SHOULDER LATISSIMUS DORSI TEAR NON-OPERATIVE GUIDELINES

The following non-operative latissimus dorsi tear guidelines were developed by HSS Rehabilitation and are categorized into five phases with the goal of maximizing the patient's level of activity including returning an athlete to full competition. Classification and progression are both criteria-based and time based due to the healing constraints of the human body. The first phase is focused on soft tissue healing and maintenance of pain-free range of motion (ROM). Phases two and three are focused on building foundational strength and stability which will allow the patient to progress to phase four which includes plyometric exercises. With the completion of phase four an athlete will be able to start the final phase which includes interval sports programs. The clinician should use their skilled judgement and decision making to advance the patient as all progression may not be linear.

Follow physician modifications as prescribed.

SHOULDER LATISSIMUS DORSI TEAR NON-OPERATIVE GUIDELINES

Phase 1: Acute Phase (Weeks 1-2)

PRECAUTIONS

- No resisted shoulder extension or internal rotation x 4 weeks

ASSESSMENT

- Quick Disabilities of Arm, Shoulder & Hand (Quick DASH)
- Numeric Pain Rating Scale (NPRS)
- Shoulder Active range of motion (AROM)
- Shoulder Passive range of motion (PROM)
- Thoracic Mobility
    - AROM and joint assessment
- Palpation
- Posture
- Scapular assessment
- Cervical mobility

TREATMENT RECOMMENDATIONS

- Patient education
- ROM
    - PROM/AAROM(active assistive range of motion)/AROM shoulder flexion, external rotation (ER) in pain-free range
    - Do not force through painful motion
- Exercises (pain-free)
    - Scapular retraction
    - AROM elbow
    - ER isometrics
    - Shoulder flexion isometrics
- Modalities
    - Cryotherapy (e.g., cold therapy unit)
    - Laser
    - Electric stimulation
    - Compression therapy (e.g., pulsed compression unit)

CRITERIA FOR ADVANCEMENT

- No pain at rest
- Full ROM

EMPHASIZE

- Reduction of soft tissue irritability
- Maintenance of full elbow ROM
- Maintenance of shoulder flexibility

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Phase 2: Sub-Acute Phase (Weeks 3-4)

PRECAUTIONS

- No resisted shoulder extension or internal rotation x 4 weeks

ASSESSMENT

- Quick DASH
- NPRS
- Cervical mobility
- Thoracic mobility
- Scapular Assessment
- AROM
- PROM
- Palpation
- Posture

TREATMENT RECOMMENDATIONS

- Flexibility
    - Supine cane shoulder elevation
    - Wall slide shoulder flexion
    - Upper extremity assistive-motion device
    - Sleeper and cross-body stretch as tolerated
    - Caution not to progress beyond normal total arc of motion
- Exercises
    - Resistance band scapular retraction
    - Scaption
    - ER exercise below 90° elevation
    - Rotator cuff (RC) isotonics
    - Sidelying ER
    - Scapular protraction
    - Lower Extremity (LE) strengthening/core/hips

CRITERIA FOR ADVANCEMENT

- Tolerance of Phase 2 exercises without posterior discomfort
- Full shoulder AROM

EMPHASIZE

- Progression of RC and scapular strength
- Restoration of shoulder endurance in 90/90 position
- Improved neuromuscular control

SHOULDER LATISSIMUS DORSI TEAR NON-OPERATIVE GUIDELINES

Phase 3: Advanced Strengthening (Weeks 5-6)

PRECAUTIONS

- No painful activities/exercises

ASSESSMENT

- Quick DASH
- NPRS
- Cervical mobility
- Thoracic mobility
- AROM
- PROM
- Strength: Hand held dynamometer (HHD) or isometric strength testing device
- Palpation
- Posture

TREATMENT RECOMMENDATIONS

- Flexibility: Continue stretching as above
    - Foam roller/trigger point ball as needed
- Exercises
    - RC: ER and internal rotation (IR) below 90° (minimal IR resistance 4-6 weeks)
    - Resistance band row; resistance band extension (minimal resistance 4-6 weeks)
    - Throwers Ten exercises
    - Scapular stabilization
        - Prone row, prone horizontal abduction
        - Closed kinetic chain (CKC) quadruped protraction
        - Protraction: supine resistance band, standing serratus punch
        - Resisted shoulder extension/straight arm pulldown with increased resistance

CRITERIA FOR ADVANCEMENT

- All RC and shoulder exercises listed above without discomfort
- Full, pain-free AROM

EMPHASIZE

- Advancement to plyometric and sports specific movements
- Progression of RC and scapular strength and endurance

SHOULDER LATISSIMUS DORSI TEAR NON-OPERATIVE GUIDELINES

Phase 4: Plyometric (Weeks 7-11)

PRECAUTIONS

- No painful activities/exercises

ASSESSMENT

- Quick DASH
- NPRS
- Cervical mobility
- Thoracic mobility
- AROM
- PROM
- Palpation
- Posture
- Strength: HHD or isometric strength testing device
- Posterior shoulder endurance test

TREATMENT RECOMMENDATIONS

- Continue as above
- Resisted shoulder extension/straight arm pulldown with increased resistance
    - Latissimus pull down variations progressing toward eccentrics as tolerated
- Advance RC strengthening to 90/90 position
- Proprioceptive Neuromuscular Facilitation (PNF) diagonals
- Advanced Throwers Ten exercises
- Single arm ER in side plank
- Scapular stabilization
    - Wall slide with low trap lift off
    - Dynamic hug CKC
    - Prone T, W, Y, I
- End range shoulder stabilization using exercise blade/perturbations
- Core strength/kinetic linking

  Week 8
- Double arm overhead (OH) wall dribbles
- Double arm plyometric chest pass (trampoline)

Week 10

- Single arm 90/90 wall dribbles
- Double arm plyometric OH soccer pass (trampoline)
- Double arm plyometric chops (trampoline)
- Single arm plyometrics 0° abduction (trampoline)
- Eccentric catches

Week 11

- Towel drill
    - If the overhead athlete can hold a towel and move the arm through a throwing path as if throwing a baseball
- Ball throw into trampoline

CRITERIA FOR ADVANCEMENT

- All RC and shoulder exercises listed above without discomfort
- Tolerate all plyometric exercises without discomfort

EMPHASIZE

- RC and scapular strength above 90°
- Plyometric tolerance and endurance

SHOULDER LATISSIMUS TEAR NON-OPERATIVE GUIDELINES

Phase 4: Return to Sport Progression (Weeks 12+)

PRECAUTIONS

- All progressions should be pain-free
- Monitor for loss of strength and flexibility

ASSESSMENT

- Quick DASH
- NPRS
- Cervical mobility
- Thoracic mobility
- AROM
- PROM
- Palpation
- Posture
- Shoulder strength

TREATMENT RECOMMENDATIONS

- Continue above
- Advanced Throwers Ten
- Scapular stabilization
- Initiate interval throwing program
- Pull up progression if appropriate
- Collaborate with ATC, performance coach/strength and conditioning coach, skills coach and/or personal trainer to monitor load and volume with return to sport participation

CRITERIA FOR RETURN TO PARTICIPATION

- Symptom free progression through interval sports program
- Independent with all arm care exercises

EMPHASIZE

- Shoulder endurance during overhead activities
- Power
- Monitor workload
- Return to sports participation
- Collaboration with Sports Performance experts

SHOULDER LATISSIMUS TEAR NON-OPERATIVE GUIDELINES

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