

TOTAL SHOULDER ARTHROPLASTY

POST-OPERATIVE INSTRUCTIONS AND REHABILITATION PROTOCOL

In anatomic total shoulder arthroplasty, the osteoarthritis and damaged cartilage is removed and the head of the humerus bone (ball) is replaced with a metal prosthesis and the glenoid (socket) is replaced with a plastic prosthesis. There may be modest improvements in shoulder range of motion following the surgery but often times the postoperative range of motion is similar to the preoperative range of motion. The primary goal of the surgery is pain relief caused by the arthritis and damaged cartilage. Physical therapy following the surgery is a critical part of your recovery and critical to the success of your shoulder replacement.

For Patients Recovery Overview:

- a. **Brace:** The abduction brace/sling is used for 4 weeks after surgery, unless you are directed otherwise. It is ok to remove the sling for bathing/grooming and to do your exercises. It is best to wear the sling while sleeping for the first few weeks after surgery. Most patients find this most comfortable to do in a reclined position.
- b. **Bandage:** In most cases a waterproof bandage will be used. It is ok to shower normally with the waterproof bandage, just avoid soaking/scrubbing over the bandage. Unless you have been directed otherwise, leave the bandage on until your first post-op appointment ~14 days after surgery. Do not submerge incisions in bath or pool until fully healed (~3-4 weeks)
- c. If you had a **nerve block at the time of surgery, it usually wears off around 1-2 days post-operatively.** It is normal to have some numbness in the shoulder/arm the first few days after surgery as a result and sometimes into the fingers for several days.
- d. **Pain meds:** take the prescribed pain medications as directed. You can supplement your pain control with Tylenol (acetaminophen) as long as you don't exceed recommended dosages. You may have been given an NSAID in addition to your pain medication. If not, you may also supplement your pain control with ibuprofen.
- e. **Ice:** You may have been prescribed an ice machine to use after surgery. If not, use bags of ice with small layer (e.g. towel) in between your skin and the ice bag. Use the ice machine for a minimum of 30 minutes every couple hours.
- f. **Physical Therapy:** Start physical therapy within 7-10 days following surgery. Call for your first appointment at your desired therapy location as soon as possible. Your therapist will follow the below protocol and teach you what to do at home and what to avoid. **Two things to avoid are:**
 1. Externally rotating your arm away from your body with your shoulder at your side.
 2. Reaching behind you to push yourself up when getting up from sitting to a standing position.
- g. **Driving:** There is no conclusive data about when it is safe to return to driving after shoulder replacement surgery. You can't drive while taking pain medications. You should be able to lift your arm overhead, have minimal pain, and be able to take the brace on and off by yourself before return to driving. Return to driving is highly individualized and is generally guided by your ability to drive safely and your ability to make evasive maneuvers if that was required.

I. REHABILITATION PROTOCOL WEEKS 0-4**MAXIMAL PROTECTIVE PHASE**

- a. Continue **Sling x 4 weeks**. Remove your sling for exercises, bathing and grooming
- b. 2-3 times per day work on pendulum exercises and table slides (see below)
- c. Work on range of motion of your wrist, elbow and grip strength **DAILY** beginning the day after surgery
- d. **No External Rotation of the shoulder beyond zero degrees (neutral abduction) x 4 weeks**
- e. Active Assisted forward elevation in scapular plane up to 130 degrees, abduction up to 90 degrees
- f. **No weight bearing through the operative arm**
 - i. **No pushing off of a chair with the operative arm (risk of dislocation)**
 - ii. **Avoid activities requiring external rotation, e.g. closing heavy door**
- g. No lifting with your operative arm exceeding 5 lbs
- h. Modalities, ice as needed. Place a towel or covering between your skin and the ice to protect your skin. Maximum 20 minutes/per hour. Gradually wean off ice as swelling/discomfort decreases.
- i. Education in ADLs

II. REHABILITATION PROTOCOL WEEKS 4-6**MODERATE PROTECTIVE PHASE**

- a. Can begin to wean out of sling. Some patients may be comfortable to remain in sling for walking outside the home
- b. Continue to work on pendulums, table slides and wrist/elbow ROM, grip strength
- c. **Can begin external rotation of the shoulder to 30 degrees**
- d. Initiate gentle internal rotation of the shoulder
- e. Progress AAROM forward flexion in scapular plane as tolerated
- f. Weight restrictions: 5 lbs
- g. Begin isometric scapular strengthening exercises
- h. If range of motion comes along faster than above timeframes, reinforce protection phase and discourage "overdoing it."

III. REHABILITATION PROTOCOL WEEKS 6-12**INITIAL STRENGTHENING PHASE**

- a. **Progress External Rotation to 45 degrees between weeks 6-8, then as tolerated**
- b. Initiate Active Range of Motion (AROM)
 - i. **GOAL: Functional range of motion by 8-10 weeks**
- c. Weight Restrictions: 10 lbs
- d. Progress scapular strengthening
- e. **At 8 weeks, can begin light rotator cuff strengthening exercises, in protective ROM only**
- f. Deltoid isotonic in plane of scapula, only after positive rotator cuff strength is determined
- g. Avoid "internal rotation strengthening"

IV. REHABILITATION PROTOCOL WEEKS 12+**RETURN TO ACTIVITY**

- a. Progress range of motion without restriction, progress strengthening (deltoid, rotator cuff, scapular stabilizers)
- b. Return to normal everyday activity, low impact sports, light weight machines if good ROM, ADL strength

- c. **Activities to avoid:**
- i. Activities that would cause high stress to implant
 - ii. Activities with high risk of injury or high-energy fall

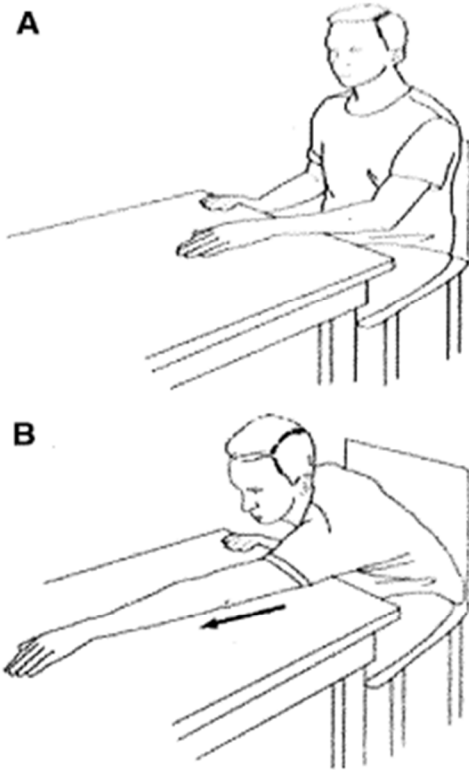


FIGURE 1. Table slide. (A) Starting position. While seated at a table, the patient places the hand of the affected shoulder on a sliding surface (e.g., a magazine that slides over a smooth table surface). (B) Ending position. The patient slides the hand forward, maintaining contact with the table, while the head and chest advance toward the table.

