Reverse Total Shoulder Arthroplasty

Physical Therapy Protocol · Deltoid-Driven Rehabilitation

Based on the Ohio State University Wexner Medical Center reverse total shoulder arthroplasty clinical care guideline and the JOSPT rehabilitation framework of Boudreau et al. Progression pacing informed by the JOSPT systematic review of shoulder arthroplasty rehabilitation guidelines and recent randomized data (SHORT trial). A reverse prosthesis is deltoid-driven: rehabilitation emphasizes deltoid and periscapular recruitment rather than rotator cuff mechanics.

AT A GLANCE

TIMELINE	12+ weeks structured rehab; discharge when pain-free AROM (typically 80°-120° elevation) with sound mechanics
IMMOBILIZATION	Sling 6 weeks (off for home exercises and cryotherapy); no driving 6 weeks
KEY MILESTONES	PROM scaption 120° by week 6 · AROM restoration weeks 6-10 · isotonic strengthening from weeks 10-12 · IR progression only after week 12
RETURN TO ACTIVITY	Light jogging ~12 weeks; long-term limits commonly 15 lb below shoulder height and 10 lb overhead; no push-ups or bench press

KEY PRECAUTIONS

- Dislocation precaution: no shoulder internal rotation, cross-body adduction, or extension (no combined extension + adduction + IR, e.g., hand-behind-back/tucking-in-shirt motion) for 12 weeks.
- No supporting body weight through the hand of the involved side (pushing up from chair or bed) for 12 weeks.
- The prosthesis is deltoid-driven: train deltoid and periscapular function in the scapular plane; do not apply rotator cuff-based expectations or aggressive rotational loading.
- Long-term restrictions per surgeon: typically no push-ups or bench press; lifting limits ~15 lb below shoulder height and ~10 lb above.

PHASED REHABILITATION

PHASE 1 — PROTECTION & PASSIVE MOTION	Weeks 0–6
GOALS	• Protect components and healing soft tissue • Pain and edema control • Establish protected PROM without violating dislocation precautions
INTERVENTIONS	• Sling at all times except hygiene and home exercises; no driving • Pendulums and shoulder blade squeezes (home program continuation) • Active elbow, wrist, and hand ROM; ball squeezes • PROM: forward scaption to 120° supine; ER to 30°-45° in the scapular plane; NO IR, extension, or cross-body adduction • Submaximal pain-free deltoid isometrics in the scapular plane from week 2 • Cryotherapy 4-5 times daily, 15-20 minutes
CRITERIA TO ADVANCE	• Tolerates outlined PROM without pain flare • Full elbow/wrist/hand AROM restored • Independent with modified ADLs within precautions • Demonstrates deltoid and periscapular activation

PHASE 2 — ACTIVE MOTION	Weeks 6–10
GOALS	• Restore AROM in scaption and ER without substitution • Establish dynamic glenohumeral and scapulothoracic stability
INTERVENTIONS	• Discontinue sling at 6 weeks • AAROM progressing to AROM in scaption and ER, supine progressing to seated/upright • ER isometrics; scapulothoracic rhythmic stabilization drills • Gentle periscapular isotonics from week 8 (rows, scapular retraction with light resistance) • Hand-held weight limited to coffee-cup weight during this phase • Continue cryotherapy after sessions as needed
CRITERIA TO ADVANCE	• Continued PROM progression toward end ranges • Gradual AROM restoration with proper scapulohumeral mechanics • Demonstrates dynamic shoulder stability without pain flare

PHASE 3 — EARLY STRENGTHENING	Weeks 10–12
GOALS	• Initiate light isotonic deltoid and periscapular strengthening • Improve functional use of the arm below shoulder height
INTERVENTIONS	• Supine forward flexion/scaption raises with 1-3 lb • Gentle ER isotonics with light band • Progressive periscapular isotonic program • Functional reaching tasks within precautions (still no IR/extension/adduction combinations)
CRITERIA TO ADVANCE	• Improved shoulder function in daily tasks • Isotonic deltoid/periscapular activation with measurable strength gains • No instability symptoms

Guideline only — individualize per intraoperative findings and patient response. Questions: contact Dr. Pettit's office.

PHASE 4 — ADVANCED STRENGTHENING & RETURN TO FUNCTION	Weeks 12+
GOALS	• Restore functional strength within permanent prosthetic limits • Independent maintenance program
INTERVENTIONS	• Begin gentle IR ROM progression (first time IR is introduced) • Resisted flexion/elevation in standing; progressive band and light dumbbell program • No lifting of objects heavier than ~6 lb with the operative limb early in this phase • Light jogging may begin at 12 weeks if desired • Home exercise program 3-4 times weekly; transition to independent maintenance
CRITERIA TO ADVANCE	• Pain-free shoulder AROM, typically 80°-120° of elevation, with proper mechanics • Independent with home program and ADLs • Understands and adheres to permanent lifting restrictions (~15 lb below shoulder, ~10 lb overhead; no push-ups/bench press)

GUIDING PRINCIPLES

This protocol follows criterion-based progression over rigid time-based advancement; phased rehabilitation balancing tissue healing with controlled stress application; objective milestones (ROM, strength LSI, functional testing) to guide phase transitions; individualization based on surgical findings, tissue quality, and patient factors; and ongoing surgeon–therapist communication throughout recovery.

REFERENCES

1. Ohio State University Wexner Medical Center Sports Medicine. Reverse Total Shoulder Arthroplasty Clinical Care Guideline. https://wexnermedical.osu.edu/-/media/files/wexnermedical/patient-care/healthcare-services/sports-medicine/education/medical-professionals/shoulder-and-elbow/reversetotalshoulderarthroplasty.pdf

2. Boudreau S, Boudreau ED, Higgins LD, Wilcox RB. Rehabilitation Following Reverse Total Shoulder Arthroplasty. J Orthop Sports Phys Ther. 2007;37(12):734-743.

3. Bullock GS, Garrigues GE, Ledbetter L, Kennedy J. A Systematic Review of Proposed Rehabilitation Guidelines Following Anatomic and Reverse Shoulder Arthroplasty. J Orthop Sports Phys Ther. 2019;49(5):337-346.

4. Garrigues GE, Cook CE, Kennedy J, et al. 2025 Neer Award Part 1: The SHORT Trial — Multicenter RCT of Surgeon-Directed Home Therapy vs. Outpatient Rehabilitation by Physical Therapists for Reverse Total Shoulder Arthroplasty. J Shoulder Elbow Surg. 2025.

For clinical use by licensed physical therapists treating patients of Robert Pettit, MD. This document is a rehabilitation guideline, not a substitute for clinical judgment. Progression must be individualized based on intraoperative findings, tissue quality, and patient response. Scan the QR code for the current version of this protocol.