

## Arthroscopic Rotator Cuff Repair: Postoperative Protocol

This rehabilitation protocol has been developed for the patient following a rotator cuff surgical procedure. This protocol will vary in length and aggressiveness depending on factors such as:

- Size and location of tear
- Degree of shoulder 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. The protocol is divided into phases. Each phase is adaptable based on the individual and special circumstances.

The **overall goals** of the surgical procedure and 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

Exercises should be initiated within the first week following surgery. The supervised rehabilitation (outpatient physiotherapy) started after 4 weeks is to be supplemented by a home fitness program where the patient performs the given exercises at home or at a gym facility.

**Return to activity** requires both time and clinical evaluation. To most safely and efficiently return to normal or high level functional activity, the patient requires adequate strength, flexibility, and endurance. Functional evaluation including strength and range of motion testing is one method of evaluating a patient's readiness to return to activity. Return to intense activities following shoulder surgery requires both a strenuous strengthening and range of motion program along with a period of time to allow for tissue healing.

### Returning to work - Rotator cuff

For most sedentary jobs, a week off work is recommended. When you return to work your arm will be in a sling (for 4 weeks after surgery), but you should be able to manage as long as you do no lifting, pushing, pulling or carrying. You are not to raise your arm without help for six weeks after surgery. This allows the tendon to heal in the best possible position.

You may begin light duty work involving no lifting, pushing, pulling or carrying, within two weeks after surgery; you may work at waist level and lift 5-10 pounds 3-4 months after surgery.

Most patients can tolerate occasional work at shoulder level 4-6 months after surgery. Return to heavy lifting or overhead use may require 6-12 months.

### Prehabilitation

- Apply ice (PolarCare if available) as much as tolerated within a 24 hour period for first week. If using ice packs, encourage icing 20-30 minutes every 3-4 hours while awake. This is also useful after therapy.

- Sling used for 4 weeks

### Home Exercise Program Phase 1: (Weeks 1-4)

Follow pictorial exercises illustrated in **Shoulder Surgery- Initial Postoperative Exercises**

### Outpatient Physiotherapy Phase 2: (Weeks 4-6)

Instruct in basic progression of rehabilitation program and expectations for time course to recovery

#### ROM

- PROM/Pendulum exercises as required
- Initiate Grade I-II joint mobilization
- Elbow (flexion/extension) range of motion

- Initiate Rope/Pulley (flexion/abduction/scaption)
- Initiate passive ER wand exercise week 3-4 not to exceed 45° or ER at 45° abduction
- Initiate gentle posterior capsule/IR stretching

### **Strength**

- 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
- Shoulder retraction

### **Modalities**

- E-stim as needed
- Ice 20 minutes after activities

### **\*Sling**

- At Week 4 may discontinue use of sling in daytime with precaution of no lifting arm away from body
- May continue to wear sling at night until Week 6 to protect arm

### **GOALS OF PHASE:**

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

### **Outpatient Physiotherapy Phase 3: (Weeks 6-12)**

#### **ROM**

- Continue all ROM from previous phases
- Posterior capsule stretching
- Initiate Grade III-IV joint mobilizations as needed
- Rope/Pulley (flexion, abduction, scaption)
- Towel stretching
- Wand activities in all planes

#### **Strength**

- Continue with all strengthening from previous phases increasing resistance and repetition
- 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
- Push-up progression
- UBE for endurance training
- Initiate plyotoss at chest then progress to overhead
- Biceps/Triceps work
- Isokinetic ER/IR at neutral at week 10-12

### **GOALS OF PHASE:**

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

### **Outpatient Physiotherapy Phase 4: (Weeks 12-24)**

#### **ROM**

- Continue with all ROM activities from previous phases
- 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
- 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

#### **GOALS OF PHASE:**

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