

REHABILITATION PROGRAM FOLLOWING BICEPS TENODYSIS

GENERAL GUIDELINES / PRECAUTIONS

- No exercises specifically for the shoulder while a pain pump is present
- Have patient wear sling at all times except showering and while doing exercises / physical therapy for 6 weeks or per physician's discretion.
- Avoid isolated biceps contraction for 8 weeks
- Avoid active shoulder forward flexion for 6 weeks in sitting and standing positions
- Once the sling is removed it is necessary to stress the importance of avoiding heavy lifting, pushing, or pulling by the patient for 6 months to allow proper tissue healing.
- This protocol, as well as most others, is a general guideline. Patients should not be progressed to the next phase until they demonstrate proper form with all activities and all criteria are met in the current phase.
- When clinically appropriate, properly assess the whole body and incorporate treatment for loss of mobility and stability. Not doing so can prevent optimal outcomes and increase risks of future injuries.

MAXIMUM PROTECTION PHASE (Weeks 0-2)

- **Goals:**
 - Protect repair and promote healing.
 - Diminish pain and inflammation.
 - Gradually increase passive range of motion
 - Minimize muscle atrophy
- **Precautions**
 - No resisted lifting, pulling, or pushing motions
 - Avoid excessive stretching or sudden movements
 - Keep incisions dry and clean
- **Treatment (Days 1-7)**
 - Pendulum exercises (4-6 x daily)
 - Hand/wrist AROM and gripping exercises.
 - Active scapular control exercises in sling
 - Gentle, pain-free ROM:
 - Passive IR/ER in scapular plane
 - Passive Flexion
 - Rhythmic stabilization drills for ER/IR with elbow supported in scapular plane
 - Gentle AAROM exercises
 - T-bar ER/IR with elbow supported at 30-45 degrees
 - Sub-maximal, non-painful isometrics
 - All planes with exception of flexion
 - Cryotherapy (3-4 x daily), modalities as indicated.

- **Treatment (Days 8-14)**
 - Continue pendulums and shoulder isometrics
 - Full PROM by Week 2
 - Progress AAROM Exercises
 - T-bar ER/IR at 90 deg ABD
 - Begin T-bar flexion to tolerance
 - Pulley flexion in scapular plane
 - Continue rhythmic stabilization drills
 - ER/IR in scapular plane
 - Initiate:
 - Scapular retraction and prone rows to neutral
 - ER/IR with tubing in neutral

MODERATE PROTECTION PHASE (Weeks 3-6)

- **Criteria to Progress:**
 - Full PROM
 - 4/5 manual muscle testing
 - Minimal pain or tenderness with IADL performance
- **Goals:**
 - Continue to protect healing tissues
 - Full AROM in all planes of motion
 - Diminish pain and inflammation
 - Restore dynamic shoulder stability
- **Treatment (Days 15-28)**
 - Continue all previous exercises as needed
 - Progress rhythmic stabilization drills to more challenging ranges
 - Progress scapular stability program
 - Initiate progressive isotonics:
 - Side-lying external rotation
 - Prone extension to neutral
 - Prone horizontal abduction with elbow at 90
 - Forward flexion (in side-lying position)
 - Aquatic program (Week 3: if incisions are well-healed)
 - Continue use of cryotherapy.
- **Treatment (Week 5)**
 - Continue all previous AROM and AAROM exercises as needed to maintain ROM
 - May begin to work on gentle behind the back stretches to tolerance
 - Progress isotonic strengthening program
 - Prone or side-lying horizontal abduction with elbow extended

INTERMEDIATE STRENGTHENING PHASE (Weeks 6-12)

- **Goals:**
 - Gradual restoration of shoulder stability, strength and power
 - Gradually return to functional activities as permitted by physician
 - Ex: Jogging program, modified gym program with shoulder safety as primary concern
 - Prepare patient to return to prior level of activity
- **Criteria to Progress**
 - Full pain-free TROM
 - 4+/5 pain-free MMT in all ranges
 - No pain or tenderness noted with activities
- **Treatment (Weeks 6-10)**
 - Continue all stretching and ROM activities in order to main full, functional mobility
 - Increase resistance for exercises listed in phase II
 - Initiate:
 - Standing or Seated Scaption
 - Patient must not demonstrate scapular hiking to progress forward scaption
 - Progressive closed-kinetic chain stability exercises
 - Biceps isometrics at Week 8
- **Treatment (Weeks 11-12)**
 - Continue all previous strengthening exercises as needed
 - Progress home exercise and gym program and schedule formal physical therapy 1-2 x per week
 - Initiate:
 - Static carry variations (i.e., farmer's carry, suitcase carry)
 - UE plyometric program for overhead and contact athletes
 - Interval Golf Program
 - Golfers may putt, chip, and pitch during this phase (MD discretion)

ADVANCED STRENGTHENING PHASE (week 13-20)

- **Criteria to Progress:**
 - Pain-free functional AROM required for previous activities
 - Pain-free 5/5 manual muscle testing
- **Goals:**
 - Maintain full, functional AROM
 - Improve muscular strength, endurance, and power.
 - Gradually return to more demanding functional activities.
- **Treatment (Weeks 13-20)**
 - Continue ROM and stretching exercises to maintain full ROM including self-capsular mobilizations as needed
 - Continue to progress to advanced strengthening exercises
 - Initiate
 - Biceps isotonic strengthening
 - Progress plyometric program until completion

- May initiate interval throwing program upon successful completion of pain-free plyometric progression

DISCHARGE TESTING / PLANNING (Month 5 to 7)

- Based on a patient's age, sex, specific sport / activity, and level (i.e. recreational, amateur, professional) that they are returning to, a decision is made to endorse their return to sport or to ask that the patient refrain from doing so. Currently we strive for the following criteria before fully endorsing going back to rigorous activities:
 - Demonstrate quality and symmetrical movement throughout the body evaluated with comprehensive movement screen or assessment process
 - Symmetrical and acceptable comprehensive scores on CKC UE testing
- Biomechanical assessment of their performance helps safe return to sport / higher level activity. Patient's may be videoed and analyzed doing activities such as throwing or hitting to see if sound body mechanics are being utilized.
- Not all patients who have undergone biceps tenodysis are candidates for functional testing. Those undergoing these tests should be chosen with proper consideration given to what they plan to return to and there general fitness level.
- No matter how well a patient is doing with return to sport testing it is prudent to remember how important time is to full healing and safe return to sport / activity.
- Often times, patients are scheduled periodically during the phase in which they are trying to return to sport / higher level activities to assess their progress and properly change their program until they are deemed safe to return to all activities.