

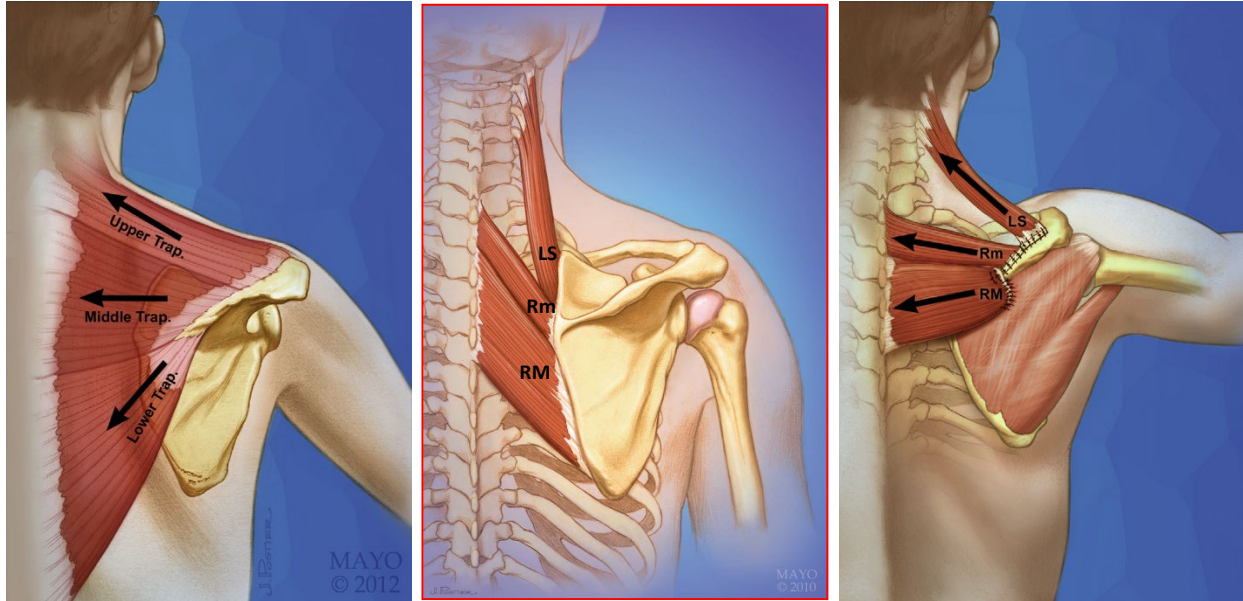


## Triple Tendon Transfer (T3) for Trapezius Palsy

### The Procedure:

The patient had a nerve palsy of the trapezius, which has persisted for greater than 2 years. In order to restore scapular motion and the function of trapezius, the levator scapulae (LS), rhomboid minor (Rm) and rhomboid major (RM) have been transferred to the scapular spine to recreate the active pull of the trapezius.

During rehab, care must be taken to allow this tendon transfer to heal. It takes approximately 12 weeks for the transfer to heal.



During the first 12 weeks of rehab, please avoid stretches and exercises which stress the transfer (e.g. scapular protraction).

### 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:

- Strict use of abduction-external rotation immobilizer
  - Sleep in immobilizer
  - Remove only for bathing
  - Abduction 90 degrees, external rotation 30 degrees
- No active range of motion (AROM) of the shoulder
- No passive range of motion (PROM) of the shoulder
- 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 7-8)**

#### Goals:

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

#### Precautions

- Strict use of abduction-external rotation immobilizer
  - Sleep in immobilizer
  - Remove only for bathing
  - Abduction 90 degrees, external rotation 30 degrees
- Discontinue abduction-external rotation immobilizer at 8 weeks
- No active range of motion (AROM) of the shoulder
- No supporting of body weight by hands
- No lifting of objects

#### Week 7-8

- Start active assisted range of motion (AAROM)
  - Forward Flexion to 90 degrees
  - Abduction to 90 degrees
  - Internal rotation to neutral
  - External rotation as tolerated

### **Phase II – Intermediate Phase (Week 9-12)**

#### Goals:

- Pain-free AAROM, 90 degrees of flexion and abduction
- Dynamic shoulder stability
- Optimize neuromuscular control

#### Precautions:

- No lifting
- 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



### Week 9-10

- Discontinue abduction-external rotation immobilizer at 8 weeks
  - Transition to standard shoulder abduction sling
  - Wear abduction sling for 2 weeks
- Continue AAROM exercises, no ROM limits

### Week 11-12

- Discontinue abduction sling
- Begin periscapular isometrics
- Initiate AROM
  - Forward Flexion to 90 degrees
  - Abduction to 90 degrees
  - Internal rotation to neutral
  - External rotation as tolerated

## **Phase III – Beginning Strengthening (Week 13-20)**

### Goals:

- Pain-free full AROM
- Improve muscular strength, power and endurance
- Gradual return to functional activities

### Precautions:

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

### Week 13-14

- Continue periscapular isometrics
- Continue AROM, no ROM limits

### Week 15-16

- Begin PROM, pain-free PROM
- Begin rotator cuff isometrics

### Week 17-20

- 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

## **Phase IV – Advanced Strengthening (Week 21-24)**

### Goals:

- Maintain full non-painful AROM
- Advance conditioning exercises for enhanced function use of the extremity



- Gradual return to full functional activities

Week 21-24

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

**Phase V – 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.
- 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