



## Total Shoulder Replacement

**Michael H. Johnson, MD**

This protocol was developed for patients who have undergone an anatomic total shoulder replacement for glenohumeral arthritis with an intact and functioning rotator cuff. The goal of this protocol is to advance range of motion and strength as directed while protecting the subscapularis tendon repair to ensure optimal healing. The specific etiology of the glenohumeral arthritis has a major impact on the eventual outcome of a total shoulder replacement. Patients with glenohumeral osteoarthritis usually have a good rotator cuff and can be expected to have excellent range of motion and strength. The outcome for patients with post-traumatic arthritis is more variable. Patients with more humeral bone deformity, pre-operative contracture and prior scarring may not regain as much shoulder motion or function. The outcome of total shoulder replacement for patients with rheumatoid arthritis is dependent upon the integrity of the rotator cuff. These patients often have substantial involvement of the rotator cuff. This protocol is not applicable to patients with reverse total shoulder replacement.

The dressing is removed three days after surgery. Leave the steri-strips on the incisions until the first post-operative office visit. After the dressing is removed the patient may shower quickly and gently pat the shoulder dry with a clean towel. If there is any drainage or concern about the healing of the incisions do not shower and just gently clean the surface of the shoulder with rubbing alcohol and call the office.

### Weeks 1-6

- Pendulum circumduction exercises (no weights)
- Begin passive self-assisted supine forward elevation, supine external rotation supine horizontal adduction, and standing internal rotation behind the back
- Each stretch should be done for 5 repetitions, holding 10-15 seconds for each repetition
- Range of motion exercises are done 5 times each day
- Begin postural exercises with serratus anterior, rhomboid and trapezius contraction
- Neck range of motion to prevent cervical spine soreness

- Unless otherwise indicated in the post-operative therapy referral the sling should be worn at all times except to perform home exercises five times per day. The hand can be used for very light activities with the arm in the sling
- **Discontinue sling at end of week 4. Light use and active motion can begin with a 1 lb. weight limit**
- Range of Motion Goals
  - Week 0-2 – FE 90°, ER 0°, IR buttock
  - Week 3-4 – FE 120°, ER 20°, IR sacrum
  - Week 5-6 – FE 145°, ER 45°, IR L4

#### Week 7

- Pulleys for assisted elevation to begin gentle strengthening and elevation patterning
- Continue passive self-assisted range of motion stretching exercises to regain motion
- Active range of motion exercises
- Begin active elevation in the supine position to minimize gravity affect

#### Weeks 8

- Isometrics deltoid, internal rotation, external rotation
- Supine deltoid exercises
- Scapula stabilization

#### Week 12

- Theraband strengthening as tolerated by patient
- Continue passive self-assisted stretching to achieve full range of motion

#### End result

- It can take up to 12 months (1 year) to achieve the final result of a total shoulder replacement. Most patients are very comfortable and functional after 3 months