

Rehabilitation Guidelines for the Overhead Athlete to Enhance Dynamic Stability

I. PHASE I – Baseline Stabilization

Goals

Diminish pain and inflammation
Improve posterior flexibility
Re-establish dynamic stability (muscular balance)
Re-establish muscular control
Improve scapula position, strength, and control

Treatment:

Modalities:

- Cryotherapy to posterior capsule/ cuff
- Iontophoresis (Empi Hybresis)
- Electrical stimulation

Flexibility:

- Sleeper stretch
- IR stretch @ 90° ABD
- Horizontal ADD w/ IR stretch
- Shoulder flexion and ER ROM (gentle stretch)

Exercises:

- Emphasize muscle balance (unilateral muscle ratios)
- Rotator cuff strengthening (esp ER)
 - Thrower's Ten
- Scapular strengthening exercises
 - Prone exercises on table and physioball
- Dynamic stabilization exercises
- ER/IR t-band w/ manual resistance and rhythmic stabilization
 - Manual resistance side-lying ER w/ end ROM rhythmic stabilization
 - Manual resistance prone rowing w/ end ROM rhythmic stabilization
- Proprioceptive training
- Closed kinetic chain
 - Push-up position rhythmic stabilization at mid ROM
 - Ball on wall in scapular plane w/ rhythmic stabilization
- Monitored Rehabilitation System- ER/IR neuromuscular program
- Seated neuromuscular control drill
- Push-ups on plyoball w/ rhythmic stabilization
- Push-ups on tilt board w/ rhythmic stabilization

Avoidance:

- Abstain from throwing (as advised by physician)

II. PHASE II – Intermediate Phase

Goals:

Progress strengthening exercises
Restore muscular balance (ER/IR)
Enhance dynamic stability
Maintain flexibility and mobility
Improve core stabilization

Flexibility:

- Control Stretches and flexibility exercises
- Sleeper stretch
- Horizontal ADD w/ IR stretch

Exercises:

- Progress strengthening exercises
 - Thrower's Ten exercises
- Initiate core stabilization program
- Implement LE strength program
- Dynamic stability
 - Seated ER t-band on physioball w/ manual resistance and rhythmic stabilization @ end ROM
 - Prone scapular exercises on physioball w/ trunk extension (performed bilaterally)
 - Planks on plinth
 - Planks on physioball
 - Manual resistance rowing w/ rhythmic stabilization
 - Seated neuromuscular control drill on physioball and contralateral knee extension
 - Single leg stance on foam w/t-band ER/IR
 - Weighted cross motion while single leg stance on foam
 - PNF D2 flexion/extension w/ rhythmic stabilization @ 45°, 90°, 145°
 - PNF D2 seated on physioball
 - Side-lying scapula neuromuscular control drill
- Initiate 2 hand plyometrics
 - Chest pass soccer throw
 - Alternating over-head side-to-side
 - Side stance overhead throw
 - Side under-hand throws

III. Phase III – Advanced strengthening

Goals:

Aggressive strengthening program
Progress neuromuscular control
Improve strength, power, and endurance
Initiate light throwing activities

Exercises:

Continue all exercises and stretches previously listed

- Thrower's Ten
- Manual resistance
- Dynamic stability drills
 - Seated physioball ER/IR t-band @ 0° ABD w/ manual resistance and rhythmic stabilization
 - Seated physioball ER/IR t-band @ 90° ABD w/ manual resistance and rhythmic stabilization
 - Planks on table
 - Bilateral UE support w/ rhythmic stabilization
 - Unilateral UE support w/ rhythmic stabilization
 - Unilateral UE support w/ LE movement and rhythmic stabilization
 - Continue Monitored Rehabilitation System for ER/IR
- Plyometrics
 - Continue 2 hand drills
 - Initiate 1 hand drills
 - Wall dribble (30-60 sec bouts)
 - Plyometrics throw a 90°/90°
 - Baseball motion throw to Plyoback w/ 1 lb ball (10-12 feet)
- Initiate light interval throwing
- Stretch post exercise

IV. Phase IV – Return to activity phase

Goals:

Continue strengthening and flexibility exercises
Progress to Interval Throwing Program
Return to competitive throwing

Exercises:

- Stretching and flexibility drills
- Thrower's Ten program
- Plyometric program
- Dynamic stability drills
- Progress to phase I interval throwing program
- Progress to appropriate phase II interval throwing program
- Gradual progression to competitive throwing