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PHYSICAL THERAPY PROTOCOL

Posterior Labral Repair

Arthroscopic Posterior Capsulolabral Repair for Posterior Shoulder Instability

FOR THE PHYSICAL THERAPIST

Overview and Goals

This protocol governs rehabilitation following arthroscopic posterior capsulolabral repair for posterior shoulder instability. The repair restores the labral attachment to the postero-inferior glenoid rim and re-tensions the posterior capsule, which together resist posterior humeral head translation. Because the rotator cuff is intact, gentle protected motion can begin POD 1 within staged limits.[1,2]

The framework is consistent with the 2025 International Expert Delphi Consensus on Posterior Shoulder Instability (Hurley et al.), the strongest current evidence base specific to posterior labral repair rehabilitation, supplemented by published surgical series and contemporary return-to-play data.[1,2,3]

Three principles guide rehabilitation. First, protect the posterior capsulolabral repair from forces that drive posterior humeral head translation — most importantly, internal rotation past neutral, cross-body adduction, and forward flexion with the arm adducted across the body. These motions are restricted in Phase 1 and early Phase 2. Second, position the arm in slight external rotation and abduction during sling immobilization — a standard adducted sling drives the humeral head posteriorly into the repair and is contraindicated. Third, defer vigorous strengthening and high-load activities until 12 weeks minimum, consistent with capsulolabral healing rates.[1]

Progression between phases is criterion-based. Time ranges represent typical windows, not gates. The Delphi consensus emphasizes that there is no absolute minimum time point for return to play; criteria-based clearance (restoration of strength, ROM, proprioception, sport-specific skills, and absence of symptoms) should drive progression.[1]

READ BEFORE STARTING — SCOPE OF THIS PROTOCOL

This protocol applies to arthroscopic posterior capsulolabral repair for posterior instability, with or without concomitant capsular plication.

- If the procedure was an **anterior labral (Bankart) repair**, use Dr. Roth's Anterior Labral Repair protocol instead — the protected motions are mirror-image (end-range ER at 90° abduction, shoulder extension, and straight-plane abduction).

Rehabilitation Phases

PHASE	SLING	RESTRICTIONS	ROM GOALS	EXERCISES	CRITERIA TO ADVANCE
PHASE 1 Weeks 0–4 *Strict protection & gentle motion in safe planes*	• "Gunslinger" sling × 4 weeks positioned in slight external rotation and ~15° abduction.[1,2] • Worn at all times including at night.	• No internal rotation past neutral. • No cross-body adduction. • No forward flexion with the arm adducted across the body.	• Gentle motion begins POD 1 within pain-free limits — restricted to safe planes only:[1,4] • Pendulum exercises permitted **Passive ER (scapular plane):** • The safe direction — within comfort	**Pain & edema control:** • Cryotherapy, NSAIDs per Dr. Roth's instructions, scar mobilization once incisions healed **Gentle motion (within phase limits):** • Pendulum (Codman) — gentle, gravity-assisted • Supine PROM/AAROM forward elevation in scapular plane with wand • Supine PROM/AAROM ER with wand at side (safe direction)	• Pain controlled at rest and with prescribed PROM/AAROM • No effusion or inflammation around incision sites • Forward elevation ≥ 90° pain-free • Pain-free passive ER in scapular

PHASE	SLING	RESTRICTIONS	ROM GOALS	EXERCISES	CRITERIA TO ADVANCE
	Remove only for prescribed PT, hygiene, and elbow/wrist/hand exercises. • Sling should be worn at all times out of the house.	• No lifting, pushing, pulling. • No supporting body weight through the operative arm.	**Forward elevation (scapular plane):** • Progress to ~90° **Restricted:** • No IR past neutral. No cross-body adduction. No forward flexion with arm adducted across body. **Elbow / wrist / hand:** • Full active ROM as tolerated	**Scapular sets / isometrics:** • Scapular retraction isometrics with minimal resistance • Scapular depression isometrics • Postural awareness training **Distal extremity:** • Elbow, wrist, hand AROM; ball squeezes for grip preservation **Avoid:** • Push-ups, planks, or any closed-chain weight-bearing • Resisted exercises • Forceful stretching at end ranges	plane • Tolerates sling weaning • Minimum 4 weeks elapsed
PHASE 2 Weeks 4–8 *Sling weaning & progressive ROM*	• Discontinue sling at end of Week 4.[1] • May continue use for comfort during long days or crowded environments through Week 6.	• No resisted IR until Phase 3. • No cross-body adduction or aggressive horizontal adduction stretching through Week 6–8. • No lifting more than coffee-cup weight. • No closed-chain weight-bearing.	• Progressive ROM toward full range: **Forward elevation & ER (at side and 90° abduction):** • OK to progress to full **Internal rotation:** • Introduce gradually — hand to abdomen initially (Week 4–5), progressing to hand-to-hip by Week 6–8. Hand-behind-back deferred to Phase 3. **Cross-body adduction:** • Deferred until Week 6–8, then introduce gently **AAROM / AROM introduced:** • Pulley, wand exercises, AROM forward elevation in scapular plane	**PROM and AAROM:** • Continue Phase 1 motion with progressive range • Pulley exercises for forward elevation • Wand-assisted ER (full range) and IR (within phase limits) **AROM progression:** • AROM forward elevation in scapular plane (gravity-eliminated → against gravity) • AROM ER at side • Side-lying supported active elevation • Aquatic AROM at slow speeds **Submaximal isometrics introduced:** • Submaximal RTC isometrics in neutral (ER, abduction, flexion) • Light isometric IR at neutral (no end-range loading) • Scapular retraction with light resistance band • Postural strengthening **Light isotonic (late Phase 2):** • Theraband ER at side (yellow band) • Side-lying dumbbell ER (1 lb) • Prone Y, T, W (gravity only) • Rows (low load) **Avoid:** • Cross-body adduction stretching until Week 6–8 • Aggressive IR stretching • Closed-chain weight-bearing (push-ups, planks) • High-load or vigorous strengthening	• Sling discontinued without arm guarding • Forward elevation ≥ 150° pain-free • ER symmetric at side • IR to hand-to-hip without pain • Pain ≤ 2/10 with all prescribed exercises • Tolerates submaximal RTC isometrics without posterior pain • Minimum 8 weeks elapsed
PHASE 3 Weeks 8–12 *Strengthening & ROM normalization*	• None. • Resistance progresses gradually. • No vigorous or high-load activity. • No throwing, overhead sport, or contact	• See ROM goals — full ROM achieved this phase.	• Goal: full ROM in all planes by Week 12, including hand-behind-back IR and full cross-body adduction:[1] **Full:** • Forward elevation, ER at side, ER at 90° abduction • IR including hand-behind-back motion • Cross-body	**Progressive RTC & periscapular strengthening (posterior-cuff emphasis):** • Theraband ER and IR progression (yellow → red → green)[1] • Side-lying dumbbell ER (progress 1 → 3 lbs) • Standing dumbbell ER in scapular plane **Posterior cuff emphasis:** • Infraspinatus and teres minor (prone horizontal abduction, prone ER at 90° abduction, side-lying ER)	• Full pain-free ROM in all planes • RTC strength symmetry approaching the contralateral side • Smooth scapulohumeral rhythm • Pain ≤ 1/10 with all prescribed strengthening • Tolerates closed-

PHASE	SLING	RESTRICTIONS	ROM GOALS	EXERCISES	CRITERIA TO ADVANCE
	activity.		adduction	• Prone Y, T, W with progressive light dumbbells • Rows (progressive load) • Reverse flys, scapular pull-downs **Closed-chain & proprioception:** • Wall push-ups → quadruped → planks (introduced cautiously) • Rhythmic stabilization at 90° flexion • Closed-chain perturbation training • Continue ROM work as needed for any residual restrictions.	chain exercises without posterior shoulder pain • Minimum 12 weeks elapsed before vigorous strengthening
PHASE 4 Weeks 12–24+ *Vigorous strengthening & return to activity*	• None.	• Sport-specific training initiated based on the patient's target activity. • Contact and collision activity deferred until criteria are met.	• Full ROM in all planes.	**Progressive strengthening (full intensity):** • Theraband ER and IR progression (red → green → blue)[1,3] • Combined IR/ER patterns at 90° abduction • Dumbbell progression for ER, IR, deltoid, periscapular muscles • Continued posterior-cuff emphasis **Compound movements:** • Military press, lat pull-downs, push-up progressions, pull-ups (later phase) • Weight lifting typically begins at 3 months[2] **Dynamic stability & proprioception:** • Plyometrics (medicine-ball wall throws, push-up plus) • Closed-chain perturbation training • Rhythmic stabilization at multiple positions • PNF patterns (D1, D2) **Endurance training:** • Progressive RTC and scapular endurance work • Sport-specific endurance demands **Sport-specific progression:** • Throwing program (interval throwing) for overhead athletes • Tennis serve, swimming stroke return • Contact sport: light contact drills → progressive contact → game readiness • Establish home maintenance program	*See Return-to-Activity Criteria section below.* • Most patients return to non-contact sport at ~4–5 months; contact and collision sport at ~6 months. Pooled return-to-sport rate is ~88% at any level and ~68% at preinjury level.[5]

Procedure-Specific Considerations

Internal Rotation, Cross-Body Adduction, and Forward Flexion + Adduction Are the Protected Motions

The posterior capsulolabral repair is stressed by posterior humeral head translation. The motions that maximally produce this translation are internal rotation past neutral, cross-body (horizontal) adduction, and forward flexion with the arm adducted across the body — the Jerk and Kim test positions. These motions are restricted in Phase 1 (× 4 weeks) and progressively reintroduced in Phase 2 (Weeks 4–8). Hand-behind-back internal rotation and cross-body adduction stretching are deferred until Phase 3. Patients who report new-onset posterior shoulder pain or apprehension with

IR or cross-body progression in late Phase 2 or early Phase 3 should be re-evaluated to rule out capsulolabral compromise.[1,4]

SLING POSITIONING MATTERS — USE ABDUCTION WEDGE / GUNSLINGER, NOT A STANDARD ADDUCTED SLING

This is one of the most important practical points in the protocol. A standard adducted sling is contraindicated for posterior labral repair — adduction with the arm across the body drives the humeral head posteriorly into the repair, the very direction the surgery was performed to prevent. Patients should be discharged in a "gunslinger" brace or abduction wedge sling that positions the arm in approximately 15° of abduction and slight external rotation, worn × 4 weeks. PTs should confirm correct sling type at the first post-op visit; if the patient was discharged in a standard sling, obtain a gunslinger sling as soon as possible and notify Dr. Roth's office.[1,2]

Posterior Cuff Strengthening Is the Strengthening Emphasis

The posterior rotator cuff (infraspinatus and teres minor) and the posterior capsule together resist posterior humeral head translation. After posterior labral repair, restoring posterior cuff strength is the central strengthening priority — both for functional recovery and as a dynamic stabilizer that complements the static restraint of the repaired labrum and capsule.[1] Phase 3 strengthening should explicitly emphasize:

- Prone horizontal abduction (works infraspinatus, teres minor, posterior deltoid)
- Prone ER at 90° abduction
- Side-lying ER (with progressive load)
- Standing dumbbell ER in scapular plane
- Theraband ER at side, then at 90° abduction

Periscapular strengthening (rows, prone Y/T/W, reverse flys, scapular pull-downs) is layered alongside posterior cuff work, not in place of it.

Cross-Body Adduction Is Both a Restricted Motion and an Eventual Stretch Target

Cross-body adduction stresses the posterior capsule. In Phase 1 (Weeks 0–4) it is restricted entirely. In Phase 2 (Weeks 4–8) it remains restricted as a stretching exercise. Beginning Week 6–8, gentle cross-body adduction can be introduced as an active motion within comfort, then progressed in Phase 3 to address residual posterior shoulder tightness. The sleeper stretch is acceptable in the posterior labral repair population, since it does not stress the posterior repair.

No Vigorous Strengthening Before Week 12 — Capsulolabral Healing Time

Capsulolabral healing requires approximately 12 weeks for sufficient construct integrity to support vigorous loading.[1] Submaximal isometrics in Phase 2 and progressive light-to-moderate resistance in Phase 3 build foundational strength without compromising the maturing repair. Vigorous strengthening, plyometrics, sport-specific high-load activity, and weight lifting (per Delphi consensus, typically begun at 3 months) are deferred to Phase 4 (Week 12+) regardless of how strong or pain-free the patient feels at earlier time points.

Closed-Chain Weight-Bearing Is Avoided Early

Push-ups, planks, and quadruped positions place the humerus in a flexed, often slightly adducted position with axial load — driving the humeral head posteriorly into the repair. These exercises are contraindicated through Phase 2 and introduced cautiously in Phase 3. Wall push-ups (which place the humerus in a more abducted, less posterior-loading position) can be the first closed-chain progression in Phase 3, before quadruped or plank work.

Return-to-Activity Criteria

Return to activity after posterior labral repair is criteria-based, not time-based. The 2025 international Delphi consensus emphasizes that there is no absolute minimum time point; criteria-based clearance (restoration of strength, ROM, proprioception, sport-specific skills, and absence of symptoms) should drive progression.[1] The criteria below should be met before clearance to the corresponding activity tier. Most patients return to non-contact sport at ~4–5 months and contact/collision sport at ~6 months; weight lifting typically begins at 3 months.[1,2]

Activity Tier	Criteria & Timing
Activities of daily living (ADLs)	Full pain-free ROM in all planes (including hand-behind-back IR and full cross-body adduction). Typically by Week 12. Lifting up to 5 lbs at this point.
Weight lifting (general)	Full pain-free ROM, RTC strength approaching the contralateral side, no posterior shoulder pain with closed-chain exercises. Typically ~3 months per Delphi consensus.
Light recreational (running, cycling)	Pain-free AROM, isotonic strength approaching the contralateral side. Typically ~3 months.
Non-contact sport (golf, tennis, swimming)	RTC and posterior cuff strength symmetry approaching 90% on isokinetic or HHD testing, full pain-free overhead motion, no apprehension with provocative testing (Jerk, Kim). Sport-specific drill progression complete. Typically ~4–5 months.
Contact / collision sport (football, rugby, hockey, lacrosse, wrestling, MMA)	Full strength symmetry, full pain-free ROM, no apprehension with provocative testing, completed sport-specific contact drill progression. Typically ~6 months; collision and military athletes may require longer. Clearance by Dr. Roth required.
Strength & ROM benchmarks	RTC strength LSI ≥ 90% on isokinetic or HHD, with particular attention to posterior cuff (infraspinatus, teres minor) symmetry. Full pain-free ROM matching the contralateral side. No apprehension with Jerk test, Kim test, or posterior load-and-shift. Sport-specific functional testing complete.

REALISTIC COUNSELING ON RETURN-TO-SPORT OUTCOMES

Pooled return-to-sport rates after posterior labral repair are approximately 88% at any level and 68% at preinjury level.[3] Patients should be counseled that returning to sport is highly likely, but returning at the same competitive level — particularly for contact, collision, and overhead-throwing athletes — is less certain. Recurrence risk is highest in the first 12 months post-repair, particularly when patients return to demanding activity before completing the full criteria-based progression. Returning to sport at “the typical 6-month mark” without meeting strength, ROM, and apprehension benchmarks substantially increases recurrence risk.

References

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3. Hurley ET, Matache BA, Colasanti CA, et al. Return to Play Criteria Among Shoulder Surgeons Following Shoulder Stabilization. J Shoulder Elbow Surg. 2021;30(6):e317–e321.
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Glossary

AAROM — Active-assisted range of motion; the patient initiates motion with assistance from gravity, pulley, wand, or therapist.

ADL — Activities of daily living.

AROM — Active range of motion; the patient moves the joint independently against gravity.

Delphi consensus — Iterative expert-agreement methodology used to generate clinical recommendations when high-level evidence is limited; the 2025 international Delphi consensus on posterior shoulder instability is the strongest current source for this protocol.

ER — External rotation.

HHD — Hand-held dynamometer; a portable device for objective strength measurement.

IR — Internal rotation.

Jerk / Kim test — Provocative examination maneuvers for posterior shoulder instability.

LSI — Limb Symmetry Index; the operative limb's strength as a percentage of the contralateral limb (operative ÷ contralateral × 100).

PNF — Proprioceptive neuromuscular facilitation; diagonal movement patterns (D1, D2) used in rehabilitation.

POD — Postoperative day.

PROM — Passive range of motion; the therapist or contralateral limb moves the joint while the patient stays relaxed.

ROM — Range of motion.

RTC — Rotator cuff.

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