

**Superior Capsular Reconstruction**

The GLSM Superior Capsular Reconstruction Rehabilitation Program is an evidence-based and soft tissue healing dependent program which allows patients to progress to vocational and sports-related activities as quickly and safely as possible.

Contact us at 1-800-362-9567 ext. 58600 if you have questions.

<b>Pre-Op</b>	<p>Pre-op overall stiffness can be correlated to post-op stiffness. The best predictor of post-op stiffness at 6 wks is decreased pre-op IR vertebral level ROM</p> <p>Pre-op exercises should be on increasing or maintaining overall ROM and muscle activation. Emphasis on improving behind the back horizontal adduction and IR.</p>
<b>Factors Influencing Post-op Rehabilitation</b>	<p>Location of tear and number of tendons involved          Amount of tendon retraction          Tissue degeneration/fatty infiltrate          Pre-op stiffness          Tissue quality: is affected by age, smoking, diabetes, chronicity of tear          Surgeon preference          Tissue healing: Soft tissue-to-bone healing is a slow and gradual process that requires at least <b>12 wks</b> of healing to allow adequate pull-out strength of the repair</p>
	<b>General Program Outline</b>
	<p><b>ROM:</b> Emphasis on PROM initially. Add AAROM supine ER at wk 4. Add AAROM elevation at wk 6. Add AROM elevation at wk 8 with emphasis on avoiding shoulder shrug. Goal of full ROM 12-16 wks.</p> <p><b>Muscle Activation:</b> Important to prevent reflex disassociation, maintain muscle tone, and prevent muscle atrophy. Initiate with sub-max pain-free isometrics and AROM as outlined in the protocol.</p> <p><b>Strengthening:</b> No aggressive strengthening for 12 wks. Goal of 75-80% strength by 5-6 months. Patients should continue with strength training at least 1 year post-op to maximize outcome.</p> <p style="text-align: right;">Updated: 10/2017</p>

<b>Phase I: 0-6 weeks</b>	<b>(Immediate post-op maximum protected motion phase)</b>			
<b>Goals</b>	<ul style="list-style-type: none"> <li>Protect anatomic repair</li> <li>Prevent negative effects of immobilization</li> <li>Gently begin PROM per tolerance except for IR</li> <li>Adequate pain control</li> </ul>			
<b>Immediate post-op exercises</b>	<ul style="list-style-type: none"> <li>AROM for cervical spine, elbow, wrist, hand</li> <li>Gripping activities without lifting</li> </ul>			
<b>Sling</b>	<ul style="list-style-type: none"> <li>24 hours/day for 6-8 weeks. D/C based on MD approval</li> <li>Remove sling for bathing/dressing and exercises as outlined by PT</li> <li>Try to keep arm relaxed in sling and avoid protective posture to decrease muscle tension in cervical region</li> </ul>			
<b>Precautions</b>	<ul style="list-style-type: none"> <li>Keep arm supported when in and out of sling.</li> <li>When laying supine, prop elbow on pillow to keep in line with the shoulder.</li> <li>No behind the back movements (avoid combined ext/add/IR). Try to keep elbow in line with shoulder.</li> <li>Avoid sudden movements or supporting body weight through the hand or elbow.</li> <li>No lifting or carrying of objects on injured side.</li> <li>Avoid pushing or pulling objects to minimize compression/shear to the shoulder</li> </ul>			
<b>Recommendations</b>	<ul style="list-style-type: none"> <li>Initial emphasis on PROM per tolerance except for IR and ext.</li> <li>No AAROM for shld elevation</li> <li>No shld AROM or resisted motion</li> </ul>			
<b>Modalities</b>	<ul style="list-style-type: none"> <li>Ice 15 minutes 3-5x/day, more often as needed for pain control</li> <li>IFC for pain management/inflammation control</li> </ul>			
<b>HEP initiate at wk 1 post-op</b>	<ul style="list-style-type: none"> <li>Remove sling 3x per day for passive pendulum, AROM elbow / wrist / hand, gripping</li> <li>Passive pendulum with trunk rotation or opposite extremity</li> <li>Postural education to avoid forward head / rounded shoulders</li> <li>Cervical AROM: retraction in supine/seated/standing, flexion, side bending, rotation</li> <li>Overpressure and stretching for cervical side bending</li> <li>Thoracic AROM mid-range extension seated or standing</li> <li>Thoracic P-A self-mobilization in seated</li> <li>Active scapular retraction with depression</li> </ul>			
<b>HEP wk 6</b>	<ul style="list-style-type: none"> <li>Add in supine AAROM ER in scapular plane</li> </ul>			
<b>PROM</b>	<ul style="list-style-type: none"> <li>Initiate PROM and passive pendulum at 1 wk post-op. Gradually progress based on tolerance except for IR and extension which needs to be progressed cautiously. Start all motions, including ER, in scapular plane to minimize strain to supraspinatus</li> <li>At wk 4 progress working on ER from scaption to 60 deg of abd; add gentle IR ROM in scaption.</li> <li>No aggressive stretching.</li> </ul>			
	<b>Goals to achieve /not exceed</b>			
		0-2 wks	2-4 wks	4-6 wks
	Flexion / scaption	Per tolerance	Per tolerance (at least 0- 90)	Per tolerance (0-110)
	Abduction	0-45 deg	0-60 deg	0-75 deg
	ER in scapular plane	0-10 deg	0-20 deg	0-40 deg
	IR (GH) in scapular plane	To chest	To chest	0-20 deg
	ER at 60 deg ABD	None	Initiate at wk 3. 0-20 deg	0-40 deg
	ER at 90 ABD	None	None	None
	IR at 90 ABD	None	None	None
Extension	Neutral	Neutral	Neutral	
<b>AAROM</b>	<ul style="list-style-type: none"> <li>Contraindicated on land for flexion / scaption / abduction until 6 wks secondary to high EMG supraspinatus activity</li> <li>Wk 4: supine / standing ER in scapular plane. Contraindicated for IR</li> <li>Wk 5: Aquatics: Buoyancy-assisted AAROM &lt;30 deg/sec per ROM guidelines</li> </ul>			

<b>Phase I: 0-6 weeks</b>	<b>Immediate post-op maximum protected motion phase</b>
<b>AROM</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Treatment Interventions</b>	<ul style="list-style-type: none"> <li>• Warm up: Passive Pendulum or Hot pack</li> <li>• Emphasis on GH passive range of motion as outlined above. AAROM ER in scapular plane at wk 4. Gentle IR PROM in scaption at wk 4. No AROM</li> <li>• GH Mobilizations (in scapular plane) grade I/II for pain or muscle spasm</li> <li>• Thoracic spine P-A mobilizations as needed. 0-2 wks: seated. 2-4wks:Progress to prone as tolerated</li> <li>• Postural education: Avoid forward head/rounded shoulders</li> <li>• Active scapular retraction, scapular depression in neutral position</li> <li>• Scapular PROM in sidelying (if needed). Manual resisted scapular isometrics</li> <li>• AROM elbow, wrist, hand. Gripping activities without lifting</li> <li>• Cryotherapy. IFC if indicated</li> </ul>

	<b>Superior Capsular Reconstruction</b>																				
<b>Phase II: 6-8 weeks</b>	<b>Intermediate moderate protection phase</b>																				
<b>Goals</b>	<ul style="list-style-type: none"> <li>• Protect anatomic repair</li> <li>• Adequate pain control</li> <li>• Gently progress PROM per tolerance, Implement AAROM for shoulder elevation</li> <li>• Utilize aquatic to assist with ROM</li> </ul>																				
<b>Sling</b>	<ul style="list-style-type: none"> <li>• D/C per MD approval</li> </ul>																				
<b>Precautions</b>	<ul style="list-style-type: none"> <li>• No shoulder AROM for lifting.</li> <li>• Avoid prolonged unsupported arm positioning.</li> <li>• Avoid sudden movement or supporting body weight through the hand or elbow.</li> <li>• No behind the back movements (avoid combined ext/add/IR). Try to keep elbow in line with shoulder both in standing and supine.</li> <li>• No lifting or carrying of objects on injured side.</li> <li>• Avoid pushing or pulling objects to minimize compression/shear to the shoulder</li> <li>• No resisted movement.</li> </ul>																				
<b>Recommendations</b>	<ul style="list-style-type: none"> <li>• Patient can perform ADL's below shoulder height</li> <li>• Treatment emphasis on restoring PROM /AAROM based on guidelines provided</li> <li>• Add low load long duration stretching (wk 7) if needed</li> <li>• Aquatic physical therapy</li> <li>• Facilitate thoracic extension</li> </ul>																				
<b>HEP to initiate at wk 6-7</b>	<ul style="list-style-type: none"> <li>• Continue previous program as needed.</li> <li>• AAROM flexion / scaption to tolerance. AAROM abduction 0-90 deg only</li> <li>• Isometric elbow flexion / extension</li> </ul>																				
<b>Modalities</b>	<ul style="list-style-type: none"> <li>• Ice 15 minutes 3-5x/day, more often as needed for pain control</li> <li>• IFC for pain management/inflammation control</li> </ul>																				
<b>Aquatics</b>	<ul style="list-style-type: none"> <li>• Emphasis on ROM with water at shld height</li> </ul>																				
<b>PROM / AAROM</b>	<ul style="list-style-type: none"> <li>• Continue with PROM with goal of full PROM by wk 12. Progress PROM ER at 90/90. Progress to gentle PROM IR at 90/90 at wk 7. Add gentle PROM ext at wk 7.</li> <li>• Add AAROM for shld elevation with goal of full AAROM by wk12-14.</li> </ul> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th colspan="2"><b>Goals to achieve /not exceed</b></th> </tr> <tr> <th></th> <th>6-8 wks</th> </tr> </thead> <tbody> <tr> <td>Flexion / scaption</td> <td>Per tolerance (0-130)</td> </tr> <tr> <td>Abduction</td> <td>0-90 deg</td> </tr> <tr> <td>ER in scapular plane</td> <td>0-60 deg</td> </tr> <tr> <td>IR (GH) in scapular plane</td> <td>0-40 deg</td> </tr> <tr> <td>ER at 60 ABD</td> <td>0-50 deg</td> </tr> <tr> <td>ER at 90 ABD</td> <td>0-40 deg</td> </tr> <tr> <td>IR at 90 ABD</td> <td>0-20 deg</td> </tr> <tr> <td>Extension</td> <td>0-20 deg</td> </tr> </tbody> </table>	<b>Goals to achieve /not exceed</b>			6-8 wks	Flexion / scaption	Per tolerance (0-130)	Abduction	0-90 deg	ER in scapular plane	0-60 deg	IR (GH) in scapular plane	0-40 deg	ER at 60 ABD	0-50 deg	ER at 90 ABD	0-40 deg	IR at 90 ABD	0-20 deg	Extension	0-20 deg
<b>Goals to achieve /not exceed</b>																					
	6-8 wks																				
Flexion / scaption	Per tolerance (0-130)																				
Abduction	0-90 deg																				
ER in scapular plane	0-60 deg																				
IR (GH) in scapular plane	0-40 deg																				
ER at 60 ABD	0-50 deg																				
ER at 90 ABD	0-40 deg																				
IR at 90 ABD	0-20 deg																				
Extension	0-20 deg																				
<b>AROM</b>	<ul style="list-style-type: none"> <li>• Contraindicated for flexion, scaption, abduction.</li> <li>• IR / ER with arm in scapular plane through pain-free ROM</li> </ul>																				
<b>Treatment Interventions</b>	<ul style="list-style-type: none"> <li>• Warm up: Passive Pendulum or Hot pack or AAROM on Nustep</li> <li>• Low-load long duration end-range stretch at wk 7 (if necessary) using wand and hot pack in supine for ER</li> <li>• GH Mobilizations grade I/II for pain, III/IV to increase joint mobility</li> <li>• Thoracic spine P-A mobilizations</li> <li>• Facilitate Thoracic extension: stretch in sitting with/without overpressure (ball / towel roll/ foam roller behind back)</li> <li>• PROM with end range stretching as outlined above</li> <li>• AAROM as outlined above: Pulleys, wand exercises, ball rolling on table</li> <li>• Aquatics</li> <li>• Postural education: Avoid forward head/rounded shoulders</li> <li>• Active scapular protraction, retraction to neutral, scapular depression</li> <li>• Scapular manual RROM in sidelying</li> <li>• AROM elbow, wrist, hand</li> <li>• Cryotherapy. IFC if indicated</li> </ul>																				

	<b>Superior Capsular Reconstruction</b>																											
<b>Phase III: 8-12 wks</b>	<b>Minimal protection phase with emphasis on normalizing ROM</b>																											
<b>Goals</b>	<ul style="list-style-type: none"> <li>• Preserve the integrity of the surgical repair</li> <li>• Implement AROM for shoulder elevation avoiding shoulder shrug</li> <li>• Restore normal ROM with normal movement patterns</li> <li>• Decrease pain and inflammation</li> <li>• Initiate sub-max and pain-free muscle activation exercises</li> </ul>																											
<b>Precautions</b>	<ul style="list-style-type: none"> <li>• Patient can perform ADL's up to shoulder height.</li> <li>• Limit overhead activities.</li> <li>• Avoid making sudden movements and lifting heavy objects.</li> <li>• No aggressive strengthening activities.</li> <li>• Avoid pushing or pulling heavy objects.</li> </ul>																											
<b>Recommendations</b>	<ul style="list-style-type: none"> <li>• Treatment emphasis on restoring PROM / AAROM / AROM</li> <li>• Add AROM exercises avoiding compensatory shoulder shrug. Encourage normal movement patterns</li> <li>• Add sub-max pain-free shoulder isometrics (GH, RTC)</li> <li>• Add sub-max rhythmic stabilizations to encourage co-contraction</li> <li>• Continue with thoracic extension exercises</li> <li>• Continue with aquatics up to wk 10-12</li> </ul>																											
<b>Modalities</b>	<ul style="list-style-type: none"> <li>• Ice 15 minutes 1-3x/day, more often as needed for pain control</li> <li>• IFC for pain management/inflammation control</li> </ul>																											
<b>Aquatics</b>	<ul style="list-style-type: none"> <li>• Continue until wk 10-12. Work on increasing ROM with emphasis on normal movement patterns.</li> </ul>																											
<b>PROM / AAROM / AROM</b>	<ul style="list-style-type: none"> <li>• Goal is functional ROM in all planes with normal movement patterns by 12-16 wks</li> <li>• Add gentle AAROM ext wk 8.</li> <li>• Add in gentle IR stretch behind the back vertebral level at wk 10</li> </ul> <table border="1"> <thead> <tr> <th colspan="3"><b>Goals to achieve /not exceed</b></th> </tr> <tr> <th></th> <th>8-10 wks</th> <th>10-12 wks</th> </tr> </thead> <tbody> <tr> <td>Flexion / scaption</td> <td>Unlimited (0-150)</td> <td>Unlimited (0-170)</td> </tr> <tr> <td>Abduction</td> <td>0-120 deg</td> <td>0-150 deg</td> </tr> <tr> <td>ER in scapular plane</td> <td>0-70</td> <td>0-80 deg</td> </tr> <tr> <td>IR (GH) in scapular plane</td> <td>0-60 deg</td> <td>0-70 deg</td> </tr> <tr> <td>ER at 90 ABD</td> <td>0-60 deg</td> <td>0-70 deg</td> </tr> <tr> <td>IR (GH) at 90 ABD</td> <td>0-45 deg</td> <td>0-60 deg</td> </tr> <tr> <td>Extension</td> <td>0-40 deg</td> <td>0-55 deg</td> </tr> </tbody> </table>	<b>Goals to achieve /not exceed</b>				8-10 wks	10-12 wks	Flexion / scaption	Unlimited (0-150)	Unlimited (0-170)	Abduction	0-120 deg	0-150 deg	ER in scapular plane	0-70	0-80 deg	IR (GH) in scapular plane	0-60 deg	0-70 deg	ER at 90 ABD	0-60 deg	0-70 deg	IR (GH) at 90 ABD	0-45 deg	0-60 deg	Extension	0-40 deg	0-55 deg
<b>Goals to achieve /not exceed</b>																												
	8-10 wks	10-12 wks																										
Flexion / scaption	Unlimited (0-150)	Unlimited (0-170)																										
Abduction	0-120 deg	0-150 deg																										
ER in scapular plane	0-70	0-80 deg																										
IR (GH) in scapular plane	0-60 deg	0-70 deg																										
ER at 90 ABD	0-60 deg	0-70 deg																										
IR (GH) at 90 ABD	0-45 deg	0-60 deg																										
Extension	0-40 deg	0-55 deg																										
<b>Muscle Activation</b> <b>Strengthening</b>	<ul style="list-style-type: none"> <li>• No aggressive strengthening activities</li> <li>• Add in sub-max pain-free shld isometrics for muscle activation. Muscle activation is important to minimize rotator cuff inhibition, maintain muscle tone, and minimize muscle atrophy.</li> <li>• Strengthening will be with the weight of the arm focusing on quality movement and endurance (ie: initially 2-3 sets of 10 progressing to 2-3 sets of 30 reps of full flexion, scaption, abduction, ER. 1x/day, 5 -7 days per week per tolerance).</li> <li>• When progressing to shld isotonic in the <b>next phase</b>, the patient must be able to elevate arm without shoulder or scapular hiking. If unable, will need to continue with dynamic rhythmic stabilization GH joint exercises.</li> <li>• Add in arm supported bicep / triceps isotonic strengthening wk 8, progress to unsupported at wk 10</li> </ul>																											

	<b>Superior Capsular Reconstruction</b>
<b>Phase III: 8-12 wks</b>	<b>Minimal protection phase with emphasis on normalizing ROM</b>
<b>Treatment Interventions</b>	<ul style="list-style-type: none"> <li>• Active warm-up: Codman's, UBE with no resistance (add light resistance at wk 9)</li> <li>• Low load long duration end-range stretch (if necessary) using wand and hot pack in supine for ER. Utilize for other movements as necessary.</li> <li>• GH Mobilizations</li> <li>• PROM with end range stretch</li> <li>• Therapeutic exercises: AAROM: Pulleys, wand. Add in extension past neutral wk 7, Add in gentle IR behind the back stretch wk 10</li>   <li>AROM: GH: All motions with emphasis on quality movement. Focus on endurance working up to 30 repetitions Scapula: (light resistance of &lt;5 lbs with emphasis on endurance) protraction, retraction (seated progress to prone), rows to neutral, depression</li> <li>*** 4 keys exercises to maximize mid/lower trapezius and inhibit upper trapezius sidelye ER sidelye flexion prone horizontal abduction with ER prone extension</li> <li>Muscle activation: <b>Sub-max pain-free</b> GH isometrics Supported Biceps / Triceps isotonic, progress to unsupported wk 10</li> <li>Rhythmic stabilization <b>sub-max</b> (to facilitate muscle activation / co-contraction): Wk 8: supine arm supported ER/IR wk 10-12: supine flexion 90 deg, low load CKC (&lt;BW) ie: ball on table with patient standing</li> <li>• Encourage thoracic extension</li> <li>• Ice (in stretch if needed) 15 minutes</li> <li>• E Stim (IFC or NMES) if necessary</li> </ul>
	•

	<b>Superior Capsular Reconstruction</b>																				
<b>Phase IV: 12+ wks</b>	<b>Regain Functional ROM / Strengthening and Conditioning Phase</b>																				
<b>Goals</b>	<ul style="list-style-type: none"> <li>• Establish and maintain functional ROM, mobility, and stability</li> <li>• Progress muscular strength, power, and endurance</li> <li>• Initiate higher level activities depending on functional demands and MD approval</li> </ul>																				
<b>Precautions</b>	<ul style="list-style-type: none"> <li>• Patient must be able to elevate arm without shoulder or scapular hiking. If unable, need to continue with dynamic rhythmic stabilization GH exercises.</li> <li>• Patients should continue to perform strengthening exercises for up to 1 year post-op to maximize outcome.</li> </ul>																				
<b>Recommendations</b>	<ul style="list-style-type: none"> <li>• Facilitate regaining functional ROM</li> <li>• Emphasize regaining strength and endurance with proper movement patterns</li> <li>• Continue with proprioceptive / kinesthetic exercises</li> <li>• Progress to independent strengthening at wk 20-24</li> <li>• Assess posterior capsule for tightness</li> </ul>																				
<b>Modalities</b>	<ul style="list-style-type: none"> <li>• Ice 1x/ day and /or after strenuous activities</li> </ul>																				
<b>ROM</b>	<ul style="list-style-type: none"> <li>• No restrictions. Goal is functional ROM in all planes with normal movement patterns by 12-16 wks</li> <li>•</li> </ul> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th colspan="2"><b>Goals to achieve /not exceed</b></th> </tr> <tr> <th></th> <th>12-16 wks</th> </tr> </thead> <tbody> <tr> <td>Flexion / scaption</td> <td>Unlimited (0-170/180)</td> </tr> <tr> <td>Abduction</td> <td>0-170/180 deg</td> </tr> <tr> <td>ER in scapular plane</td> <td>0-80/90 deg</td> </tr> <tr> <td>IR (GH) in scapular plane</td> <td>0-70 deg</td> </tr> <tr> <td>ER at 90 ABD</td> <td>0-80/90 deg</td> </tr> <tr> <td>IR (GH) at 90 ABD</td> <td>0-70 deg</td> </tr> <tr> <td>Extension</td> <td>0-60 deg</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	<b>Goals to achieve /not exceed</b>			12-16 wks	Flexion / scaption	Unlimited (0-170/180)	Abduction	0-170/180 deg	ER in scapular plane	0-80/90 deg	IR (GH) in scapular plane	0-70 deg	ER at 90 ABD	0-80/90 deg	IR (GH) at 90 ABD	0-70 deg	Extension	0-60 deg		
<b>Goals to achieve /not exceed</b>																					
	12-16 wks																				
Flexion / scaption	Unlimited (0-170/180)																				
Abduction	0-170/180 deg																				
ER in scapular plane	0-80/90 deg																				
IR (GH) in scapular plane	0-70 deg																				
ER at 90 ABD	0-80/90 deg																				
IR (GH) at 90 ABD	0-70 deg																				
Extension	0-60 deg																				
<b>Strengthening</b>	<ul style="list-style-type: none"> <li>• Target scapulothoracic, rotator cuff, glenohumeral, and total arm strengthening and endurance</li> <li>• Progress to unilateral scapulothoracic strengthening</li> <li>• Strengthening initially with uni-planar movements progressing to multi-planar movements</li> <li>• Wk 20: Isokinetic ER/IR power test at 90, 180 deg/sec</li> <li>• Wk 20: Progress to overhead strengthening (if needed) if adequate strength scores: MMT 4/5, Isokinetic ER/IR of 75% at 90 and 180 deg/sec; ER/IR ratio of 2/3 Isometric strength test (5 sec hold) for shld flexion and scaption of 75% compared to opp extremity. (Measure with hand-held dynamometer. Perform 3 reps and calculate the average)</li> </ul>																				

	<b>Superior Capsular Reconstruction</b>
<b>Phase IV: 12+ wks</b>	<b>Regain Functional ROM / Strengthening and Conditioning Phase</b>
<b>Treatment Interventions:</b>  (Examples of exercises but not an all-inclusive list)	<ul style="list-style-type: none"> <li>• Active warm-up: UBE, rower</li> <li>• Continue with ROM activities as necessary</li> <li>• Scapulothoracic strengthening:               <ul style="list-style-type: none"> <li>chest press (+), rows in full ROM, press down, scaption</li> <li>prone horizontal abduction in neutral rotation, prone extension with ER,</li> <li>prone horizontal abduction with ER, prone full can, dynamic hug, serratus punch 120 deg, lat pull downs (wk 18)</li> </ul> </li> <li>• Glenohumeral / rotator cuff strengthening:               <ul style="list-style-type: none"> <li>flexion, scaption, prone horizontal adduction with ER, press down</li> <li>sidelying ER,</li> <li>isotonic IR/ER in scapular plane progress to 90/90 at wk 18 if needed,</li> <li>isokinetic IR/ER in scapular plane progress to 90/90 wk 20 if needed</li> </ul> </li> <li>• Total arm strengthening: Triceps extensions, biceps curls</li> <li>• PNF patterns at wk 16</li> <li>• Proprioceptive/Kinesthesia activities:               <ul style="list-style-type: none"> <li>rhythmic stabilization: supine flexion 120 deg</li> <li>standing flexion 90 deg bilateral progress to unilateral</li> <li>body blade</li> </ul> </li> <li>• CKC exercises: sub-max BW: quadruped (euroglide / cuff link), wall push-ups</li> <li>Progress to full BW (wk 18): partial prone walk-outs, full prone walk-outs</li> <li>• Plyometrics: bilateral progress to unilateral</li> <li>• Cryotherapy, electrical stimulation, and biofeedback, and if necessary</li> </ul>
<b>Isokinetic IR/ER testing</b>	<ul style="list-style-type: none"> <li>• Wk 20 (5 months), wk 28 (7 months) and 12 months at 30/30/30 position or 90/90 (if appropriate)</li> </ul>
<b>Return to work/sport</b>	<ul style="list-style-type: none"> <li>• Based on MD approval, full ROM, minimal pain at rest or with activity, isokinetic power at 90%, isometric hand-held dynamometer testing 90% and/or MMT 5/5, and functional testing at 90 % compared to uninvolved side</li> <li>• 6-8 months: Return to interval throwing program per MD approval</li> </ul>

