

REHABILITATION FOLLOWING SLAP II OR IV REPAIR

GENERAL GUIDELINES / PRINCIPLES

- Have patient wear sling at all times except showering and while doing exercises / physical therapy for 6 weeks or per physician's discretion.
- No exercises specifically for the shoulder while a pain pump is present.
- Once the sling is removed it is necessary to stress the importance of avoiding heavy lifting, pushing, or pulling by the patient for at least 6 months to allow proper tissue healing.
- **Avoid** active elbow flexion / supination or isolated biceps contraction for the first 6 weeks after surgery. **Protect** repaired labrum by avoiding excessive shoulder ER and secondary peel back mechanism.
- 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.

PRE-OPERATIVE PHASE

- **Goals:**
 - Diminish inflammation, swelling, and pain
 - Maximize normal range of motion within patient tolerance
 - Restore normal scapulohumeral rhythm and control
 - Provide patient education and expectations of post-operative care
 - Protect the shoulder from further injury
- **Exercises / Treatment**
 - Scapular setting/retraction/ Shoulder isometrics
 - Avoid biceps contraction
 - AAROM/PROM (T-bar, Pulleys)
 - Pain-free resistive exercises as needed (ER/IR, Rows)
 - Ice/compression as needed.

MAXIMUM PROTECTION PHASE (Days 1-42)

- **Goals:**
 - Protect repair and promote healing.
 - Prevent atrophy
 - Diminish pain and inflammation.
 - Address mobility / stability needs for C-spine and T-spine
- **Treatment (Days 1-7)**
 - No exercises while pain pump present
 - Gentle, pain-free ROM
 - Passive flexion: restrict to 60 degrees
 - Passive ER at 45 degrees: 10-15 degrees

- Passive IR at 45 degrees: 45 degrees
 - Passive ER at 45 deg ABD: to 10-15 degrees
 - Passive IR at 45 deg ABD: to 45 degrees
 - No active biceps, shoulder extension, ER or elevation
 - Gripping
 - Scapular retraction
 - Upper trap stretch
 - Levator scapulae stretch
 - Pendulums
 - Shoulder isometrics x 5
 - Cryotherapy (3-4 x daily), modalities as indicated
- **Treatment (Days 8-14)**
 - Gentle, pain-free ROM
 - Passive flexion: restrict to 75 degrees
 - Passive ER at 45 degrees: 10-15 degrees
 - Passive IR at 45 degrees: 45 degrees
 - No active biceps, shoulder extension, ER or elevation
 - Continue same treatment as days 1-7
- **Treatment (Days 15-28)**
 - Gentle, pain-free ROM
 - Passive flexion: restrict to 90 degrees
 - Passive abduction: restrict to 85 degrees
 - Passive ER at 35 degrees: 25-30 degrees
 - Passive IR at 35 degrees: 55-60 degrees
 - No active biceps, shoulder extension, ER or elevation
 - Continue relevant exercises from first 2 weeks
 - Initiate rhythmic stabilization drills
 - AAROM
 - Initiate scapular setting
 - Tubing at 0 degrees- Reactive isometrics (side stepping)
 - Assess and properly treat C-spine and T-spine
 - Continue use of cryotherapy
- **Treatment (Weeks 5-6)**
 - Gentle, pain-free ROM
 - Passive flexion: restrict to 145 degrees
 - Passive abduction: restrict to 135 degrees
 - Passive ER at 45 degrees: 45-50 degrees
 - Passive IR at 45 degrees: 55-60 degrees
 - No active biceps, shoulder extension, ER or elevation
 - No isolated biceps contraction
 - Continue light rotator cuff strengthening and scapular stabilization
 - Continue progressing AAROM within protocol limits
 - Rhythmic stabilization at 90 degrees flexion
 - Prone row
 - Prone shoulder extension
 - Horizontal abduction
 - Supine shoulder flexion
 - Tubing ER / IR at side
 - Continue ice if needed
 - Assess properly treat lumbar, LE stability / mobility needs

MODERATE PROTECTION PHASE (Weeks 7-12)

- **Goals:**
 - Gradually restore pain-free PROM
 - Initiate biceps strengthening
 - Protect surgical repair
 - Restore scapular stability and neuromuscular timing.
 - Improve RC activation/strength
 - Initiate non-impact cardiovascular training
- **Treatment (Weeks 7-8)**
 - **Remove sling**
 - Continue to progress ROM
 - Passive flexion to 160 degrees
 - Passive ER at 90 degrees to 75-80 degrees
 - Passive IR at 90 degrees to 65-75 degrees
 - Initiate PNF patterns
 - Continue to progress isotonic exercises
 - Progressively resistive weighted carries
 - Prone horizontal abduction
 - Continue to emphasize normal scapulohumeral rhythm
 - Initiate biceps/elbow AROM
 - Initiate non-impact cardiovascular training (UBE, Bike)
 - PRE for elbow and wrist that do not overstress the biceps
- **Treatment (Weeks 9-12)**
 - PROM
 - Progress to full ROM in all planes
 - Passive ER at 90 degrees abduction to 110 or more in overhead athletes if no pain
 - Initiate light closed chain exercises
 - Progress exercises to eventually meet functional demands (tennis, baseball, etc.)
 - Continue to assess / treat mobility / stability needs throughout

MINIMAL PROTECTION PHASE (Weeks 13-20)

- **Goals**
 - Progress strengthening program to shoulder level and above
 - Continue to address whole body mobility / stability needs
- **Treatment (weeks 13-15)**
 - Progress capsular stretching exercises
 - Begin resisted elbow flexion and forearm supination
 - Restore functional movement patterns of UE/LE combination
 - Initiate plyometrics (side -> shoulder level)
 - Maintain full Active and Passive ROM for patient demands.
- **Treatment (Week 16-20)**
 - Initiate interval sport program-
 - Towel drills, 1-2 weeks elbow toss
 - 2 weeks rainbow tosses (Week 18)
 - Initiate linear throwing program (week 20)
 - Progress body weight resistance upper extremity exercises
 - Body weight hangs
 - Progress dynamic warm-up and mobility exercises

- Continue core stability in functional sport/activity demand positions

ADVANCED STRENGTHENING PHASE (Week 20-26)

- **Treatment**
 - Continue strengthening and flexibility exercises
 - Progress plyometric activities incorporating balance and multi-plane tasks
 - Muscular strength 70-75% involved side (ER: IR 66-75%)

DISCHARGE TESTING / PLANNING (usually done 6-12 months post-op)

- 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 SLAP II / IV repair are candidates for functional testing. Those undergoing these tests should be chosen with proper consideration given to what they plan to return to and their 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.
- Patients should schedule periodically during this phase to assess their progress and properly change their program until they are deemed safe to return to all activities.