

Rehabilitation Guidelines for Standard Reverse Total Shoulder Arthroplasty (rTSA)

Note: Revision surgery or cases involving bone grafting procedures may undergo modifications to the below guideline. Additional restrictions or modifications will be listed in the last paragraph of the Operative Report and the therapy instructions.

General Information: Immobilization

- Sling should be worn while sleeping for 2 weeks.
 - Sling may be removed in controlled environments for light activity after 2 weeks.
 - Discontinue sling completely at 2 weeks.
 - Shoulder abduction immobilizer sling should be worn in uncontrolled environments as needed for the first 6 weeks (around dogs, kids, in crowds, etc.).
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Expectations for Outcomes

Reverse Total Shoulder Arthroplasty (rTSA) is designed for the treatment of glenohumeral arthritis associated with irreparable rotator cuff tears, complex fractures, severe glenoid deformity, or revision of a failed conventional Total Shoulder Arthroplasty (TSA).

Modern rTSA designs and improved implant placement accuracy have significantly reduced instability risk, allowing earlier and more unrestricted motion compared to previous guidelines.

Key Rehabilitation Concepts:

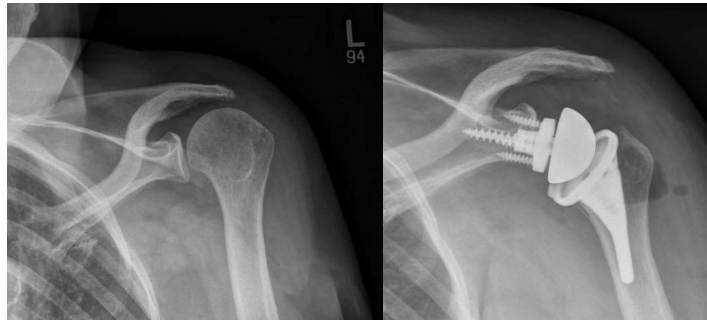
- Joint protection: While instability risk is lower, forced manipulation is forbidden. Motion should be patient-directed.
 - Deltoid function: Shoulder stability and movement now depend primarily on the deltoid and periscapular muscles.
 - Range of motion (ROM): Expected outcomes vary by case. Full ROM is not always achievable.
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Reverse Total Shoulder Arthroplasty Biomechanics

The rTSA prosthesis reverses the shoulder joint orientation—replacing the glenoid fossa with a glenoid baseplate and glenosphere, and the humeral head with a shaft and concave cup.

This design:

- Moves the shoulder's center of rotation medially and inferiorly.
- Increases deltoid tension and moment arm, improving its ability to elevate the arm even without an intact rotator cuff.



Shoulder Dislocation Precautions

- Active shoulder motion behind the back is allowed but should not be forced.
- Avoid external rotation beyond 45–60° for 8 weeks.

Surgical Considerations

- Procedure typically performed through a deltopectoral approach.
- For revision or poor bone stock cases, therapy may start 4–6 weeks post-op based on surgeon guidance.
- Adjust all timeframes so that “Day 1” corresponds to the first day of therapy.

Progression through phases depends on clinical criteria and timeframes.

Phase I – Immediate Post-Surgical Phase / Joint Protection (Day 1–2 Weeks)

Goals

- Independent with:
 - Joint protection and PROM
 - Sling use and dressing
 - Home exercise program and cryotherapy
- Promote soft tissue healing and joint integrity
- Maintain AROM of elbow, wrist, and hand
- Modified independence with ADLs and mobility

Precautions

- Wear sling for 2 weeks (or up to 6 weeks for revisions).
- When lying supine, support the elbow with a towel or pillow (“always see your elbow”).
- No shoulder AROM, lifting, or weight bearing on operative arm.
- No whirlpool, jacuzzi, or swimming for 6 weeks.

Acute Care Therapy (Day 1–4)

- Begin PROM in supine once block wears off:
 - Flexion/elevation in scapular plane to 90°
 - ER to 20–30°
 - No internal rotation
- A/AAROM for cervical spine, elbow, wrist, hand
- Begin gentle periscapular isometrics
- Use cryotherapy 4–5x/day
- Educate on positioning and HEP

Days 5–14

- Continue above exercises 2–3x/day
 - Begin gentle, pain-free deltoid isometrics
 - Maintain frequent cryotherapy
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Weeks 2–6

Progress PROM:

- Flexion/elevation in scapular plane to tolerance
- ER to tolerance (respect tissue limits)
- Gentle resistance for elbow, wrist, hand
- Continue frequent cryotherapy

Progression Criteria:

- Tolerates PROM and isometrics
 - Demonstrates deltoid and periscapular activation in scapular plane
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Phase II – Active Range of Motion / Early Strengthening (Weeks 2–12)

Goals

- Continue PROM progression (full PROM not expected)
- Gradually restore AROM
- Control pain and inflammation
- Promote healing and dynamic stability

Precautions

- Avoid sudden or heavy deltoid loading (risk of acromial fracture).
- Avoid poor shoulder mechanics or repetitive strain.
- No lifting > a cup of coffee
- No supporting body weight on operative arm.

Weeks 6–8

- Continue PROM and begin PROM IR ($\leq 50^\circ$).
- Begin AAROM and AROM in scapular plane (supine → sitting → standing).
- Initiate gentle scapular stabilization and alternating isometrics.
- Continue cryotherapy and gentle joint mobilizations (Grade I–II).
- Light ADLs allowed (feeding, dressing, hygiene).

Weeks 8–12

- Add gentle IR/ER isometrics and light isotonic strengthening (deltoid, periscapular).

- Begin light AROM forward flexion/elevation with 1–3 lb weights (“lawn chair progression”).
- Progress to gentle ER/IR isotonic strengthening in sidelying with light weights or bands.

Progression Criteria:

- Improved shoulder function and strength
 - Demonstrates controlled isotonic activation of deltoid and periscapular muscles
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Phase III – Moderate Strengthening (Week 12+)

Goals

- Enhance functional use and endurance of operative extremity
- Improve strength and mechanics

Precautions

- No lifting > 20 lbs
- Avoid sudden lifting or pushing

Weeks 12–16

- Continue prior program
 - Add gentle resisted flexion and elevation in standing
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Phase IV – Continued Home Program (4+ Months Postop)

Goals

- Continue strength and endurance gains
- Return to functional and recreational activities within safe limits

Discharge Criteria:

- Pain-free shoulder AROM with proper mechanics (typically 80–140° elevation, ~50° ER)
- Able to complete light household and work activities