

## Rehabilitation Programs for ORIF Humeral Fractures with Locking Plate

Dr. Rolf

### General Principles of Rehabilitation for Fractures

- Treat the patient not the fracture
- Move all joints that are not immobilized
- Prevent disuse atrophy
- Use gravity to assist in mobilizing a joint
- Be aware of peripheral nerve palsy signs
- Avoid exercises which reproduce the mechanism of injury
- Early intervention is the key to a successful recovery

### Rehabilitation Program for ORIF Humeral Fractures with Locking Plate

- Phase I- Early Mobility
- Phase II- AROM
- Phase III- Strength and Function
- Phase IV- Return to Normal Function

#### PHASE I Weeks 1-6

- Sling worn during the day and night for 6 weeks, except for HEP
- Begin immediate Pendulum exercises
- Neck ROM exercises
- Elbow, wrist, and hand ROM exercises
- Scapular exercises-shrugs, squeezes, and PNF
- Immediate PROM in supine if fixation is secure
- Pulleys
- Modalities for pain and swelling

#### PHASE II Week 6

- Wean from sling usually at 6 weeks and discontinue it if physician allows
- AROM, sub-max isometrics, and scapular PRE's < 5lbs at 6 weeks
- AROM based on radiographic evidence of healing
- Active shoulder ROM exercises in supine and progress to standing or sitting
- Sub-maximal Isometric exercises of the deltoid and rotator cuff muscles
- Continue passive ROM and scapular exercises

#### PHASE III Weeks 7-11

- Continue AROM, PROM, shoulder isometrics and scapular PRE's

#### PHASE IV Week 12+

- Initiate isotonic exercises starting with therabands and progressing to weights after week 12
- Upper extremity PNF
- Concentrate on RTC and scapular strength
- Advanced progressive resistance exercises
- Progress to overhead exercises
- Plyometrics and muscle coordination exercises
- Push end range of motion
- Glenohumeral joint mobilizations

# Rehabilitation Programs for ORIF of Greater Tuberosity Fracture with Sutures or Screws

Dr. Rolf

## **Rehabilitation Program for ORIF of Greater Tuberosity Fracture with Sutures or Screws**

- Phase I- Early Mobility
- Phase II- AROM
- Phase III- Strength and Function
- Phase IV- Return to Normal Function

### **PHASE I Weeks 1-6**

- Abduction Sling worn during the day and night for 4-6 weeks, except for HEP
- Begin immediate Pendulum exercises
- Neck ROM exercises
- Elbow, wrist, and hand ROM exercises
- Scapular exercises-shrugs, squeezes, and PNF
- Immediate PROM in supine if MD is confident in stability-gentle IR
- Pulleys
- Modalities for pain and swelling

### **PHASE II Week 6**

- Wean from sling usually at 6 weeks and discontinue it if physician allows
- AROM, sub-max isometrics, and scapular PRE's < 5lbs at 6 weeks
- AROM based on radiographic evidence of healing
- Active shoulder ROM exercises in supine and progress to standing or sitting
- Sub-maximal Isometric exercises of the deltoid and rotator cuff muscles
- Continue passive ROM and scapular exercises

### **PHASE III Weeks 7-11**

- Continue AROM, PROM, shoulder isometrics and scapular PRE's

### **PHASE IV Week 12+**

- Initiate isotonic exercises starting with therabands and progressing to weights after week 12
- Upper extremity PNF
- Concentrate on RTC and scapular strength
- Advanced progressive resistance exercises
- Progress to overhead exercises
- Plyometrics and muscle coordination exercises
- Push end range of motion
- Glenohumeral joint mobilizations