



— ARIZONA CENTER FOR —
Hand to Shoulder Surgery

Hand to Shoulder Surgery & Reconstructive Microsurgery • www.achssurgeons.com
Phone (602) 258-4788 • Fax (602) 258-5131

Vivek Agrawal, M.D.
Total Shoulder Protocol

Shoulder replacement, like hip and knee replacement, is truly one of the modern marvels of orthopedic surgery offering patients meaningful shoulder pain relief and improved functional ability. An excellent outcome depends greatly on good communication between the patient, rehabilitation specialist, and the shoulder surgeon.

As patient apprehension and guarding can lead to persistent stiffness and pain, it is important to educate the patient to achieve early relaxation and range of motion. The shoulder specialist should note the amount of forward flexion, external rotation, and internal rotation achieved safely at the time of surgery. Our surgical protocol utilizes a lesser tuberosity osteotomy, resulting in a more secure and reliable subscapularis repair, allowing earlier external rotation and active assisted motion.

The Reversed Total Shoulder Prosthesis utilizes a different biomechanical rationale and these patients should be treated differently. Only hand squeezes, elbow range of motion, gentle scapular mobility, and limited pendulum exercises should be performed by the patient in a self-directed manner for the first 4 weeks after surgery. Instead of stiffness, instability has been the most common problem reported worldwide. The position of highest risk for dislocation with The Reverse Prosthesis is with the arm in extension, adduction, and internal rotation. For this reason, patients should be advised to avoid pushing off or supporting weight the hand placed behind the scapular plane. We recommend placing your hand on your thigh to help arise from a sitting position.



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- **PHASE I**

- Goals
 1. Patient Education
 2. Pain control, swelling reduction
 3. Initiate range of motion program
- Postoperative Day Zero
 - Inpatient session
 - Educate patient on precautions
 - Hand squeeze and elbow range of motion
 - Passive abduction to 70 degrees, external rotation and internal rotation based on limits determined at the time of surgery
- Postoperative Day One
 - Before discharge home
 - Review precautions
 - ADL activities (hand to mouth, dressing, etc.)
 - Pendulum, elbow range of motion, hand squeezes
 - Supine passive forward flexion, abduction, external rotation, and internal rotation
- Postoperative Day Two-4 weeks
 - Outpatient and self-directed program
 - Sling for comfort and protection
 - No weight support and protection
 - Hand always in front of scapular plane
 - Continue until patient is independent with home exercises and precautions
 - Exercise 4 to 6 times per day
 1. Pendulum
 2. Elbow range of motion
 3. Hand squeezes
 4. Scapular motion (shoulder shrugs, scapular retraction)
 5. Supine assisted forward flexion, abduction, external rotation, internal rotation



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- **PHASE II**
 - 5 to 8 weeks
 - Goals/treatment
 - Discontinue sling
 - Passive range of motion full and pain-free
 - Increased ADL activities
 - Add active assist and active range of motion
 - Initiate light isometric strengthening after range of motion restored
- **PHASE III**
 - 8 to 6 weeks
 - Goals/Treatment
 - Maximize and maintain active range of motion
 - Increase functional activities
 - Increase strength of scapular stabilizers and rotator cuff
 - Progress to work or sport specific training
 - Suggested modifications to work, sport, or functional activities

We discourage patients from participating in heavy work or recreational activities that result in high loads and forces to the glenohumeral joint. Golf, swimming, bicycling, aerobics, bowling, and running activities are acceptable for patients following shoulder replacement.