;▪ Dynamic stabilization exercises²,³,⁶,⁷  &lt;br&gt; o Progress rhythmic stabilizations to more challenging and functional positions  &lt;br&gt; o Shoulder PNF  &lt;br&gt; o Inertial machine IR/ER beginning in less ABD/ER and progressing to more ABD/ER  &lt;br&gt;▪ Continue to progress scapular stabilization/strengthening exercises²,³,⁴,⁵,⁶  &lt;br&gt; o Progress current exercises by increasing resistance/sets  &lt;br&gt; o Closed chain exercises  &lt;br&gt; o Quadruped or tripod rhythmic stabilizations</td>
<td>▪ Maintain full A/PROM  &lt;br&gt; ▪ Independent with HEP  &lt;br&gt; ▪ Strength improving</td>
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<td>▪ 1-3 visits/week</td>
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<td>Total Visits 13-30</td>
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Neuromuscular Electrical Stimulation NMES Guidelines

- **Patient Positioning:** seated in a chair with arm in about 30° of elevation in scapular plane and neutral IR/ER using a mobilization belt to prevent movement.

- **Electrode Placement**
  - **Supraspinatus:** both pads placed superior to spine of scapula. One pad placed at the medial border of the scapula and one pad placed at lateral border of scapula. Avoid the upper trapezius as much as possible.
  - **Infraspinatus:** both pads placed inferior to the spine of the scapula. One pad placed at the medial border of the scapula and one pad placed at the lateral border of the scapula.

- **Parameters:**
  - **EMPI 300PV unit:** Pulse width= 400 microseconds, frequency= 75 pulse per second, on time= 12 seconds, off time= 50 seconds, ramp time= 2 seconds. Intensity to tolerance, goal of visible tetanic contraction.
  - **Versastim:** Pulse width=2500Hz, frequency=75 bursts per second, on time=12 seconds, off time=50 seconds, ramp time=2 seconds. Intensity to tolerance, goal of visible tetanic contraction.

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<th>Weeks 13-18</th>
<th>Dates: ______ to ______</th>
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<td>1 visit/week</td>
<td>Total Visits: 19-36</td>
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- Progress strengthening program\(^2,3\)
- Progress dynamic stabilization exercises\(^2,3,6,7\)
  - Progress rhythmic stabilizations to more challenging and functional positions
  - Continue shoulder PNF
  - Continue inertial machine progression
- Progress scap strengthening/stabilization exercises\(^2,3,4,6\)
- **PRN:** NMES using guidelines at end of protocol\(^8\)

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<tr>
<th>Weeks 19-28</th>
<th>Dates: ______ to ______</th>
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<td>Physical therapy is as needed for sport/work specific activities</td>
<td>Total Visits: 19-36</td>
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- Progress strengthening and dynamic stabilization exercises as HEP and/or in PT prn\(^2,3,6,7\)
- Begin sport specific interval training program and/or throwing progression\(^2,6,7\)
- Progression of sport/work specific rehabilitation following soreness rules\(^9\)

- **MMT 5/5 all shoulder motions**
- Full shoulder ROM equal to the uninvolved side
- Return to sport/work
References


Updated: May 20, 2009