

University Place Orthopaedics

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University Orthopaedics RTC Repair (Large to Massive Tear) Rehabilitation Timeline

		<i>Timeline</i>
Sling:	Discharge sling after 4-6 weeks if patient is pain-free at rest	4-6 weeks
PROM:	• Shoulder Flexion: 0 - 120 degrees	0 - 2 week
	• Shoulder Flexion: 0 - 140 degrees	2 - 4 weeks
	Shoulder POS: 0 - 130 degrees	
	ER: 60 degs / IR: 30 degs (@ 45 degs POS)	
	• Shoulder Flexion/POS: 145 degs	4 - 6 weeks
AROM:	ER: 70 degs / IR: 35 degs (@ 45 degs POS)	6 - 8 weeks
	• Shoulder Flexion/POS: 150 degs	8 - 12 weeks
	ER: 75 degs / IR: 40 degs (@ 90 degs POS)	
	• Shoulder Full PROM	
	• Shoulder Flexion/POS: 135 degs	6 - 8 weeks
Muscle Strength	ER: 60 degs / IR: 35 degs (@ 90 degs POS)	8 - 12 weeks
	• Shoulder Flexion/POS: 140 degs	12 - 16 weeks
	ER: 65 degs / IR: 40 degs (@ 90 degs POS)	
	• Shoulder AROM- WNL	
	NO ACTIVE FIRING OF REPAIRED RTC MUSCULATURE	
Functional Goals:	4- /5 throughout shoulder, except repaired tissue 2+/5	4 - 6 weeks
	4 /5 throughout shoulder, except repaired tissue 3/5	8 weeks
	75-80% through repaired tissue	12 weeks
	90 -100% through repaired tissue	4 - 6 months
	Return to LE Sports (soccer, running, etc)	6 - 7 months
Return to UE Sports (basketball, tennis, baseball, etc)	7 - 9 months	

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University Place Orthopaedics
RTC Repair (Large to Massive Tear) Rehabilitation Protocol
Phase I Weeks 0 -4

Goals By End of Week 4	<ul style="list-style-type: none"> • Control inflammation / Pain • Allow healing of surgically repaired tissue • PROM: Flexion- 140 degs, POS- 130 degs, ER- 60 degs, IR- 30 degs. • Normal glenohumeral joint mobility • Prevent atrophy of forearm and scapular musculature • Sling for 8 weeks 	
Evaluation	<ul style="list-style-type: none"> • Pain • Surgical Portals • Glenohumeral Joint Mobility • PROM 	Goals Controlled Healing w/o infection Normal Flexion- 140 degs POS- 130 degs ER- 60 degs (@45 degs POS) IR- 30 degs (@45 degs POS)
Treatment <i>Week 0 - 2</i> 3-4 x's/day 3-4x's/day by Therapist 2-3 x's day pm	AAROM Pulleys (Shoulder flexion only) Pendulum Exercises (cw, ccw, flexion/extension) Strengthening Wrist/Hand PRE's Joint Mobilization Posterior / Inferior glides (grade I & II, for pain control) PROM - flexion and ER Modalities EMS to RTC musculature (10 on / 20 off) Cold Pack/Interferential Stimulation	 x 30 reps x 30 reps 3 x 10 reps 5 minutes 12 mins. 15 mins
<i>Week 2 - 4</i> 3-4 x's/day 3-4x's/day by Therapist 2-3 x's day pm	AAROM Pulleys (Shoulder flexion) Pulleys (Shoulder POS) --> pain-free motion Pendulum Exercises (cw, ccw, flexion/extension) Strengthening Wrist/Hand PRE's Scapular Retraction Isometrics Cardiovascular training for LE's Joint Mobilization Posterior / Inferior glides (grade I & II, for pain control) PROM - flexion, POS, and ER Modalities EMS to RTC musculature (10 on / 20 off) Cold Pack/Interferential Stimulation	 x 30 reps x 30 reps x 30 reps 3 x 10 reps 3 x 10 reps 15+ minutes 5 minutes 12 mins. 15 mins

*** NO ACTIVE FIRING OF REPAIRED RTC MUSCLES FOR 5-6 WEEKS ***

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Phase 2 Weeks 4 - 8

Goals By End of Week 8	<ul style="list-style-type: none"> • Control inflammation / Pain • PROM: Flexion/POS- 150 degs, ER- 75 degs, IR- 40 degs • Normal glenohumeral joint mobility • Muscle Strength - 4-5 throughout shoulder musculature, except repaired tissue 2+5 • Mild scapulohumeral rhythm imbalances • Discharge sling at 6 weeks 	
Evaluation	<ul style="list-style-type: none"> • Pain • Muscle Strength • Glenohumeral Joint Mobility • Scapulohumeral Rhythm • PROM 	Goals Controlled 4-5 MMT, except RTC- 2+5 Normal Mild imbalance Flexion- 150 degs POS- 150 degs ER- 75 degs (@90 degs POS) IR- 40 degs (@90 degs POS)
Treatment <i>Week 4 - 6</i> 1 - 2 x's/day 1 - 2 x's/day by Therapist 2-3 x's day pm.	AAROM Pulleys (Shoulder flexion/POS) Table Stretch for external rotation Supine Cane Exercise (flexion) Strengthening Wrist/Hand PRE's ISOMETRICS a) Internal/External Rotation (submaximal) (pain-free) b) Shoulder flexion, abduction, extension, adduction (submaximal) PRE's a) Scapular Retractions Proprioception PNF Scapular Patterns Joint Mobilization/PROM Posterior / Inferior / Anterior glides (grade I -III) PROM - flexion, POS, ER, and light IR Modalities EMS to RTC musculature (10 on / 20 off) Cold Pack	 x 30 reps x 10 reps/Hold 10 secs x 15 reps/Hold 5 secs 3 x 10 reps/Hold 2 secs x 20 reps / Hold 10 secs x 20 reps / Hold 10 secs 3 x 10 reps/Hold 2 secs 5 minutes 12 mins. 15 mins
<i>Week 6 - 8</i> 1 - 2 x's/day 3 - 4 x's/week 3 - 4 x's/week by Therapist pm	AAROM Table Stretch for external rotation Towel Stretch for internal rotation Supine Cane Exercise (flexion) Strengthening PRE's a) Scapular Retractions b) Scapular Protractions (serratus punch) c) Internal/External Rotation d) Plane of Scapula e) Supraspinatus f) Shoulder Flexion g) Bicep / Tricep Proprioception PNF GHJ (rhythmic stabilization → diagonal patterns) Closed Kinetic Chain exercises for scapular and GHJ dynamic stabilization Joint Mobilization Posterior / Inferior / Anterior glides (grade III & IV - if limitations) PROM - flexion, POS, ER, and IR Modalities Cold Pack	 x 10 reps/Hold 10 secs x 10 reps/Hold 10 secs x 15 reps/Hold 5 secs 3 x 10-12 reps/Hold 2 secs 3 x 10-12 reps/Hold 2 secs 3 x 10-12 reps/Hold 2 secs 3 x 10-12 reps/Hold 2 secs 3 x 10-12 reps/Hold 2 secs 3 x 10-12 reps/Hold 2 secs 3 x 10-12 reps/Hold 2 secs 3 x 10-12 reps/Hold 2 secs 5 minutes 5 minutes 15 mins

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RTC Repair (Large to Massive Tear) Rehabilitation Protocol
Phase 3 Weeks 8 - 12

Goals By End of Week 12	<ul style="list-style-type: none"> • Control inflammation / Pain • PROM: WNL • AROM: Flexion/POS- 140 degs, ER- 65 degs, IR- 40 degs • Normal glenohumeral joint mobility • Muscle Strength - 4/5 throughout shoulder musculature, except repaired tissue 3/5 • Mild scapulohumeral rhythm imbalances 	
Evaluation	<ul style="list-style-type: none"> • Pain • PROM • AROM • Muscle Strength • Glenohumeral Joint Mobility • Scapulohumeral Rhythm 	Goals Controlled → Eliminated WNL Flexion/Abduction- 140 degs ER-65 degs IR- 40 degs 4/5 MMT, except RTC 3/5 Normal Mild imbalances
Treatment Week 8 - 10 3-4 x's/week by Therapist pm	<p>Strengthening PRE's</p> <ol style="list-style-type: none"> a) Scapular Retractions b) Scapular Protractions (serratus punch) c) Internal/External Rotation d) Plane of Scapula e) Supraspinatus f) Shoulder flexion g) Bicep / Tricep <p>Proprioception PNF GHJ (diagno patterns w/ resistance) Closed Kinetic Chain exercises for scapular and GHJ dynamic stabilization</p> <p>Joint Mobilization Posterior / Inferior / Anterior glides (grade III & IV - if limitations) PROM - flexion, POS, ER, and IR</p> <p>Modalities Cold Pack</p>	<p>3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs</p> <p>3 x 10 reps/ Hold 2 secs 5 minutes</p> <p>15 mins</p>
Week 10 - 12 3-4 x's/week by Therapist pm	<p>Strengthening PRE's</p> <ol style="list-style-type: none"> a) CYBEX - Scapular Row Machine b) Scapular Protractions (serratus punch) c) Internal/External Rotation d) Plane of Scapula e) Supraspinatus f) Shoulder flexion g) Bicep / Tricep h) CYBEX 6000 - RTC Strengthening (@120, 180, 240 degs/sec) <p>Proprioception Closed Kinetic Chain exercises for scapular and GHJ dynamic stabilization</p> <p>Joint Mobilization Posterior / Inferior / Anterior glides (grade III & IV - if limitations) PROM - flexion, POS, ER, and IR</p> <p>Modalities Cold Pack</p>	<p>3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 sets x 15 reps each speed</p> <p>5 minutes</p> <p>15 mins</p>

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Phase 4 Weeks 12 +

Goals Week 16	<ul style="list-style-type: none"> • Muscle Strength - 4+/5 throughout shoulder musculature, except repaired tissue 4-/5 	
Evaluation	<i>Reassess at 16 wks</i> <ul style="list-style-type: none"> • Clinical Examination (ROM, GHJ mob., pain, SHR, etc.) • Muscle strength 	Goals
Treatment Week 12 + 3-4 x's/week	<i>Home/Gym Exercise Program</i> Strengthening PRE's <ol style="list-style-type: none"> a) CYBEX - Scapular Row Machine b) Scapular Protractions (serratus punch) c) Internal/External Rotation d) Plane of Scapula e) Supraspinatus f) Shoulder flexion g) Bicep / Tricep h) Latissimus Pull i) Shoulder Press j) UBE (forward / backward - 90 rpm's) Proprioception Closed Kinetic Chain exercises for scapular and GHJ dynamic stabilization	4+/5 MMT, except RTC 4-/5 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 3 x 10-15 reps/Hold 2 secs 5-10 minutes 5-10 minutes

Goals Week 20	<ul style="list-style-type: none"> • Isokinetic Muscle Strength @20 weeks (70-75% of uninjured) 	
Evaluation	<i>Reassess at 20 wks</i> <ul style="list-style-type: none"> • Clinical Examination (ROM, GHJ mob., pain, SHR, etc.) • Isokinetic Muscle strength (Cybex 6000) 	Goals Normal 70-75% of uninjured

Goals Week 26	<ul style="list-style-type: none"> • Isokinetic Muscle Strength @26 weeks (75-80% of uninjured) • Integration of Sports Specific Exercises 	
Evaluation	<i>Reassess at 26 wks</i> <ul style="list-style-type: none"> • Clinical Examination (ROM, GHJ mob., pain, SHR, etc.) • Isokinetic Muscle strength (Cybex 6000) 	Goals Normal 75-80% of uninjured

Goals Week 39	<ul style="list-style-type: none"> • Isokinetic Muscle Strength @39 weeks (90-100% of uninjured) • Return to Sports 	
Evaluation	<i>Reassess at 39 wks</i> <ul style="list-style-type: none"> • Clinical Examination (ROM, GHJ mob., pain, SHR, etc.) • Isokinetic Muscle strength (Cybex 6000) • Sport Specific Testing 	Goals Normal 90-100% of uninjured Normal for UE