

CORACOID TRANSFER/DISTAL CLAVICLE TRANSFER/DISTAL TIBIA ALLOGRAFT

Physical Therapy, Strength and Conditioning

PHASE I: MAXIMUM PROTECTION (WEEKS 0 TO 2)

Goals

- Reduce inflammation
- Decrease pain
- Postural education

Exercise Progression

- Ultrasling x 6 weeks
- **No motion x 2 weeks**
- Ice and modalities to reduce pain and inflammation.
- Cervical ROM and basic deep neck flexor activation (chin tucks).
- Instruction on proper head neck and shoulder (HNS) alignment.
- Active hand and wrist range of motion.
- Active shoulder retraction
- Encourage walks and low intensity cardiovascular exercise to promote healing.

Manual Intervention

- STM—global shoulder and CT junction.

PHASE II: PASSIVE RANGE OF MOTION (WEEKS 2-4)

Goals

- Postural education with cervical spine and neutral scapular positioning
- Shoulder flexion to 120 degrees by week 4
- Shoulder external rotation 30-45 degrees at 45 degrees abduction by week 4

Exercise Progression

- Supine flexion using contralateral arm for ROM at least 3x/day
- Supine ER using T bar
- Shoulder pendulums
- Cervical ROM as needed to maintain full mobility.
- DNF and proper postural positioning with shoulder retraction exercises.
- Low to moderate cardiovascular work. May add elliptical but no running.

Manual Intervention

- STM—global shoulder and CT junction
- Scar tissue mobilization
- Graded GH mobilizations
- ST mobilizations
- Gentle submaximal therapist directed isometrics to achieve ROM goals

PHASE III: ACTIVE RANGE OF MOTION (WEEKS 4-6)

Goals

- Discontinue sling
- Shoulder flexion to 150 degrees by week 6
- Shoulder external rotation 45-60 degrees at 75 degrees abduction. Should approach normal ROM by week 10
- Internal rotation to belt line

Exercise progression

- Serratus activation; Ceiling punch (weight of arm) many initially need assistance
- Manual perturbations supine with arm in 90° flexion and ER/IR at 0°
- Scapular strengthening—prone scapular series (rows and I's). Emphasize scapular strengthening under 90°
- External rotation on side (no resistance)
- Cervical ROM as needed to maintain full mobility
- DNF and proper postural positioning with all RC/SS exercises
- Low to moderate cardiovascular work. May add elliptical but no running.
- Continue with combined passive and active program to push full flexion and external rotation achieving ROM goals outlined above.
- Stick off the back progressing to internal rotation with thumb up back and sleeper stretch
- Sub-maximal 6 direction rotator cuff isometrics (no pain).

Manual Intervention

- STM and Joint mobilization to CT junction, GHJ and STJ as needed.
- CR/RS to gain ROM while respecting repaired tissue.

PHASE IV: PROGRESSIVE ROM AND STRENGTHENING (WEEKS 6-12)

Goals

- Gradual progression to full P/AROM by week 10-12
- Normalize GH/ST arthrokinematics
- Activate RC/SS with isometric and isotonic progression.

Exercise Progression

- Continue with combined passive and active program to push full flexion and external rotation.
- Internal rotation with thumb up back and sleeper stretch.
- Continue with ceiling punch adding weight as tolerated.
- Advance intensity of sub-maximal rotator cuff isometrics. May discontinue once isotonic RC/SS program is fully implemented.
- Advance prone series to include T's and Y's adding resistance as tolerated.
- Resisted ER in side-lying or with bands.
- Gym: rows, front lat pulls, biceps and triceps.
- Scaption; normalize ST arthrokinematics.
- Supine progressing to standing PNF patterns, adding resistance as tolerated. Protect end range 90/90.
- CKC progression—Quadruped, ball compression, counter weight shift, knee scapular push-ups, knee push-ups; all as tolerated. 1/2 to 3/4 ROM protecting the anterior shoulder capsule.
- Therapist directed RS and perturbations in quadruped—bilateral progressing to unilateral-tri pod position.

Manual Intervention

- STM and Joint mobilization to CT junction, GHJ and STJ as needed.
- CR/RS to gain ROM while respecting repaired tissue.
- Manual perturbations.
- PNF patterns.

PHASE V: ADVANCED STRENGTHENING AND PLYOMETRIC DRILLS (WEEKS 12-24)

Goals

- Gradual progression to full ROM with protection at end range 90/90.
- Normalize GH/ST arthrokinematics
- Advance gym strengthening program.
- Begin RTS progression.
- Evaluation with physician for clearance to full activity.

Exercise Progression

- Full range of motion all planes—protecting end range 90/90.
- Begin strengthening at or above 90° with prone or standing Y's, D2 flexion pattern and 90/90 as scapular control and ROM permit. Patient goals/objectives will determine if strengthening above 90° is appropriate.
- Continue to progress RC and scapular strengthening program.
- Continue with closed chain quadruped perturbations; add open chain as strength permits.
- Advance gym strengthening program maintaining anterior shoulder precautions with pressing and chest fly exercises.
- Initiate plyometric and rebounder drills as appropriate.
- RTS testing for interval programs (golf, tennis etc.).
- Follow-up examination with the physician (6 months) for release to full activity.

Manual Intervention

- STM and Joint mobilization to CT junction, GHJ and STJ as needed.
- CR/RS to gain ROM while respecting repaired tissue.
- Manual perturbations.
- PNF patterns.

Criteria for Return to Sport/Full Clearance

- *Full, pain-free ROM*
- *Normal GH/ST arthrokinematics*
- *>90% MMT using handheld dynamometer*
- *Full progression through interval program*
- *Anticipated return to play for contact athlete is 4 months*
- *Anticipated return to play for throwing athlete, swimmer and volleyball is 6-9 months.*