



**ORTHOPEDIC SURGERY**

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 Christopher J. Rierson, DO  
 Seth W. Harrer, MD  
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**PODIATRY**

Timothy D. Blankers, DPM  
 Jesse R. Wolfe, DPM

**CLINIC LOCATIONS**

Spencer  
 Storm Lake  
 Spirit Lake  
 Estherville  
 Emmetsburg  
 Pocahontas  
 Cherokee  
 Primghar  
 Sibley  
 Algona

**OFFICE LOCATIONS**

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**POSTOPERATIVE REHABILITATION PROTOCOL:**

**LARGE - MASSIVE ROTATOR CUFF REPAIR**

Arthroscopic

Mini-Open

Tear Size:	Biceps Tendodesis:	Distal Clavicle Resection:
<input type="checkbox"/> Large	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Massive	<input type="checkbox"/> No	<input type="checkbox"/> No

Phase 1: Weeks 0-6

• No active ROM exercises

• Limited supine position passive ROM only

○ 120 degrees of forward flexion weeks 0-4

○ 45 degrees of external rotation

○ 90 degrees of abduction without rotation

○ May progress supine passive forward flexion to 10-15 degrees per week starting at week 2 as patient tolerates (goal 130-140 degrees at 6 weeks)

○ Pendulums (Codman's)

○ May do table slides (or equivalent) at 14-20 days, hand resting on table, torso leaning forward, pain free, within limits of forward elevation as outlined above

○ Pulleys at 4 weeks

○ Use of sling for protection for 6wks

○ Sling may be removed during day when sitting upright in chair prn, but with strict instructions for no active shoulder motion

○ Sling should be worn at night

○ Therapeutic modalities:

○ Ice, ultrasound, E-stim

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### • Elbow ROM:

- Passive progress to active motion
- 0-130 degrees
- Pronation and supination as tolerated

○ Note: if biceps tenodesis, no active elbow flexion or forearm supination until 4 wks postop

### ○ Wrist ROM

- Full all planes
- Grip strengthening as tolerated

## **Criteria for Progression to Phase 2**

### • At least 6wk of recovery has elapsed

### • Painless passive ROM to:

- 140 degrees of forward flexion
- 45 degrees of external rotation
- 90 degrees of abduction

## **Phase 2: Weeks 6-12**

• No strengthening/resisted motion of the shoulder until 12wk after surgery, unless indicated otherwise

• Discontinuation of sling

• Therapeutic modalities

• Ice, ultrasound, E-Stim

• Moist heat before therapy, ice at the end of session

### • Shoulder ROM goals:

- 150 degrees of forward flexion-progress to 160-170 degrees
- 45 degrees of external rotation-progress to 60 degrees
- 90 degrees of abduction- progress to 120 degrees

• Continue with passive ROM exercise to achieve above goals

• Begin active-assisted ROM exercises for the above goals

• Progress to active ROM exercises as tolerated after full motion achieved with active-assisted exercises

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- Light passive stretching at end ROMs
- Pendulums and pulleys (or other equivalent)
- Some early strengthening may be allowed depending on certain patient factors and tear/repair characteristics. This is at the surgeon's discretion
- Continue with grip strengthening

### **Criteria for Progression to Phase 3**

- Painless active ROM
- No shoulder pain or tenderness
- Satisfactory clinical examination

### **Phase 3: 3 Months- 6 Months**

#### **Goals**

- Improve shoulder strength, power, and endurance
- Improve neuromuscular control and shoulder proprioception
- Prepare for gradual return to functional activities
- Establish a home exercise maintenance program that is performed at least three times per week for strengthening
- Stretching exercises should be performed daily

#### **Motion**

- Achieve motion equal to contralateral side
- Use passive, active-assisted and active ROM exercises
- Passive capsular stretching at end ROMs especially cross body (horizontal) adduction and internal rotation to stretch the posterior capsule

#### **Muscle Strengthening**

- Strengthening of the rotator cuff
- Begin with closed chain isometric strengthening
- Internal rotation
- Abduction
- Forward flexion
- Extension
- Progress to open chain strengthening with free weight (i.e. dumbbells)
- Exercises performed with the elbow flexed to 90 degrees

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- Starting position is with the shoulder in the neutral position of 0 degrees of forward flexion, abduction and external rotation. The arm should be comfortable at the patient's side

- Weight progression typically with light object and increasing gradually in 1-2 pound increments

- Progression to the next weight level occurs usually in 2-3 wk intervals. Patients are instructed not to progress to the next level if there is any discomfort at the present level

- Internal rotation

- External rotation

- Abduction

- Forward flexion

- Extension

- Strengthening of deltoid especially anterior deltoid

- Strengthening of scapular stabilizers

- Closed chain strengthening exercise

- Scapular retraction (rhomboids, middle trapezius)

- Scapular protraction (serratus anterior)

- Scapular depression (latissimus dorsi, trapezius, serratus anterior)

- Shoulder shrugs (trapezius, levator scapulae)

- Progress to open chain scapular stabilizer strengthening

### **Goals**

- Begin with 10 for one set, advance to 8 to 12 repetitions for three sets

- Functional strengthening: (begins after 70% of strength recovered)

- Plyometric exercises

### **Maximal Improvement**

- Large tears 6-10 mos.

- Massive tears 10-15 mos.

Patient will continue to show improvement in strength and function for at least 12 mos.

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