



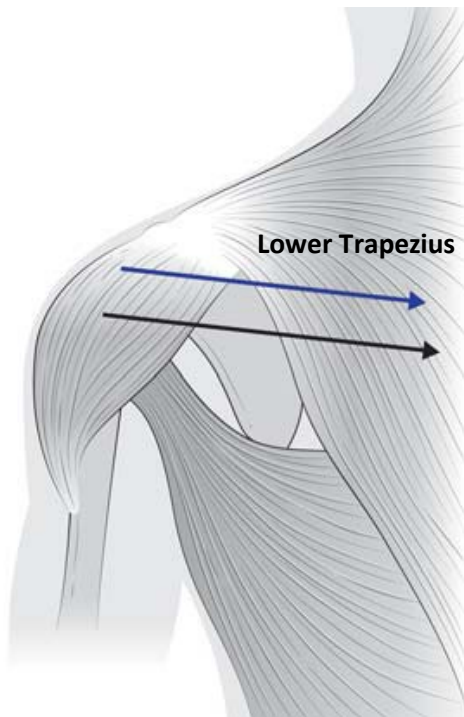
Lower Trapezius Transfer

The Procedure:

The patient has an irreparable rotator cuff tear. In particular, the patient's infraspinatus is irreparable. In order to recreate the balance and force coupling of the rotator cuff, the lower trapezius has been transferred to substitute for the infraspinatus.

The lower trapezius works in phase with the infraspinatus and biomechanical studies demonstrate that the pull of the lower trapezius is in-line with the pull of the infraspinatus.

In order to connect the lower trapezius to the greater tuberosity, an Achilles tendon allograft was used.





Phase 0 – Immediate Post-Surgical (Week 0-6)

Goals:

- Maintain integrity of repair
- Diminish pain and inflammation
- Avoid adjacent joint stiffness (elbow, wrist, hand, cervical spine)

Precautions:

- No active range of motion (AROM) of the shoulder
- No passive range of motion (PROM) of the shoulder
- Strict use of external rotation immobilizer, sleep in immobilizer
- Maintain arm in external rotation immobilizer, remove only for bathing
- No supporting of body weight by hands
- No lifting of objects

Week 0-6

- Cryotherapy for pain and inflammation
- Begin hand, wrist, elbow AROM & PROM as tolerated
- Begin cervical AROM & PROM as tolerated

Phase I – Protection (Week 7-10)

Goals:

- Maintain integrity of repair
- Diminish pain and inflammation
- Prevent muscular inhibition
- Allow healing of soft tissue
- Do not overstress healing rotator cuff
- Independent with ADLs with modifications while maintaining the integrity of the repair

Precautions

- Strict use of external rotation immobilizer, sleep in immobilizer
- Maintain arm in external rotation immobilizer, remove only for bathing
- No supporting of body weight by hands
- No lifting of objects

Week 7-8

- Patient education: posture, joint protection, positioning, hygiene
- Initiate pendulum exercises

Week 9-10

- Progressively wean off external rotation immobilizer/sling
- Start active assisted range of motion (AAROM)
 - Forward Flexion to 90 degrees
 - Abduction to 90 degrees
 - Internal rotation to neutral
 - External rotation as tolerated
- Start scapular musculature isometrics



Phase II – Intermediate Phase (Week 11-16)

Goals:

- Full AROM & PROM
- Dynamic shoulder stability
- Gradual restoration of shoulder strength, power and endurance
- Optimize neuromuscular control
- Gradual return to functional activities

Precautions:

- No heavy lifting (<5 lbs)
- No sudden lifting or pushing activities
- No sudden jerking motions

Criteria for progression to Phase III

- Able to tolerate the progression to low-level functional activities
- Demonstrates return of strength/dynamic stability
- Re-establish dynamic shoulder stability
- Demonstrate adequate strength and dynamic stability for progress to higher demanding working/sport specific activities

Week 11-12

- Initiate AROM exercises, no ROM limits
- Initiate PROM and stretching exercises
 - Gentle painless PROM as tolerated
 - Gentle scapular/glenohumeral joint mobilization as indicated to regain full passive ROM
- Begin rotator cuff isometrics

Week 13-16

- Dynamic stabilization exercises
- Initiate strengthening program
 - External rotation (ER) and Internal rotation (IR) with theraband
 - Lateral raises
 - Full can in scapular plane (avoid empty can abduction exercises)
 - Prone rowing
 - Prone horizontal abduction
 - Prone extension
 - Elbow flexion/extension

Phase III – Advanced Strengthening (Week 17-24)

Goals:

- Maintain full non-painful AROM
- Advance conditioning exercises for enhanced function use of the extremity
- Improve muscular strength, power and endurance
- Gradual return to full functional activities



Week 17-24

- Progress to fundamental shoulder exercises
- Continue ROM and self-guided capsular stretching
- Continue progression of strengthening
- Advance proprioceptive, neuromuscular activities

Phase IV – Return to Full Activity (Week 24+)

Goals:

- Gradual return to work activities
- Gradual return to recreational activities
- Gradual return to sport activities

Week 24+:

- Unrestricted activity is allowed after 6 months from surgery.
- Plain radiographs are recommended at 3 and 6 months postoperatively and then on yearly basis.
- May initiate interval sports program (if applicable)

Criteria to Return to Sport

- Surgeon clearance
- Pain free shoulder function
- Adequate active and passive range of motion necessary for required sport/activity