

Thermal Assisted Capsular Shrinkage for Individuals With Acquired Laxity (Overhead Athlete)

I. Phase I – PROTECTION PHASE (Day one to week 6)

Goals: Allow soft tissue healing
Diminish pain and inflammation
Retard muscular atrophy

Weeks 0-2

- Sling use for 14 days
- Sleep in sling/brace for 2-4 weeks

Exercises:

- Hand Gripping exercises
- Elbow and wrist ROM exercises
- Active ROM cervical spine
- Passive and active-assisted shoulder ROM exercises
 - Elevation to 75-90 degrees (flexion to 70 degrees week 1, flexion to 90 degrees week 2)
 - Internal rotation (IR) in scapular plane at 30-45 degrees abduction (45 degrees by week 2)
 - External rotation (ER) in scapular plane at 30-35 degrees abduction (25 degrees by week 2)
 - No aggressive stretching
 - No overhead motions
- Rope and Pulley (shoulder flexion) active-assisted ROM
- Cryotherapy to control pain (before and after treatment)
- Submaximal isometrics (ER, IR, abduction, flexion, extension)
- Rhythmic stabilization exercises at 7 days
- Proprioception and neuromuscular control drills

Week 3-4

Shoulder ROM exercises (passive ROM, active-assisted ROM, active ROM)

- Elevation to 125-135 degrees
- Internal rotation (IR) at 45 degrees abduction to 30 degrees
- External rotation (ER) at 45 degrees abduction to 40-45 degrees
- At week 4, begin ER/IR at 90 degrees abduction
 - ER at 90 degrees abduction to 45-50 degrees
- No extension
- No aggressive stretching

Shoulder Strengthening Exercises:

- Active ROM program (begin at week 3)
- Initiate LIGHT isotonic program (use 1 lb. at week 4)
- ER/IR exercise tubing (zero degrees abduction)
- Continue dynamic stabilization drills
- Scapular strengthening drills
- Biceps/Triceps strengthening
- Proprioceptive Neuromuscular facilitation D2 flex/ext manual resistance (limited ROM)
- Emphasize ER strengthening and scapular musculature
- Continue use of cryotherapy and modalities to control pain

Week 5-6

Continue all exercises listed above

Progress ROM to the following:

- Elevation to 160 degrees by week 6
- ER at 90 degrees abduction (75-80 degrees) by week 6
- IT at 90 degrees abduction (60-65 degrees) by week 6
- Initiate Throwers Ten strengthening program
- Continue emphasis on ER and scapular muscles

II. PHASE II – INTERMEDIATE PHASE (Weeks 7-12)

Goals: Restore full ROM (week 8)

Restore functional ROM (week 10-11)

Normalize arthrokinematics

Improve dynamic stability, muscular strength

Weeks7-8

Progress shoulder ROM to the following:

- Elevation to 180 degrees
- ER at 90 degrees abduction to 90-100 degrees by week 8
- IR at 90 degrees abduction to 60-65 degrees by week 8

Continue strengthening program

- May become more aggressive with ROM progression and stretching
- May perform joint mobilization techniques

Strengthening Exercises:

- Continue Throwers Ten Program
- Continue manual resistance, dynamic stabilization drills
- Rhythmic stabilization drills
- Initiate plyometrics (two hand drills)

Week 9-12

Progress shoulder ROM to the overhead athlete's demands

- Gradual progression from week 9-12
- Continue stretching into ER
- ER at 90 degrees abduction to 110-115 degrees by week 10-12
- Continue stretching program for posterior structures (IR, horizontal abduction)

Strengthening exercises at 12 weeks:

- Progress isotonic program
- Continue Throwers Ten Program
- May initiate more aggressive strengthening
 - Push ups
 - Bench Press (DO NOT allow arm below body)
 - Latissimus pull downs (IN FRONT of body)
 - Single hand plyometrics throwing (initiate 14-18 days following the introduction of two hand plyometrics)
 - Plyoball wall drills

III. Phase III – ADVANCED ACTIVITY AND STRENGTHENING PHASE (Week 12-20)

Goals; Improve strength, power and endurance
Improve neuromuscular control
Functional activities

Criteria to Enter Phase III:

1. Full non-painful ROM
2. No pain or tenderness
3. Muscular Strength 80% of contralateral side

Week 12-16

- Continue all stretching exercises
- Self capsular stretches, active ROM, passive stretching
- Continue all strengthening exercises
 - Throwers Ten Program
 - Progress isotonics
 - Plyometrics
 - Two –hand drills (week 12)
 - One hand drills (week 14)
 - Throwing into plyoback 1 lb. ball (week 13)
 - Neuromuscular control/dynamic stabilization drills

Week 16-22

- Initiate interval sport program (Phase I throwing, tennis, swimming, etc) week 16
- Progress all exercises listed above
- May resume normal training program
- Continue specific strengthening exercises
- Progress interval program (throwing program to Phase II) week 22-24

Week 22

- Progress to Phase II interval throwing program or sport specific training
- Continue isotonic strengthening
- Continue flexibility and range of motion
- Continue plyometrics

IV PHASE IV – RETURN TO ACTIVITY (Week 26)

Goals: Gradual return to unrestricted activities
 Maintain static and dynamic stability of shoulder joint

Criteria to progress to Phase IV:

1. Full functional ROM
2. No pain or tenderness
3. Satisfactory muscular strength (isokinetic test)
4. Satisfactory clinical exam

Exercises:

- Continue maintenance for ROM (stretching)
- Continue strengthening exercises (Throwers Ten)
- Gradual return to competition
 - Progress throwing program to game situations – month 6-7