

AC Joint Reconstruction Rehabilitation Guidelines

Protocol: Chris Utz, MD

Progression is based on healing constraints and functional progression specific to the patient. Phases and time frames are designed to give a general sense of progression. Acute versus chronic, as well as, concomitant procedures such as SLAP repair, distal clavicle excision, and physiologic age of the patient will alter the guidelines. Importantly, the reconstruction must be protected for the first 8 weeks. Please do not hesitate to contact me with any questions or concerns.

**PHASE I: Generally 0 - 8 weeks post-op**

**PHASE I GOALS:** Protect surgical repair  
Avoid a "stiff" shoulder

**PRECAUTIONS:** \***NO** elevation of shoulder past 90°\*  
\*Must **ALWAYS** wear sling/immobilizer for 8 weeks, even while sleeping\*  
\***NO** jogging/running\*

**SLING:** Sling must be worn except during rehabilitation for the first 8 weeks after surgery

**WOUND:** Post-op dressing remains intact until post-op day #5  
May begin showering after post-op day #5 (no need to cover incision site)  
\***Do NOT** submerge shoulder in tub or pool for 4 weeks\*  
Suture/staple removal @ 10-14 days per Ortho/PT  
Begin scar massage after incision site sloughs/scar is formed

**REHABILITATION:** Frequent use of ice

~weeks 1-3 Elbow, Wrist, & Hand: ROM ex's, gripping, squeezing  
Gentle ("Two Finger") Isometrics: light pain free resistance (all directions)  
OK GENTLE PASSIVE SUPINE SCAPULAR RANGE OF MOTION

~weeks 4-6 Supine Assisted Shoulder Flexion - limited to 90° and assisted with opposite hand  
Aerobic Conditioning on Stationary Bike (with sling on)  
Scapular Retraction & Protraction

~weeks 7-8 Shoulder AROM exercises (Limited to 90° shoulder elevation)  
Lower Extremity Weight Lifting: May begin leg & calf press, hamstring curls, hip add/abd

**FOLLOW-UP:** Physical Therapy: 2-3x weekly; Ortho: ~6-8 weeks post-op;  
Supervised rehabilitation: 1-2 x per week as needed

**DOCUMENTATION:** Precautions, pain level, medications and modalities  
Observation: (incision sites) - Signs/symptoms of infection? Site healing well?  
Neurovascular status: Distal pulses, motor and sensation intact?  
Shoulder ROM & strength

**PHASE II: Generally 9-16 weeks post-op**

**PHASE II GOALS:** ROM: Full shoulder flexion and internal rotation, ~90% full external rotation  
Pain free ADLs

**PRECAUTIONS:** \*May discontinue sling use\*  
\***NO** repetitive overhead use of shoulder\*  
\***NO** regular pushups, heavy lifting, or other sports participation\*

**REHABILITATION:** Continue phase I exercises as needed  
Progress to the following exercises and increase intensity gradually when patient is ready  
(i.e., no increase in shoulder pain or stiffness since the previous exercise session)  
\*Note: all strengthening should be done, starting with low weights, high repetitions, and in  
a painless ROM\*

~**weeks 9-12** Shoulder AAROM exercises: Wand, pulley, towel stretch, sleeper's stretch, etc.  
May begin elliptical (legs only) and/or stairmaster for conditioning  
ER/IR strengthening with light theraband (with towel roll under arm)

~**weeks 13-16** Upper body cycle: begin with three 1-min sets (forwards and backwards) progress gradually  
Shoulder AROM exercises: (add mobilizations, other manual therapy as needed)  
Progressive strengthening: ER & IR with arm at side, FF & scaption to 60-90°, rows  
(first set: 20 repetitions, then 1 additional set at the same weight to muscle failure)  
May begin jogging (start with 5 minutes and progress gradually as tolerated)  
Beginning level neuromuscular/functional training exercises (see appendix)  
Beginning level shoulder stabilization exercises (see appendix)

**FOLLOW-UP:** Physical Therapy; Ortho: ~3 months post-op;  
Supervised rehabilitation: 2-3 x per week as needed

**DOCUMENTATION:** Pain level, medications, modalities  
Shoulder ROM & strength

**PHASE III: Generally 5-6 months post-op**

**PHASE III GOALS:** Pushups at own pace without pain  
≥ 90% internal/external rotation strength return

**PRECAUTIONS:** \***NO** participation in contact/collision sports until 8 months post-op\*  
\*OK to start supervised throwing program at 6 months if pain free with full ROM

**REHABILITATION:** Continue phase II exercises as needed  
Progress to the following exercises and increase intensity gradually when patient is ready (i.e., no increase in shoulder pain or stiffness since the previous exercise session)  
\*Note: all strengthening should be done, starting with low weights, high repetitions, and in a painless ROM\*

**~weeks 17-20** Warm-up: 5-10 minutes on upper body cycle  
General upper quarter stretching: 5-10 minutes (shoulder, thoracolumbar spine)  
Progressive strengthening: ER/IR with shoulder in 30° elevation, FF/scaption to 60-90°, rows (first set: 15 reps, then 2 additional sets at the same weight to muscle failure)  
Intermediate level neuromuscular/functional training exercises (see appendix)  
Intermediate level shoulder stabilization exercises (see appendix)

**~weeks 21-26** Progressive strengthening: ER/IR with shoulder in 45-90° elevation, FF/scaption to 90-120°, (first set: 10-15 reps, then 2 additional sets at the same weight to muscle failure)  
May also begin general light intensity strengthening with shoulder in “safe” position (avoid heavy overhead lifting, avoid shoulders in the 90° elevation, 90° ER position)  
Intermediate/advanced level neuromuscular/functional training exercises (see appendix)  
Intermediate/advanced level shoulder stabilization exercises (see appendix)  
Progressive sports training: Begin at 25-50% intensity, progress gradually (see appendix)

**FOLLOW-UP:** PT: Monthly; Ortho: ~6 months post-op;  
Supervised rehabilitation: 1-2 x per week as needed

**DOCUMENTATION:** Pain level - medications and modalities  
Shoulder ROM & strength  
Biodex testing at 6 months post-op

**MISCELLANEOUS:** After 6 months post-op: Exercises in phase III are continued, gradually increasing intensity & duration as tolerated.  
The recommendation is to wait until 8-10 months post-op to return to contact/collision sports . This time period may be adjusted slightly by the surgeon and therapist according to patient progress.

## APPENDIX: GENERAL SHOULDER PROGRESSIONS

\*The following is a supplement to the rehabilitation guidelines on various types of shoulder exercises. The time frames listed are only for procedures specific to this protocol\*

In general, beginning level shoulder exercises are performed with light resistance in a ROM below 90° of shoulder elevation. Intermediate level exercises are done with moderate resistance in a ROM below 120°.

Advanced level exercises are done with moderate resistance in a full ROM, but avoiding the 90° abducted, 90° externally rotated position until ~5-6 months post-op. All training should be pain free.

Exercise Type	Beginning Level ~13-16 weeks post-op	Intermediate Level ~17-20 weeks post-op	Advanced Level 21-26 weeks post-op
<b>Body Blade</b>	Flexion/Extension IR/ER Superior/Inferior (arm at side)	FF range to 90° Scaption to 90° IR/ER through ROM Horiz adb/add at 90°	FF range to 150° Scaption to 150° IR/ER through ROM Diagonal motions
<b>Ball toss</b>	Chest pass – 2 handed IR toss – (arm at side)	Overhead toss – (2 handed) Behind back toss	Overhead diagonal toss – (2 handed) Regular throwing toss
<b>Prone stabilization</b>	Weight shifting in sitting, standing, prone on all fours	All fours stabilization on stable surface	All fours stabilization on foam or theraball
<b>Supine stabilization</b>	Supine Shoulder Stabilization @ 90°	Supine Shoulder Stabilization from 60-120°	Supine Shoulder Stabilization (Available ROM)
<b>Cuff strengthening</b>	ER/IR – (arm at side)  FF/Scaption to 60-90° (Thumb up)	ER/IR - (30-45° shld scaption)  FF/Scaption to 90-120° (Thumb up)	ER/IR- (45-90°shld scaption) – gradually moving into abd PNF patterns
<b>Scapular strengthening</b>	Ceiling “punches” Rows	“Pushouts” (in standing) Rows (inferior/superior)	Pushup plus
<b>Pushups</b>	none	Wall pushups – progressing to inclined pushups	Knee pushups – progressing to modified regular pushups
<b>Misc activities</b>	Basketball: dribbling, chest and bounce pass Golf: putting Volleyball: bumping Pool: jogging, treading Wall ball drawing	Basketball: shooting within the key only Golf: chipping, short irons Volleyball: setting Pool: No overhead strokes Tossing Frisbee Catching drills: below 90°	Basketball: noncontact drills only Golf: gradual return Vball: gradual return ~6 mo Pool: gradual return Forehand, backhand racquet sports (no overhead)