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## REHABILITATION GUIDELINES FOR BICEPS TENODESIS Aaron Bott, M.D.

The rehabilitation guidelines are presented in a criterion based progression. General time frames are given for reference to the average, but individual patients will progress at different rates. Specific time frames, restrictions and precautions may also be given to protect healing tissues and the surgical repair/reconstruction.

### Phase I Surgery to 2 Weeks

<b>Appointments</b>	Physician: 10-14 days postoperatively Physical Therapy: 3-5 days postoperatively 1-2x/week
<b>Guidelines</b>	<ul style="list-style-type: none"> <li>• <b>Shoulder Immobilizer:</b> <ul style="list-style-type: none"> <li>-Required for soft tissue healing for 3 weeks/Should be worn at all times except for ROM exercises</li> </ul> </li> <li>• No biceps tension x 6 weeks           <ul style="list-style-type: none"> <li>-Avoid long lever arm flexion ROM</li> <li>-Avoid resisted supination, elbow flexion, and shoulder forward flexion</li> <li>-No isolated biceps contractions</li> </ul> </li> <li>• No external rotation (arm at side) &gt; 45° x 3 weeks</li> <li>• No extension or horizontal extension behind body x 3 weeks</li> <li>• Other exercises may be utilized at the therapist's discretion within the restrictions of the protocol</li> </ul>
<b>Range of Motion Exercises</b>	<ul style="list-style-type: none"> <li>• Active wrist ROM exercises immediately</li> <li>• Active cervical spine and scapular ROM exercises immediately</li> <li>• PROM to elbow, No active elbow flexion or supination</li> <li>• Pendulum exercises immediately</li> <li>• Passive and active-assisted shoulder ROM exercises in all planes           <ul style="list-style-type: none"> <li>-Weeks 1-2: Flexion to 90°/ER to 30° (arm at side)</li> </ul> </li> <li>• Gentle shoulder mobilizations</li> </ul>
<b>Strengthening Exercises</b>	<ul style="list-style-type: none"> <li>• Submaximal shoulder isometrics in all planes starting immediately</li> <li>• Grip strengthening exercises/Postural exercises</li> </ul>
<b>Aerobic Conditioning</b>	<ul style="list-style-type: none"> <li>• Walking/Stationary bike</li> <li>• Avoid impact aerobic conditioning</li> </ul>
<b>Modalities</b>	<ul style="list-style-type: none"> <li>• Cryotherapy</li> </ul>
<b>Progression Criteria</b>	<ul style="list-style-type: none"> <li>• 2 weeks postop</li> <li>• Flexion 90°/ER 25° (arm at side)</li> </ul>

**BICEPS TENODESIS**  
**Phase II 2 to 6 Weeks Postop**  
**Aaron Bott M.D.**

<b>Appointments</b>	Physician: 10-14 days and 6 weeks postoperatively Physical Therapy: 1-2x/week
<b>Guidelines</b>	<ul style="list-style-type: none"> <li>• <b>Shoulder Immobilizer:</b> <ul style="list-style-type: none"> <li>-Required for soft tissue healing for 3 weeks</li> <li>-May be removed for ROM exercises</li> <li>-May be removed during the 3rd week in safe environments</li> <li>-Should be worn at night from weeks 0-3</li> <li>-D/C completely 3 weeks after surgery</li> </ul> </li> <li>• No biceps tension x 6 weeks <ul style="list-style-type: none"> <li>-Avoid long lever arm flexion ROM</li> <li>-Avoid resisted supination, elbow flexion, and shoulder forward flexion</li> <li>-No isolated biceps contractions</li> </ul> </li> <li>• No external rotation (arm at side) &gt; 45° x 3 weeks</li> <li>• No extension or horizontal extension behind body x 3 weeks</li> <li>• Other exercises may be utilized at the therapist's discretion within the restrictions of the protocol</li> </ul>
<b>Range of Motion Exercises</b>	<ul style="list-style-type: none"> <li>• Active elbow, forearm, and wrist ROM exercises immediately</li> <li>• Active cervical spine and scapular ROM exercises immediately</li> <li>• Passive and active-assisted shoulder ROM exercises in all planes <ul style="list-style-type: none"> <li>-Weeks 3-4: Flexion to 120°/Abduction to 90° <ul style="list-style-type: none"> <li>ER (arm at side) to 45°</li> <li>ER (45° abduction) to 30°</li> <li>IR as tolerated</li> </ul> </li> <li>-Weeks 5-6: Flexion to 160° <ul style="list-style-type: none"> <li>ER (45° abduction) to 75°</li> <li>ER (90° abduction) to 60°</li> </ul> </li> </ul> </li> <li>• Active shoulder ROM exercises may commence at week 5 <ul style="list-style-type: none"> <li>-Active shoulder abduction without resistance/Full can exercise (weight of arm)</li> <li>-Prone rowing/prone horizontal abduction</li> </ul> </li> <li>• Gentle shoulder mobilizations as needed</li> </ul>
<b>Strengthening Exercises</b>	<ul style="list-style-type: none"> <li>• Submaximal shoulder isometrics in all planes starting immediately</li> <li>• Theraband shoulder ER/IR (arm at side) at week 3-No supination with ER</li> <li>• PNF manual resistance at week 5</li> <li>• Grip strengthening exercises/Postural exercises</li> <li>• No biceps strengthening</li> </ul>
<b>Aerobic Conditioning</b>	<ul style="list-style-type: none"> <li>• Walking/Stationary bike without using arms</li> <li>• Avoid impact aerobic conditioning</li> </ul>
<b>Modalities</b>	<ul style="list-style-type: none"> <li>• Cryotherapy</li> </ul>
<b>Progression Criteria</b>	<ul style="list-style-type: none"> <li>• 6 weeks postop</li> <li>• Flexion 160°/ER 45° (arm at side)</li> </ul>

**BICEPS TENODESIS**  
**Phase III 6 to 12 Weeks Postop**  
**Aaron Bott M.D.**

<b>Appointments</b>	Physician: 6 weeks and 12 weeks postoperatively Physical Therapy: 1x/1-2 weeks
<b>Guidelines</b>	<ul style="list-style-type: none"> <li>• Goals include restoration of full motion by week 8</li> <li>• Avoid passive and forceful movements into external rotation, extension and horizontal abduction</li> <li>• Strengthen shoulder and scapular stabilizers</li> <li>• <b>Progress biceps strengthening slowly</b></li> <li>• Begin proprioceptive and dynamic neuromuscular control retraining</li> <li>• Other exercises may be utilized at the therapist's discretion within the restrictions of the protocol</li> </ul>
<b>Range of Motion Exercises</b>	<ul style="list-style-type: none"> <li>• Passive, active-assisted, and active ROM in all cardinal planes – assessing scapular rhythm <ul style="list-style-type: none"> <li>-Weeks 7-9: Flexion to 180° ER 90° (at 90° abduction) IR 75° (at 90° abduction) May start behind the back IR stretch Initiate thrower's ten program</li> <li>-Weeks 10-12: Full passive and active motion permitted</li> </ul> </li> <li>• Cervical spine and scapular AROM</li> <li>• Gentle shoulder mobilizations as needed</li> </ul>
<b>Strengthening Exercises</b>	<ul style="list-style-type: none"> <li>• Rotator cuff strengthening exercises as tolerated</li> <li>• Scapular strengthening and dynamic neuromuscular control</li> <li>• Bodyblade in nonprovocative positions with progression to functional positions</li> <li>• Plyoball progression</li> <li>• Other closed chain strengthening and progressive resistance exercises as tolerated</li> <li>• Postural exercises</li> <li>• Core strengthening</li> </ul>
<b>Aerobic Conditioning</b>	<ul style="list-style-type: none"> <li>• Walking</li> <li>• Stationary bike</li> <li>• Stairmaster</li> <li>• No swimming, treadmill, running, or jumping</li> </ul>
<b>Modalities</b>	<ul style="list-style-type: none"> <li>• Cryotherapy</li> </ul>
<b>Progression Criteria</b>	<ul style="list-style-type: none"> <li>• 12 weeks postop</li> <li>• Full active ROM</li> </ul>

**BICEPS TENODESIS**  
**Phase IV 12 Weeks to 6 Months Postop**  
**Aaron Bott M.D.**

Appointments	Physician: 12 weeks and 6 months postoperatively Physical Therapy: 1x/2-3 weeks
Guidelines	<ul style="list-style-type: none"> <li>• <b>Months 3-4:</b> -All exercises and activities to remain non-provocative and low to medium velocity -Avoid activities where there is a risk of falling/increased stress applied to the arm -No swimming, throwing or sports</li> <li>• <b>Months 4-5:</b> -Progress gradually into provocative exercises by beginning with low velocity, known movement patterns -Begin education in sport specific biomechanics with initial program for throwing, swimming, or overhead racquet sports -No swimming</li> <li>• <b>Months 5-6:</b> -Progress gradually into sport specific movement patterns -Develop provocative exercises in high velocity, multidirectional movement patterns</li> <li>• Other exercises may be utilized at the therapist's discretion within the restrictions of the protocol</li> </ul>
Range of Motion Exercises	<ul style="list-style-type: none"> <li>• Posterior glides/sleeper stretches for posterior capsular tightness</li> <li>• More aggressive ROM if limitations are still present</li> <li>• Stretching for patient specific muscle imbalances</li> </ul>
Strengthening Exercises	<ul style="list-style-type: none"> <li>• <b>Months 3-4:</b> -Prone flexion, horizontal abduction -Standing D1/D2 diagonals -TB/cable column/dumbbell IR/ER at 90° of abduction -Balance board in push-up position/Prone swiss ball walk-outs -RAM with supine D2 diagonal -CKC stabilization with narrow base of support -Continue thrower's ten program/fundamental exercises</li> <li>• <b>Months 4-5:</b> -Dumbbell and medicine ball exercises that incorporate trunk rotation and control with cuff strengthening at 90° of abduction -Higher velocity strengthening and control (plyometrics and rapid theraband drills)</li> <li>• <b>Months 5-6:</b> -Incorporate dumbbell and medicine ball exercises at higher velocities -Initiate sport-specific programs (throwing, swimming, overhead racket, etc.)</li> </ul>
Aerobic Conditioning	<ul style="list-style-type: none"> <li>• <b>Months 3-5:</b> -Walking, stationary bike, stairmaster, and running. No swimming</li> <li>• <b>Months 5-6:</b> -Return to sport-specific conditioning regimen</li> </ul>
Modalities	<ul style="list-style-type: none"> <li>• Cryotherapy</li> </ul>
Progression Criteria/Return to Sports	<ul style="list-style-type: none"> <li>• Full active ROM</li> <li>• Full shoulder/upper extremity strength</li> <li>• Dynamic neuromuscular control with multi-plane activities without instability</li> </ul>