Irrigation & Debridement — Arm / Upper Extremity (Infection)

Post-Operative Therapy Guidance · General Guideline

Formal published rehabilitation protocols for irrigation and debridement are limited; this general guideline is synthesized from published surgeon post-operative I&D; instructions and infection-surgery education resources. Rehabilitation is subordinate to infection control: progression is dictated by wound status, planned repeat debridements, and the antibiotic course, and must be coordinated with the surgeon and infectious disease team.

AT A GLANCE

TIMELINE	Highly variable — driven by infection response, wound closure method, and antibiotic course (often 4–6+ weeks); repeat debridement resets the early phase
IMMOBILIZATION	Soft dressing with sling for comfort; no rigid immobilization unless structures at risk — ROM as tolerated once cleared by the surgeon
KEY MILESTONES	Wound stable without drainage · inflammatory markers/clinical signs improving · full ROM restored as the wound matures
RETURN TO ACTIVITY	Gradual return as the wound heals and the infection treatment course completes; no submersion of the incision for ~4 weeks

KEY PRECAUTIONS

- Wound precautions: keep the surgical site clean and dry (waterproof cover for showering); no soaking or submersion for ~4 weeks; follow wound-VAC or dressing-change plan if present.
- Monitor and report infection warning signs at every visit: temperature ≥101.5°F, chills, spreading erythema, increasing tenderness, foul odor, or new drainage.
- Coordinate all progression with the treating surgeon and infectious disease service; antibiotics may run orally or via PICC line for several weeks, and repeat debridement may interrupt therapy.
- If tendon, nerve, or bone was debrided or exposed, obtain structure-specific precautions from the surgeon before loading the limb.

PHASED REHABILITATION

PHASE 1 — WOUND PROTECTION & EARLY MOTION	Weeks 0–2
GOALS	• Protect the healing wound • Control edema • Prevent stiffness in uninvolved and involved joints as permitted
INTERVENTIONS	• Sling for comfort; no weight bearing or lifting through the surgical arm until the first post-operative visit • AROM of all uninvolved joints (shoulder, elbow, wrist, digits as applicable) multiple times daily • Gentle AROM of the involved region as tolerated once cleared by the surgeon — pain and wound tension are the limiters • Elevation above the heart and retrograde edema management • Dressing management per surgeon (outer dressing typically removed ~day 4; wound-VAC changes coordinated by the surgical office) • Patient education: wound checks, warning signs, antibiotic compliance
CRITERIA TO ADVANCE	• Wound stable without increasing drainage or erythema • Edema controlled • Surgeon clearance to progress ROM

PHASE 2 — PROGRESSIVE MOBILIZATION & RECONDITIONING	Weeks 2–6+
GOALS	• Restore full ROM of the involved limb • Rebuild strength and functional use • Complete return to activity as infection resolves
INTERVENTIONS	• Progress AROM/AAROM to full; add gentle stretching as the wound tolerates • Scar mobilization once the incision is fully closed • Graded strengthening (isometrics progressing to bands/light weights) after wound closure and with clinical signs of infection control • Progressive functional and work-specific activity; advance loading per surgeon, factoring any debrided structures • Continue coordination with the infection treatment course; hold or regress if drainage, erythema, or systemic signs recur
CRITERIA TO ADVANCE	• Wound fully healed and dry • Full or functional ROM restored • Antibiotic course completed or ID clearance for full activity • Strength adequate for ADL/work demands

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. Chokshi N. Post-Operative Instructions: Irrigation & Debridement. https://www.nikhilchokshimd.com/pdfs/chokshi-post-op-irrigation-debridement.pdf

2. International Center for Limb Lengthening, Rubin Institute for Advanced Orthopedics. Irrigation & Debridement and Incision & Drainage. https://www.limblength.org/treatments/devices-procedures-to-fight-bone-infection/irrigation-debridement-and-incision-drainage/

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.