Orthopaedic Sports Specialists, P.C.

Michael E. Joyce, M.D. and Alex G. Dukas, M.D.

84 Glastonbury Blvd., Suite 101, Glastonbury, Connecticut 06033

Voice: 860-652-8883, *Fax:* 860-652-8887

Post Operative Rehabilitation Protocol:

Latarjet Procedure or Open Anterior Capsular Shift

- ACCELERATED for OVERHEAD ATHLETES -

GOAL:

This rehabilitation program's goal is to return the patient/athlete to their activity/sport as quickly and safely as possible, while maintaining a stable shoulder. The program is based on muscle physiology, biomechanics, anatomy and the healing process following surgery for a capsular shift.

The capsular shift procedure is one where the orthopaedic surgeon makes an incision into the ligamentous capsule of the shoulder and pulls the capsule tighter and then sutures the capsule together. In this procedure the Subscapularis tendon in not detached from the humerus - therefore it is strong from the time of surgery, without the need of waiting for it to heal.

The Latarjet procedure utilized the transfer of a bone block to the anterior aspect of the shoulder. It is held in place with 2 screws. This bone block will take 8-12 weeks to heal completely and must be protected for forces that could disrupt the healing process.

If too much strain is placed onto the shoulder too early – the screws can come loose and the bone block displaced. If this happens, revision surgery would be necessary.

Phase I - Protection Phase (Week 0-6)

Goals: *Allow healing of sutured capsule*
Begin early protected range of motion
Retard muscular atrophy
Decrease pain/inflammation

A. Week 0-2

Precautions:

1. Sleep in immobilizer for 4 weeks
2. No overhead activities for 4-6 weeks

3. Wean from immobilizer and into sling as soon as possible (orthopaedist or therapist will tell you when)

Exercises:

- Gripping exercises with putty
- Elbow flex/extension and pronation/supination
- Pendulum exercises (non-weighted)
- Rope & Pulley active assisted exercises
  - shoulder fixation to 90 degrees
  - shoulder abduction to 60 degrees
- T-bar Exercises
  - external rotation to 15 degrees with arm abducted at 30 degrees
  - shoulder flexion/extension to tolerance
- AAROM cervical spine
- Isometrics
  - flexors, extensors, ER, IR, ABD

B. Week 2-4

***Goals**:* *Gradual increase in ROM*
Normalize arthrokinematics
Improve strength
Decrease pain/inflammation

1. Range of motion exercises

- T-bar active assisted exercises
- ER @ 30 degrees ABD to 45 degrees
- IR @ 30 degrees ABD to 45 degrees
- Shoulder flex/ext to tolerance
- Shoulder abduction to tolerance
- Shoulder horizontal ABD/ADD
- Rope & pulley flex/ext

** All exercises performed to tolerance*
- take to point of pain and/or resistance and hold
- <u>gentle</u> self capsular stretches

2. Gentle joint mobilization to reestablish normal arthrokinematics to:
- scapulothoracic joint
- glenohumeral joint
- sternoclavicular joint

3. Strengthening exercises

- - isometrics
- - may initiate tubing for ER/IR at 0 degrees

4. Conditioning program for:

- - trunk
- - lower extremities
- - cardiovascular

5. Decrease pain/inflammation

- - ice, NSAID, modalities

C. Week 5-6

- AAROM flexion to tolerance
- IR/ER @ 45 degrees ABD to tolerance
- Initiate IR/ER at 90 degrees ABD to tolerance
- Initiate isotonic (light weight .) strengthening
- Gentle joint mobilization (Grade III)

Phase II - Intermediate Phase (Week 7-12)

Goals: Full non-painful ROM at week 8-10
Normalize arthrokinematics
Increase strength
Improve neuromuscular control

A. Week 7-10

1. Range of motion exercises

- T-bar active assisted exercises
- Continue all exercises listed above
- Gradually increase ROM to full ROM week 8 to 10
- Continue self capsular stretches
- Continue joint mobilization

2. Strengthening Exercises:

- - side-lying ER
- - side-lying IR
- - shoulder abduction
- - supraspinatus
- - latissimus dorsi

- - rhomboids
- - biceps curls
- - triceps curls
- - shoulder shrugs
- - push-ups into chair (serratus anterior)
- Continue tubing at 0 degrees for ER/IR

3. Initiate neuromuscular control exercises for scapulothoracic joint

B. Week 10-12

1. Continue all exercises listed above
2. Initiate tubing exercises for rhomboids, latissimus dorsi, biceps and triceps
3. Initiate aggressive stretching and joint mobilization, if needed.

Phase III - Dynamic Strengthening Phase (Week 12-20)

A. Week 12-17

***Goals**:* *Improve strength/power/endurance*
Improve neuromuscular control
Prepare athlete to begin to throw

1. Criteria to Enter Phase III:

a. Full non-painful ROM
b. No pain or tenderness
c. Strength 70% or better compared to contralateral side

Emphasis of Phase III:

- high speed; high energy strengthening exercises
- eccentric exercises
- diagonal patterns

Exercises:

Throwers Ten Exercises:

- - Initiate tubing exercises in 90/90
- - position for IR & ER (slow sets,fast sets)
- - Tubing for rhomboids
- - Tubing for latissimus dorsi
- - Tubing for biceps
- - Tubing for diagonal patterns D2 extension
- - Tubing for diagonal patterns D2 flexion

- - Continue dumbbell exercises for supraspinatus and deltoid
- - Continue serratus anterior strengthening exercises push-ups floor

2. Continue trunk/LE strengthening exercises

3. Continue neuromuscular exercises

4. Continue self capsular stretches

B. Week 17-20

- Continue all exercises above
- Initiate plyometrics for shoulder:
- ER at 90 degrees ABD
- IR at 90 degrees ABD
- D2 extension plyometrics
- Biceps plyometrics
- Serratus anterior plyometrics

Phase IV - Throwing Phase (Week 20-26)

***Goals**: Progressively increase activities to prepare patient for full functional return.*

Criteria to Progress to Phase IV:

1. Full ROM
2. No pain or tenderness
3. Isokinetic test that fulfills criteria to throw
4. Satisfactory clinical exam

Exercises:

- Initiate interval throwing program
- Continue throwers ten exercises
- Continue plyometric five exercises

A. Interval Throwing Program at 20th Week

1. Interval Throwing Program Phase II - 24th week

B. Return to Sports: 26-30 weeks