

Humeral shaft fractures take 6-8 weeks to heal. Severity of humeral shaft fractures can vary and affect time to healing and stability of the repair. The rehab protocol below relates to fractures that have a strong and stable surgical repair. Less stable fractures may require more protection and a less aggressive protocol.

The intent of this protocol is to provide the therapist with a guideline for the postoperative rehabilitation course for a humeral shaft ORIF patient. It is not intended to be a substitute for appropriate clinical decision making. The actual postsurgical physical therapy management must be based on the surgical approach, physical exam and/or findings, individual progress, and/or the presence of postoperative complications. If the therapist requires assistance with the progression of a postoperative patient, please consult with Dr. Kandil or his team.

PHASE 1: Time Frame: 0-4 weeks

Immobilization:

- Sling Immobilizer / Brace with 15 degrees abduction x 4 weeks.
- Wear continuously except for therapy, HEP (home exercise program) and hygiene/bathing.

Restrictions:

- No strengthening.
- Avoid aggressive stretching and rotational stress.
- Limit ER to neutral and IR to chest.

Exercises:

- Gripping exercises, elbow, wrist and finger ROM, shoulder pendulums, PROM/AAROM/AROM for shoulder should be slow and to tolerance.
- Instruct on HEP to perform twice daily.
- Modalities used as needed.

PHASE 2: Time Frame: 4-8 weeks

Immobilization:

- None

Restrictions:

- No strengthening until fracture healing. Avoid pain, stretch to tolerable discomfort only.

Exercises:

- Gradually increases ROM exercises. Stretching should continue to be slow and to tolerance while avoiding pain.
- Modalities used as needed

PHASE 3: Time Frame: 8-12 weeks

Immobilization:

- None

Restrictions:

- Exercise advancement should be gradual and in slow increments while avoiding pain.
- If patient develops pain, drop back to early phase of rehabilitation, until pain free.
- ROM restrictions: FF-none, ABD-none, IR-S1 or 20° in abduction, ER 20°.

Exercises:

- Continue with shoulder PROM, AAROM and AROM.
- At 8 weeks begin shoulder isometric strengthening with arms at side (IR, ER, scapular stabilization).
- At 10 weeks add shoulder resistance strengthening exercises. Progression should be gradual and in slow increments while avoiding pain.



PHASE 4: Time Frame: 12-26 weeks

Immobilization:

- None

Restrictions:

- No specific restrictions.
- Patient's ROM, strength and endurance should be advanced progressively while avoiding pain.

Exercises:

- ROM should be 85% normal or greater; if not, continue to address with stretching and a HEP.
- Progressive upper-body strengthening may be more aggressive after 16 weeks.
- Add plyometric training for athletes at 18 weeks.
- Add exercises simulating work requirements at 18 weeks as part of return to work program.

PHASE 5: Time Frame: 26+ weeks

Goal:

- Restore normal shoulder function and progress to return to sport or return to work.

Restrictions:

- No specific restrictions. Advance progressively while avoiding pain.
- If the patient develops pain they are to return to earlier stage of rehabilitation.

Exercises:

- Aggressive upper-body strengthening and with initiation of plyometric training and sports or work specific training.
- Consider work conditioning program based on patients job requirements and patient motivation.