

Rehabilitation Program Following Thermal Assisted Capsulorrhaphy For Individuals with Atraumatic Congenital Instability

I. PHASE I – PROTECTION PHASE (0-8 Weeks)

Goals: Allow healing of tightened capsule
Begin early protected motion of the elbow, wrist, and hand
Decrease pain/inflammation

Weeks 0-2

Precautions:

- Sleep in immobilizer/sling for 14 days
- No overhead activities for 12 weeks
- Avoid abduction, flexion, and external rotation (ER)

Exercises:

- Gripping exercises with putty
- Elbow flexion/extension and pronation/supination
- Active range of motion (ROM) cervical spine
- After 10 days, active abduction may be allowed, but is not to exceed 70 degrees

Weeks 2-4

Goals: Gradual increase in range of motion (ROM)
Normalize arthrokinematics
Improve strength
Decrease pain/inflammation

Range of Motion Exercises:

- Active assisted exercises (pulley and L-bar)
 - Forward flexion to 90 degrees
 - Abduction to 90 degrees (plane of scapula)
 - ER in scapular plane to neutral
 - Internal rotation (IR) to 35 degrees
 - No extension

Strengthening Exercises:

- Isometrics initiated in all planes to tolerance
- Progressive resistive exercises to elbow and wrist
- Scapular strengthening (isometrics)

- Rhythmic stabilization drills (neutral rotation)

Conditioning Program For:

- Trunk
- Lower extremities
- Cardiovascular

Decrease Pain/Inflammation:

- Ice, non-steroidal anti-inflammatory drugs, modalities

Weeks 4-6

Gradual increase to full ROM

ROM Exercises:

- L-bar active assisted exercises
 - Shoulder flexion 125 degrees by week 6
 - ER scapular plane to 25 degrees by week 6
 - IR scapular plane to 45 degrees by week 6

Strengthening Exercises:

- Continue with exercises above
- Rhythmic stabilization drills into wall
- Scapular strengthening
- Therapeutic tubing initiated (week 5)
- Active ROM exercise

Gentle mobilization to re-establish normal arthrokinematics to:

- Scapulothoracic joint
- Glenohumeral joint
- Sternoclavicular joint

II. PHASE II – INTERMEDIATE PHASE (Weeks 6-12)

Goals: Full non-painful ROM at weeks 10-12

Normalize arthrokinematics

Increase strength

Improve neuromuscular control

Weeks 6-8

ROM Exercise:

- L-bar active assisted exercises
 - Flexion to 145 degrees by week 8
 - ER scapular plane to 45 degrees by week 8

- IR scapular plane to 50 degrees by week 8
- Initiate capsular self-stretches
- Continue joint mobilization
- Gradually increase to 80% of full ROM to full by week 12

Strengthening Exercises:

- Continue all exercises listed above
- Initiate isotonic dumbbell and tubing program
 - Sidelying ER
 - Sidelying IR
 - Shoulder abduction
 - Supraspinatus
 - Latissimus dorsi
 - Rhomboids
 - Biceps curl
 - Triceps curl
 - Shoulder shrugs
 - Push-ups (into wall or table)

Continue neuromuscular control exercises for scapulothoracic joint

Weeks 8-12

Goals: 80% of full ROM

Continue with all exercises listed above

Continue with joint mobilization and self-capsular stretches

ROM Exercises:

- active assisted ROM with an L-bar
 - Flexion to 160 degrees at week 8-10
 - ER at 90 degrees abduction to 75 degrees at week 10
 - IR at 90 degrees abduction to 50-55 degrees

III. PHASE III – DYNAMIC STRENGTHENING PHASE (Weeks 12-20) –

Advanced

Strengthening Phase

Goals: Improve strength, power, endurance

Improve neuromuscular control

Prepare the athlete to begin to throw

Criteria to Enter Phase III:

- 1) Full non-painful ROM (80% of ROM of contralateral shoulder)
- 2) No pain or tenderness
- 3) Strength 70% or greater compared to the contralateral side

Emphasis of Phase III:

- High speed, high energy strengthening exercises
- Eccentric exercises
- Diagonal patterns

Exercises:

- Fundamental shoulder exercises
- Continue tubing exercises for ER/IR
- 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
- Continue neuromuscular exercises
- Continue self-capsular stretches
- Gradual return to recreational activities

IV. PHASE IV – RETURN TO ACTIVITY (Weeks 20-28)

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

Criteria to progress to Phase IV:

- Full range of motion
- No pain or tenderness
- Isokinetic test that fulfills criteria
- Satisfactory clinical exam

Exercises:

- Continue all strengthening
- Emphasize closed kinetic chain
- Initiate recreational sport (week 24-26) – physician clearance required