

Rehabilitation Program Following Thermal Assisted Anterior Capsular Shrinkage For Individuals with Acquired Laxity

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

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

Week 0-2

- Sling use for 7-10 days
- Sleep in sling/brace for 14 days

Exercises:

- Hand gripping exercises
- Elbow and wrist range of motion (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° abduction (45 degrees by 2 weeks)
 - External rotation (ER) in scapular plane at 30-45° abduction (25 degrees by 2 weeks)
 - NO aggressive stretching
- 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
 - IR, in scapular plane, full motion (60-65 degrees)
 - ER, in scapular plane 45 degrees by week 4
 - 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 exercises
 - 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 6 weeks
 - IR at 90 degrees abduction (60-65 degrees) by 6 weeks
- Initiate Throwers Ten strengthening program
- Continue emphasis on ER and scapular muscles

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

Goals: Restore full ROM (week 8)
Restore functional ROM (week 10-11)
Normalize arthrokinematics
Improve dynamic stability, muscular strength

Week 7-8

- 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 stretching 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-handed drills)

Week 9-12

- Progress shoulder ROM to the overhead athlete's demands
 - Gradual progression from week 9 to 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 adduction)
- Strengthening Exercises:
 - 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
Enhance neuromuscular control
Functional activities

Criteria to Enter Phase III:

- 1) Full 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
 - Thrower Ten Program
 - Progress isotonic
 - Plyometrics
 - Two-hand drills progress to one-hand drills
 - Throwing into plyoback 1 lb ball (week 13)

- Neuromuscular control/dynamic stabilization drills

Week 16-22

- Initiate interval sport program (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 22-23

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 PHASE (Week 26)

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

Criteria to Enter 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