

Clavicle Fracture: Open Reduction Internal Fixation (ORIF)

Physical Therapy Protocol

General Considerations

Post-Operative Goals:

- Restore shoulder function.
- Protect the surgical site.
- Prevent complications such as frozen shoulder or muscle atrophy.

Precautions:

- Avoid lifting, pushing, or pulling heavy objects for the first 6 weeks.
- Avoid excessive ROM, especially internal rotation and adduction during early stages.
- Protect the surgical site and prevent excessive strain on the clavicle during early phases.

Initial Management:

- **Sling Use:** Wear a sling for comfort and support for the first 1-2 weeks post-op.
- **Non-Weight-Bearing:** The affected arm should remain non-weight-bearing for the first 4–6 weeks.
- **Pain Management and Edema Control:**
 - Apply ice and elevate the arm to control swelling.
 - Use NSAIDs as prescribed for pain management.
 - Continue with gentle, passive exercises for circulation and pain control.

Phase I: Day 1 to Two Weeks After Surgery

Goals:

- Protect the fracture site.
- Begin gentle exercises to promote circulation and prevent stiffness.
- Initiate pain management and reduce swelling.

Interventions:

- **Sling:** Wear for comfort.
- **Elbow, Wrist, and Hand Exercises:**

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- Straightening and flexion of the elbow.
- Hand opening and closure.
- Squeezing a soft ball.
- Wrist bending forward, backward, and in a circular motion.
- Movement of an open hand from side to side.
- **Pendulum Exercises:** Gentle pendulum swings to reduce swelling and improve circulation.
- **Scapular Stabilization Exercises:** Gentle scapular retraction, protraction, and elevation exercises.

Criteria for Progression:

- No significant pain or swelling.
- Maintain passive movement in distal joints (elbow, wrist, hand).
- Tolerates scapular stabilization exercises without discomfort.

Phase II: Two to Six Weeks After Surgery

Goals:

- Gradually restore passive and assisted range of motion (ROM).
- Avoid excessive loading on the clavicle.
- Initiate scapular stabilization exercises.

Interventions:

- **Pendulum Exercises:** Continue when pain subsides.
- **Passive and Assisted ROM:**
 - Start gentle external and internal rotation.
 - Begin flexion exercises with arm on the table.
 - Perform flexion with a ball on the wall.
- **Isometric Strengthening Exercises (Sub-Maximal):**
 - Internal rotation.
 - External rotation.
 - Abduction and extension.
- **Aerobic Exercises:**
 - Low-impact activities such as walking or stationary cycling (avoiding use of the affected arm).

Criteria for Progression:

- Gradual improvement in ROM.
- No pain during gentle shoulder movements.
- Tolerates isometric strengthening exercises and aerobic activities.

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Phase III: Six to Twelve Weeks After Surgery

Goals:

- Initiate weight-bearing exercises as tolerated.
- Continue progression of ROM and strengthening.
- Begin returning to functional activities.

Interventions:

- **Active-Assisted Range of Motion (AAROM):**
 - Gradual progression of external rotation, internal rotation, and flexion.
- **Isometric Strengthening:** Focus on:
 - Internal rotation.
 - External rotation.
 - Abduction and extension.
- **Weight-Bearing Exercises:**
 - Light weight-bearing activities with arm supported in neutral position.
 - Begin gentle active shoulder exercises like overhead lifting once cleared by the surgeon.
- **Functional Mobility Exercises:**
 - Reaching, lifting, and carrying with the affected arm to reintegrate into daily activities.

Criteria for Progression:

- Increased ROM without pain.
- Tolerates light strengthening and weight-bearing exercises.
- No complications (e.g., swelling, stiffness).

Phase IV: Twelve Weeks to Six Months After Surgery

Goals:

- Full functional return.
- Rebuild strength and endurance.
- Begin return to activity.

Interventions:

- **Progressive Strengthening:**
 - Continue strengthening the shoulder using light resistance.

- Add weights and resistance bands for shoulder muscles.
- **Functional Exercises:**
 - Begin more complex exercises like shoulder presses, rows, and overhead motions.
 - Return to activities like light lifting or carrying.
- **Functional Tests:**
 - Assess readiness for more strenuous activities (e.g., sports-specific tests).

Criteria for Progression:

- Strength and ROM close to baseline levels.
- No pain or discomfort with functional exercises.
- Able to perform lifting, carrying, and sports-specific activities safely.

Phase V: Six Months and Beyond

Goals:

- Full return to work and sports activities.
- Advanced strengthening.
- Prevention of re-injury.

Interventions:

- **Return to Full Activity:** Gradual return to work, recreational activities, and sports as tolerated.
- **Heavy Strengthening:** Full progression to resistance training for all shoulder muscles.
- **High-Level Functional Exercises:** Full return to sports and more strenuous activities like running, swimming, and lifting heavy objects.

Criteria for Full Return:

- Pain-free shoulder function.
- Strength comparable to the uninjured side.
- Able to perform all activities with no discomfort.

Patient Education

Key Reminders:

- Follow up with the surgeon regularly for radiographs and clinical evaluations.
- Report any persistent pain, swelling, or difficulty with motion to your therapist or surgeon.
- Avoid excessive overhead movements or heavy lifting until cleared by the surgeon.