



## Dr. Chad Zehms

### Reverse Total Shoulder Arthroplasty

## Phase 1 – Range of Motion (0-6 weeks)

### Goals for Phase 1

- Minimize pain and inflammation
- Initiate shoulder PROM
- Prevent muscular inhibition
- Restore full shoulder PROM

### Precautions

- No lifting >5#
- No ROM limitations unless otherwise indicated on MD referral

### Criteria for Progression to Phase 2

- Minimal pain with Phase 1 exercises

### Immobilization

- Sling immobilization for comfort, may wean from sling as symptoms allow

### Initial Post-op Exercises

- Elbow, forearm, wrist, hand (grip) AROM exercises, pendulum (Codman's) exercise, scapular squeezes, upper trapezius stretching, postural correction.

### Post-op Physical/Occupational Therapy

- 1<sup>st</sup> therapy visit to occur 2-3 days post-op with therapy 1-3 times/week
  - Ensure appropriate fit of sling and reinforce on proper use
  - Review initial post-operative exercises and reinforce on proper performance

### Manual Therapy

- Initiate pain dominant glenohumeral joint mobilization Grades I-II
- Initiate scar mobilization, soft tissue mobilization, lymphedema massage
- Initiate other shoulder, scapular, and cervicothoracic manual therapy techniques, as needed

### PROM

- Initiate manual shoulder PROM in all planes of motion
- No range of motion restrictions
- Avoid sustained end range stretching

### AAROM

- Initiate shoulder ER AAROM with wand at 45° ABD
- Initiate shoulder FLEX and ABD AAROM
  - Table slides, UE Ranger, physio-ball, wand, etc.

### AROM

- Initiate as appropriate starting with gravity-assisted, progressing to gravity-minimized and then gravity resisted positions
- Do **NOT** push through shoulder shrug

### Strengthening

- Initiate sub-maximal shoulder isometrics

### Modalities

- Utilize cryotherapy, thermotherapy, and electrical modalities, as needed



## Phase 2 – Strengthening (6-12 weeks)

### Goals for Phase 2

- Minimize pain and inflammation
- Restore full shoulder AROM
- Initiate sub-maximal rotator cuff activation and neurodynamic stabilization exercises
  - No shoulder shrug sign with elevation AROM

### Criteria for Progression to Phase 3

- Minimal pain with Phase 2 exercises
- Full shoulder PROM with minimal pain
- Full shoulder AROM with minimal pain
- Demonstrate neurodynamic stabilization of the shoulder
- No evidence of shoulder shrug with elevation AROM

### Manual Therapy

- Continue pain dominant glenohumeral joint mobilization Grades I-II, as needed
- Initiate stiffness dominant glenohumeral joint mobilization Grades III-IV, as needed
- Continue scar mobilization, soft tissue mobilization, lymphedema massage, as needed
- Continue other shoulder, scapular, and cervicothoracic manual therapy techniques, as needed

### Range of Motion

- Continue manual shoulder PROM as needed
- Continue shoulder ER AAROM with wand at 45° ABD
- Continue shoulder FLEX and ABD AAROM
  - Table slides, wall slides, U.E. Ranger, physio-ball, wand, pulleys, etc.
- Shoulder AROM in all planes of motion as tolerated

### Strengthening

- Initiate light isotonic scapular strengthening
- Initiate light isotonic biceps and triceps strengthening
- Initiate sub-body weight closed-chain strengthening exercises
  - Gradually progress from gravity reduced to full gravity positions
  - Gradually progress from below shoulder height to above shoulder height
- Do **NOT** exercise through shoulder shrug sign
- Initiate gradual progression of isotonic rotator cuff strengthening exercises

### Aquatics

- Utilize aquatics for patients who are significantly painful, stiff, or guarded
  - Initiate when surgical incisions have healed
  - Consider alternating land and aquatic-based physical therapy visits

### Neuromuscular Control

- Initiate sub-maximal rhythmic stabilization drills

### NMES

- Utilize NMES to facilitate rotator cuff and scapular activation and strengthening

### Modalities

- Utilize cryotherapy, thermotherapy, and electrical modalities, as needed



## Phase 3 – Return to Activity (12+ weeks)

### Goals for Phase 3

- Minimize pain and inflammation
- Maintain full shoulder PROM and AROM
- Restore shoulder, scapular, and total arm strength, power, and endurance
- Restore neurodynamic stabilization of the shoulder
- Safe and effective return to previous level of function for occupational, sport, or desired activities

### Criteria for Return to Activity

- Minimal pain with Phase 3 exercises
- Full, pain free shoulder PROM and AROM
- Shoulder, scapular, and total arm strength  $\geq 90\%$  of the uninvolved side (4+/5)

### OR

- Demonstrate neurodynamic stabilization of the shoulder
- Successful completion of functional capacity evaluation if physical laborer
- Quick Disability Arm Shoulder Hand Index score  $\leq 15\%$  disability

### Manual Therapy

- Continue stiffness dominant glenohumeral joint mobilization Grades III-IV, as needed
- Continue other shoulder, scapular, and cervicothoracic manual therapy techniques, as needed

### Range of Motion

- Continue manual shoulder PROM and stretching, as needed
- Progress towards achieving full AROM in gravity resisted positions

### Strengthening

- Consider single-planar and multi-planar movement patterns
- Progress to functional movement patterns
- Progress with load as tolerated

### Neuromuscular Control

- Progress rhythmic stabilization exercises to more functional positions and dynamic movement patterns
- Initiate gradual progression of other neuromuscular control exercises
  - Body blade, wall dribbles, ball flips, plyo-back, etc.

### Core Stabilization

- Incorporate core integrated exercises with strengthening and neuromuscular control progression

### Work Specialty Rehabilitation Program (At 12 weeks)

- Transition to work re-conditioning if specific occupational demands
  - Lifting requirements, overhead tasks, repetitive tasks, tool or machine work, etc.

### NMES

- Utilize NMES to facilitate rotator cuff and scapular activation and strengthening

### Modalities

- Utilize cryotherapy, thermotherapy, and electrical modalities, as needed

Protocol was revised and updated by Chad Zehms, MD and Katelyn Peterson, PT, DPT on October 23, 2025