DR. KAISEN YAO, MD

ORTHOPEDIC SPORTS MEDICINE SURGEON

Accelerated Post-Operative Physical Therapy Protocol

Humerus Fracture Fixation

Northwell Health • Department of Orthopedic Surgery & Sports Medicine • Dr. Kaisen Yao, MD

Patient Name	Date of Surgery	Prescribing Surgeon
		Dr. Kaisen Yao, MD

General Guidelines & Precautions

- Non-weight bearing through the operative arm for the first 6 weeks. Light daily activity only; lift nothing heavier than a cup of coffee.
- Weeks 0-2: begin gentle passive shoulder motion, Codman/pendulum exercises, and wrist, elbow, and finger range of motion. No active shoulder elevation before 6 weeks.
- Weeks 2-6: progressive passive shoulder motion with physical therapy (PT). Continue elbow, wrist, and finger motion.
- Weeks 6-12: advance weight bearing progressively as healing allows and as directed by Dr. Yao.
- Contact the surgeon for fever, excessive drainage, increasing redness, uncontrolled pain, or new numbness, tingling, or weakness in the arm or hand.

PHASE I

Early Protected Motion

TIMEFRAME

WEEKS 0-2

Goals:
Protect the fixation, control pain and swelling, and begin gentle shoulder and distal joint motion.

Precautions:
Non-weight bearing; sling or immobilizer as directed. No active shoulder elevation, resisted shoulder or elbow strengthening, pushing, or pulling. Monitor for new numbness, tingling, or difficulty extending the wrist or fingers.

Interventions:
Gentle passive shoulder motion and Codman/pendulum exercises; gentle passive elbow range of motion; active wrist and finger motion with gentle grip. Cryotherapy, elevation, and cervical and scapular mobility as tolerated.

Criteria to Progress:
Incision healing without drainage and pain controlled with oral medication.

PHASE II

Progressive Passive Motion

TIMEFRAME

WEEKS 2-6

Goals:
Progress passive shoulder range of motion with PT and restore elbow and forearm motion while the fracture consolidates.

Precautions:
The arm remains non-weight bearing; light daily activity only, nothing heavier than a cup of coffee. No active shoulder elevation, resisted shoulder or elbow strengthening, or rotational or torsional loading through the humerus.

Interventions:
Progressive passive shoulder range of motion with PT, within tolerance; continue Codman/pendulum exercises. Passive elbow flexion and extension with gentle forearm pronation and supination; continued finger, wrist, and scapular motion; edema control; sling weaning for comfort as directed by Dr. Yao.

Criteria to Progress:
Comfortable passive shoulder and elbow motion, minimal pain at the fracture site, and radiographic evidence of early healing at the 6-week visit.

PHASE III

Progressive Weight Bearing

TIMEFRAME

WEEKS 6-12

Goals:
Advance weight bearing through the arm, restore active shoulder and elbow range of motion, and begin low-load strengthening.

Restrictions:
Weight bearing through the arm advances progressively as tolerated beginning at 6 weeks, as healing allows and as directed by Dr. Yao. Active shoulder range of motion begins at 8 weeks. Avoid sudden torsional loads and impact through the arm.

Interventions:
Shoulder active-assisted range of motion in all planes at 6 weeks, progressing to active range of motion at 8 weeks; active elbow and forearm motion; graded progression from partial to full weight bearing through the arm; scapular stabilization and periscapular isometrics at 8 weeks; joint mobilization and soft tissue work for residual stiffness.

Criteria to Progress:
Full weight bearing through the arm without pain, near-full active shoulder and elbow motion, and radiographic union.

PHASE IV

Strengthening & Return to Activity

TIMEFRAME

MONTHS 3-6

Goals:

Restore full motion and symmetrical strength, and return to unrestricted work, recreation, or sport.

Interventions:

Progressive resisted strengthening of the rotator cuff, deltoid, periscapular muscles, and elbow beginning at 12 weeks once union is evident; endurance and task-specific loading; gradual reintroduction of overhead and impact activity.

Return to Work/Sport:

Return to contact sports, heavy manual labor, or overhead throwing requires confirmed union, full pain-free motion, and clearance from Dr. Yao - typically 4 to 6 months.

Discharge Criteria:

Full pain-free range of motion, strength symmetrical to the uninvolved side, and safe mechanics with functional and sport-specific tasks.

This protocol is a general guideline. Because timelines depend heavily on fracture pattern and fixation stability, progression must be individualized by the treating physical therapist in coordination with Dr. Yao's office and confirmed against follow-up radiographs.