



SHOULDER BICEPS TENDONITIS NON-OPERATIVE GUIDELINE

The following Biceps Tendonitis Guideline was developed by HSS Rehabilitation and is categorized into four phases, dependent on patient presentation and symptom irritability. Individuals may initially present in any of the first three phases. Biceps-related shoulder injuries can occur due to a number of causes such as traumatic events or chronic overuse. Therefore, classification and progression are both criteria-based and patient specific. The clinician should balance appropriate interventions for the optimization of functional activities and achievement of patient goals, while considering symptom irritability and resolution of impairments. Advancement through the phases may vary based on any concomitant injuries, which should be addressed during the rehabilitation process.

FOLLOW REFERRING PROVIDER'S MODIFICATIONS AS PRESCRIBED

SHOULDER BICEPS TENDONITIS NON-OPERATIVE GUIDELINE

Phase 1: Acute/High-Moderate Irritability

PRECAUTIONS

- Limit overloading the biceps tendon
- Limit exercises and activities that increase pain and/or edema

CONSIDERATIONS

- Level of irritability and concomitant injuries

ASSESSMENT

- Quick Disability of the Arm, Shoulder and Hand Score (DASH) (Ages 18+)
 - Sports/performing arts module, as needed
 - Work module, as needed
- Youth Throwing Score used for all throwing athletes (ages 10 -18)
- Numeric Pain Rating Scale (NPRS)
- Posture
- Cervicothoracic screen
- Palpation of pain generators
- Upper extremity (UE) active range of motion (AROM) and passive range of motion (PROM)
- UE flexibility/soft tissue quality, where appropriate
- UE strength, where appropriate
- Scapular assessment
- Special tests for differential diagnosis of intra-articular, extra-articular or rotator cuff pathology (see Biederwolf reference for testing algorithm)
- Joint mobility
 - Glenohumeral joint
 - Acromioclavicular and sternoclavicular joints
 - Cervical and thoracic spine
 - Scapulothoracic
- Prior/current level of function

TREATMENT RECOMMENDATIONS

- Patient education
 - Nature of the condition
 - Activity modification
 - Postural awareness
 - Work ergonomics
 - Understanding the importance of compliance with the home exercise program (HEP)

- Manual therapy
 - Soft tissue mobilization (STM)
 - Joint mobilizations
 - Taping, as needed
- ROM/flexibility
 - PROM/AROM
 - Stretching to adjacent tissues, as needed
 - Posterior capsule: cross body stretching, sleeper stretch, latissimus stretch
 - Self MFR
 - Foam rolling
 - Lacrosse ball
 - Thoracic spine mobility
- Neuromuscular re-education
 - Postural training
 - Scapulohumeral rhythm training: Bilateral
 - Proprioception
 - Rhythmic stabilization
 - Bilateral
 - Closed chain
- Strength
 - Peri-scapular
 - Focus on mid and lower trapezius facilitation
 - Rotator cuff: as tolerated
 - Lower extremity (LE)/core strengthening
 - No limits on LE or core workouts that do not affect the injured shoulder
- Functional training: as tolerated
- Modalities: as necessary
 - Cryotherapy
 - Laser
 - Blood flow restriction (BFR) program with FDA approved device and qualified therapist available

CRITERIA FOR ADVANCEMENT

- Minimal irritability
- Restore ROM to within functional limits (WFL)
- Scapulohumeral rhythm to WFL with < 90° shoulder elevation

EMPHASIZE

- Limit painful exercises
- Limit activities that stress healing tissues
- Importance of adherence to HEP and symptom management

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Phase 2: Sub-acute/ Moderate-Low Irritability

PRECAUTIONS

- Limit overloading biceps tendon
- Limit exercises and activities that increase pain and/or edema

ASSESSMENT

- Quick DASH
 - Sports/performing arts module, as needed
 - Work module, as needed
- Youth Throwing Score
- NPRS
- Posture
- Cervicothoracic screen
- Palpation of pain generators
- UE AROM and PROM
- UE flexibility/soft tissue quality, where appropriate
- UE strength, where appropriate
- Scapular assessment
- Special tests for differential diagnosis of intra-articular, extra-articular or rotator cuff pathology (see Biederwolf reference for testing algorithm)
- Joint mobility
 - Glenohumeral joint
 - Acromioclavicular and sternoclavicular joints
 - Cervical and thoracic spine
 - Scapulothoracic
- Prior/current level of function

TREATMENT RECOMMENDATIONS

- Patient education
 - Nature of the condition
 - Activity modification
 - Postural awareness
 - Work ergonomics
 - Understanding the importance of compliance with HEP

- Manual therapy
 - STM
 - Joint mobilizations
 - Taping, as needed
- ROM/flexibility
 - PROM/AROM
 - Stretching to adjacent tissues, as needed
 - Self MFR
 - Foam rolling
 - Lacrosse ball
- Neuromuscular re-education
 - Postural endurance training
 - Scapulohumeral rhythm training
 - Proprioception
 - Rhythmic stabilization
 - Open kinematic chain (OKC)
 - Close kinematic chain (CKC)
- Strength
 - Progress peri-scapular
 - Proprioceptive neuromuscular facilitation (PNF) patterns
 - Rotator cuff
 - Biceps
 - Tendon loading as able and tolerated
 - LE/core strengthening
- Functional training
- Modalities
 - Cryotherapy
 - Laser
 - BFR program with FDA approved device and qualified therapist available

CRITERIA FOR ADVANCEMENT

- Limited pain and irritability as activity increases
- Full shoulder ROM
- Scapulohumeral rhythm to WFL
- 5/5 rotator cuff strength

EMPHASIZE

- Limited pain and irritability as activity increases
- Full shoulder ROM
- Scapulohumeral rhythm to WFL with > 90° shoulder elevation
- 5/5 rotator cuff strength

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Phase 3: Chronic/Low-No Irritability

PRECAUTIONS

- Limit overloading biceps tendon
- Limit exercises and activities that increase pain and/or edema

ASSESSMENT

- Quick DASH
 - Sports/performing arts module, as needed
 - Work module, as needed
- Youth Throwing Score
- NPRS
- Posture
- Cervicothoracic screen
- Palpation of pain generators
- UE AROM and PROM
- UE flexibility/soft tissue quality, where appropriate
- UE strength, where appropriate
- Scapular assessment
- Special tests for differential diagnosis of intra-articular, extra-articular or rotator cuff pathology (see Biederwolf reference for testing algorithm)
- Joint mobility
 - Glenohumeral joint
 - Acromioclavicular and sternoclavicular joints
 - Cervical and thoracic spine
 - Scapulothoracic
- Prior/current level of function and general fitness
- Functional movement screen

TREATMENT RECOMMENDATIONS

- Patient education
 - Nature of the condition
 - Activity modification
 - Postural awareness
 - Work ergonomics
 - Understanding the importance of compliance with HEP

- Manual therapy
 - Stretching to adjacent tissues, as needed
 - Self MFR, as needed
 - Joint mobility, as needed
- Neuromuscular re-education
 - Scapulohumeral rhythm training
 - Unilateral, multiplanar
 - Proprioception
 - Rhythmic stabilization
 - OKC and CKC
 - PNF patterns
- Strength
 - Progress exercise intensity and HEP
 - Full kinetic chain exercises
- Functional training
 - Multiplanar
 - > 90° shoulder elevation, with load
- Cardiovascular conditioning
- Modalities:
 - Laser
 - BFR program with FDA approved device and qualified therapist available

CRITERIA FOR DISCHARGE OR ADVANCEMENT TO PHASE 4 (IF RETURNING TO SPORT)

- Minimal pain and limited irritability as activity increases
- Gross UE strength 5/5 in all planes
- Adequate neuromuscular control throughout full ROM

EMPHASIZE

- Pain-free exercise
- Importance of adherence to HEP

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Phase 4: Return to Sport

PRECAUTIONS

- Avoid premature return to sport/recreational activity
- Ensure adequate rest and recovery to prevent fatigue and overuse related injuries

CONSIDERATIONS

- Sport and position demands
- Referring provider clearance for return to sport/activity

ASSESSMENT

- Quick DASH
 - Sports/performing arts module, as needed
 - Work module, as needed
- NPRS
- Strength
 - Endurance
 - Isokinetic testing
- Sports-specific readiness
- Current level of function and general fitness

TREATMENT RECOMMENDATIONS

- Patient education
 - Gradual return to play
- Neuromuscular re-education
 - Multiplanar, dynamic
- Strength
 - Biceps
 - Progress PREs
- Plyometrics
- Sports specific exercises
 - Thrower's Ten Program, Advanced Thrower's Program
- Functional training
 - Full kinematic chain exercises
- Cardiovascular conditioning

CRITERIA FOR DISCHARGE

- Movement patterns, strength, flexibility, motion, power and accuracy to meet demands of sport
- Independent in appropriate return to sport program
 - Thrower's Ten Program, Advanced Thrower's Program

EMPHASIZE

- Pain-free training
- Self-monitoring of volume and load progressions
- Speed, accuracy, power and quality in sport-specific activities
- Collaboration with performance trainer or coach, as needed

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References

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