



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

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Date of Surgery: _____

Repair of Large Rotator Cuff Tears Rehab Protocol

Timeline	Treatment	Milestones²
<p><u>Weeks 1-2</u> Dates: _____ to _____</p> <ul style="list-style-type: none"> No formal PT Use sling with ABD pillow 24 hrs/day² No driving 	<ul style="list-style-type: none"> Ice for pain and inflammation control Remove Sling TID for Pendulum exercises (Codman's)² 	<ul style="list-style-type: none"> Sleep comfortably through the night wearing sling
<p><u>Weeks 3-5</u> Dates: _____ to _____</p> <ul style="list-style-type: none"> Begin PT 2-3 visits/week Continue sling use 24 hrs/day² D/C ABD pillow <p>Total Visits: 6-9</p>	<ul style="list-style-type: none"> Modalities for pain and inflammation control as needed³ Scar Mobilization when incisions healed <u>Joint Mobilization</u> <ul style="list-style-type: none"> If hypomobile - grade III/IV mobilizations If normal- grade I/II mobilizations PRN PROM and AAROM exercises in all planes only to restrictions stated in milestones; no IR in 0° abduction^{3, 6} Scapular control exercises^{3,4,6} <ul style="list-style-type: none"> Scap PNF T-Band Rows, prone extension to plane of body Rhythmic stabilization exercises^{2,3,7} Initiate HEP 	<ul style="list-style-type: none"> <u>PROM:</u> <ul style="list-style-type: none"> ER/IR (90° ABD), HOR ADD: determined by the surgeon Flexion, ABD: to tolerance up to 90° - 120° Normal glenohumeral jt. Mobility Normal scapulohumeral rhythm No hypomobility or hypersensitivity of the scars
<p><u>Week 6-10</u> Dates: _____ to _____</p> <ul style="list-style-type: none"> D/C use of sling 1-3 visits/wk <ul style="list-style-type: none"> May begin increasing resistance of flexion week 7 May initiate behind the back IR (towel stretch) week 7 May initiate resistance with ABD week 9 May initiate resistance with ER week 9 <p>Total Visits: 11-24</p>	<ul style="list-style-type: none"> <u>Progress ROM to milestones²</u> <ul style="list-style-type: none"> PROM → AAROM → AROM Begin pain-free sub-maximal isometrics at 8 wks³ for flexion, extension, ABD, IR, ER Progress to ABD in gravity minimized positions progressing to gravity resisted³ <u>Progress to PRE's for all other shoulder motions (flexion, extension, IR)^{3,6}</u> <ul style="list-style-type: none"> Can begin PRE if pain-free with isometrics Progress rhythmic stabilizations^{2,3,6,7} <u>Progress scapular strengthening exercises^{2,3,4,6}</u> <ul style="list-style-type: none"> Progress serratus push-up plus to more horizontal surfaces Bilateral ER/scap retraction in 0° ABD T-band T-Band Rows Prone mid-trap (MT) and low-trap (LT) exercises with scap retraction to plane of the body Modify HEP accordingly 	<ul style="list-style-type: none"> Full A/PROM for all motions except IR in 0° ABD
<p><u>Weeks 11-12</u> Dates: _____ to _____</p> <ul style="list-style-type: none"> 1-3 visits/week <p>Total Visits 13-30</p>	<ul style="list-style-type: none"> PRE's for ALL shoulder motions^{2,3,6} <u>Dynamic stabilization exercises^{2,3,6,7}</u> <ul style="list-style-type: none"> Progress rhythmic stabilizations to more challenging and functional positions Shoulder PNF Inertial machine IR/ER beginning in less ABD/ER and progressing to more ABD/ER <u>Continue to progress scapular stabilization/strengthening exercises^{2,3,4,5,6}</u> <ul style="list-style-type: none"> Progress current exercises by increasing resistance/reps/sets Closed chain exercises Quadruped or tripod rhythmic stabilizations 	<ul style="list-style-type: none"> Maintain full A/PROM Independent with HEP Strength improving



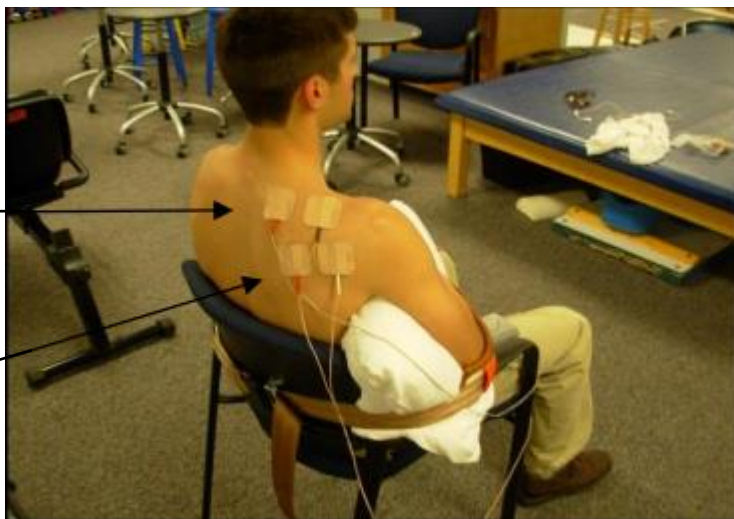
	<ul style="list-style-type: none"> ○ Prone LT, MT, HOR ABD ○ Prone rows ○ Standing D2 PNF with T-band ▪ <u>PRN: NMES using guidelines at end of protocol</u>⁸ <ul style="list-style-type: none"> ○ Infraspinatus starting 8-12 weeks ○ Supraspinatus starting 12-16 weeks 	
<p><u>Weeks 13-18</u> Dates: _____ to _____</p> <ul style="list-style-type: none"> ▪ 1 visit/week <p>Total Visits: 19-36</p>	<ul style="list-style-type: none"> ▪ Progress strengthening program^{2,3} ▪ <u>Progress dynamic stabilization exercises</u>^{2,3,6,7} <ul style="list-style-type: none"> ○ 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} ▪ <u>PRN: NMES to supraspinatus and infraspinatus using guidelines at end of protocol</u>⁸ 	<ul style="list-style-type: none"> ▪ MMT 5/5 all shoulder motions ▪ Full shoulder ROM equal to the uninvolved side
<p><u>Weeks 19-28</u> Dates: _____ to _____</p> <ul style="list-style-type: none"> ▪ Physical therapy is as needed for sport/work specific activities 	<ul style="list-style-type: none"> ▪ Continue 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 rules⁹ 	<ul style="list-style-type: none"> ▪ Return to sport/work

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.



References

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