

Rotator Cuff Repair

Rehabilitation Protocol

Dr. Mark Adickes



Introduction:

- This rehabilitation protocol has been developed for the patient following a rotator cuff repair. This protocol will vary in length and aggressiveness depending on factors such as:
 - Size and location of tear
 - Degree of shoulder instability/laxity prior to surgery
 - Acute versus chronic condition
 - Length of time immobilized
 - Strength/pain/swelling/range of motion status
 - Rehabilitation goals and expectations

Early passive range of motion is highly beneficial to enhance circulation within the joint to promote healing.

Goals of rehabilitation are to:

- Control pain, inflammation, and effusion
- Regain normal upper extremity strength and endurance
- Regain normal shoulder range of motion
- Achieve the level of function based on the orthopedic and patient goals

The physical therapy should be initiated within the first 1-2 weeks post-op. The supervised rehabilitation program is to be supplemented by a home fitness program.

Important post-op signs to monitor:

- Swelling of the shoulder and surrounding soft tissue
- Abnormal pain, hypersensitive—an increase in night pain
- Severe range of motion limitations
- Weakness in the upper extremity musculature

Return to activity:

- It requires both time and regular clinic evaluation to safely and efficiently return to functional activity.
- Adequate strength, flexibility, and endurance are all necessary to return to high level function, all of which are addressed in this program.
- Functional evaluation including strength and range of motion testing are required to assess a patient's readiness to return to sport.

- Return to intense activities following a rotator cuff repair requires both a strenuous strengthening and range of motion program along with a period of time to allow for tissue healing. Symptoms such as pain, swelling, or instability should be closely monitored by the patient.

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Phase 1: Week 1-3

Range of Motion:

- Scapular ROM is critical
- Passive ROM in scapular plane
- Pendulum exercises
- Elbow (flex/ext) range of motion
- Initiate rope/pulley week 3-4 post-op
- Initiate passive ER wand exercise week 3-4 not to exceed 45° or ER at 45° abduction

Strength:

- **NO** Active Shoulder flexion or abduction allowed in the first 3 weeks
- Periscapular muscle strengthening and coordination critical
- Grip strengthening with putty or ball

Brace:

- Brace for 3 weeks or as noted by Dr. Adickes
- Brace removed to perform exercises above

Modalities:

- E-stim as needed
- Ice 15-20 minutes

Goals for Phase 1:

- Promote healing of repaired rotator cuff
- Control pain and inflammation
- Gradual increase of ROM
- Independent in HEP
- Delay muscle atrophy

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Phase 2: Week 3-6

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Range of Motion:

- Continue PROM as needed
- Scapular ROM is critical
- Initiate Grade I-II joint mobilization
- Pendulum exercise
- Elbow (flex/ext) range of motion
- Rope/Pulley (flex/abd/scaption)
- Wand activities in all planes
- Initiate gentle posterior capsule stretching
- Initiate gentle IR stretching

Strength:

- Periscapular muscle strengthening and coordination critical
- Continue grip strengthening as needed
- Initiate submaximal isometrics at week 4
- Initiate supine AROM exercises without resistance
- Initiate UBE without resistance at week 4
- Initiate scapular stabilizer strengthening-active assisted
- Shrugs
- Shoulder retraction

Brace:

- Discharge brace at week 3-4

Modalities:

- E-stim as needed
- Ice 15-20 minutes

Goals for Phase 2:

- Control pain and inflammation
- Initiate light RC muscle contraction
- Gradual increase in ROM
- Initiate light scapular stabilizer contraction

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Phase 3: Week 6-12

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Range of Motion:

- Continue all ROM from previous phases
- Scapular ROM is critical
- Posterior capsule stretching
- Initiate Grade II-IV joint mobs as needed
- Rope/Pulley (flex, abd, scaption)
- Towel stretching
- Wand activities in all planes

Strength:

- Continue with all strengthening from previous phases increasing resistance and repetition
- Periscapular muscle strengthening and coordination critical
- Manual rhythmic stabilization exercises at 90° flex
- Shoulder shrugs with resistance
- Shoulder retraction with resistance
- Supine punches with resistance
- Prone shoulder extension
- Prone rowing
- Prone ER with abduction
- Initiate forward flexion, scaption, empty can
- Sidelying ER
- Initiate D1/D2 patterns supine then standing
- Push-up progression
- UBE for endurance training
- Initiate plyotoss at chest then progress to overhead
- Bicep/Tricep work
- Isokinetic ER/IR at neutral at week 10-12

Modalities:

- Ice 15-20 minutes

Goals for Phase 3:

- Minimize pain and swelling
- Reach full ROM
- Improve upper extremity strength and endurance
- Enhance neuromuscular control
- Normalize arthrokinematics

Phase 4: Week 12-24

Range of Motion:

- Continue with all ROM activities from previous phases
- Scapular ROM is critical
- Posterior capsule stretching
- Towel stretching
- Grade III-IV joint mobs as needed for full ROM

Strength:

- Progress strengthening program with increase in resistance and high speed repetition
- Periscapular muscle strengthening and coordination critical
- Initiate IR/ER exercises at 90° abduction
- Progress rhythmic stabilization activities to include standing PNF patterns with tubing
- Initiate single arm plyotoss
- Initiate military press, bench press, flys, lat pulldowns
- UBE for strength and endurance
- Initiate sport specific drills and functional activities
- Initiate interval throwing program week 16-20
- Initiate light upper body plyometric program week 16-20
- Progress isokinetics to 90° abduction at high speeds

Modalities:

- Ice 15-20 minutes

Goals for Phase 4:

- Full painless ROM
- Maximize upper extremity strength and endurance
- Maximize neuromuscular control
- Initiate sports specific training/functional training