

Posterior Shoulder Instability – Nonoperative Protocol Physical Therapy Instructions

The rehabilitation program is outlined in three phases. It is possible to overlap phases (Phase I - II, Phase II - III) depending on the progress of each individual. In all exercises during Phase I and Phase II, caution must be applied in placing undue stress on the joint capsule as dynamic joint stability is restored. An isokinetic strength and endurance tests is scheduled during the latter part of Phase II. The focus in Phase III is on progressive isotonic and isokinetic exercises in preparation for returning to the prior activity level (work, recreational activity, sports, etc.) It is important to emphasize throughout the importance of three things:

1. Rotator cuff strengthening
2. Scapular stabilization

Phase 1

1. Apply modalities, as needed (heat, ice, electrotherapy, etc.)
2. Perform range-of-motion exercises (passive, active-assistive, active), as tolerated. Avoid shoulder internal rotation/adduction until patient is able to tolerate this without apprehension.
3. No joint mobilizations
4. Scapular stabilization exercises.
5. Active shoulder internal/external rotation exercises with surgical or rubber tubing. Arm positioned at side with elbow flexed at 90°. Avoid excessive stress to the posterior joint capsule by limiting internal rotation (as tolerated).

Note: If discomfort persists, isometric exercises may be added. The shoulder position may be adjusted to allow a pain-free muscle contraction to occur.

6. Add supraspinatus exercises in the scapular plane, if adequate range-of-motion is available (0°-90° range).
7. Active shoulder flexion exercise through available range-of-motion.
8. Active shoulder abduction exercises to 90°. Maintain shoulder in the scapular plane to avoid stress on the anterior joint capsule.
9. Shoulder extension exercises - lying prone or standing (bending at the waist). Avoid the shoulder extended position by preventing arm movement beyond the plane of the body. This will decrease excessive stress to the anterior joint capsule.
10. Shoulder shrug exercises - avoid traction in the glenohumeral joint between repetitions by not allowing the arms to drop completely. This will avoid an excessive inferior glide of the humeral head.
11. Active shoulder internal/external rotation - progress to free-weights.
 - a. **Shoulder Internal Rotation:** Perform sidelying with the involved side down. Elevate

or support the lateral chest wall (pillow, bolster, wedge, etc.) to decrease the joint compression on the involved shoulder.

b. **Shoulder External Rotation:** Lie on the uninvolved side. Avoid excessive stress to the anterior joint capsule by limiting movement to no greater than 45°-50° of external rotation.

12. Add forearm-strengthening exercises (elbow, wrist).

Phase II

1. Continue mobilization and range-of-motion exercises (as needed).
2. Continue shoulder strengthening with surgical tubing and/or free weights. Emphasize eccentric phase of contraction.
3. Continue scapular stabilization exercises
4. Add arm ergometer for endurance exercises.
5. Add push-ups. Maintain proper alignment of the shoulders and elbows at the starting position. *Caution is applied during the descent phase of the push-up to avoid excessive stress to the anterior capsule. Do not lower the body beyond the elbows. Begin with wall push-ups. As strength improves, progress to floor push-ups (modified - hands and knees, or military - hands and feet), as tolerated.*
6. Isokinetic Test: Perform isokinetic strength and endurance test for the following suggested patterns: shoulder internal/external rotation (arm at the side), abduction/adduction, and flexion/extension as tolerated. To perform this test, pre-requisite strength requirements of the rotator cuff are 5-10 pounds for internal rotation. The shoulder should be pain free and have no significant amount of swelling.
7. Add isokinetic strengthening and endurance exercises (high speeds - 200+ degrees/second) for shoulder internal/external rotation with arm at the side. Maintain shoulder in 15°-20° of flexion and limit external rotation to 45°-50° to avoid excessive stress to the anterior joint capsule.
8. Add total body conditioning with emphasis on strength and endurance; include flexibility exercises as needed

Phase III

1. Continue mobilization and range-of-motion exercises (as needed).
2. Continue to emphasize the eccentric phase in strengthening the rotator cuff.
3. Continue scapular stabilization exercises
4. Continue to progress isotonic exercises. For shoulder internal/external rotation, gradually increase the stress to the anterior joint capsule by positioning the upper extremity at 45° and 80° to 90° of shoulder abduction. Continue to exercise in the functional shoulder position specific to the sport, as tolerated
5. Add isokinetic exercises for shoulder flexion/extension, abduction/adduction, and horizontal abduction/adduction. Take precautions in avoiding excessive stress to the anterior joint capsule.
6. Add chin-ups.
7. Continue arm ergometer for endurance.
8. Isokinetic Test: The second isokinetic test is administered for shoulder internal/external rotation, abduction/adduction, and flexion/extension. For shoulder internal/external rotation, the shoulder may be tested in the functional position (80° to 90° of abduction). Test results should demonstrate at least 80% strength and endurance (as compared to the uninvolved side) before proceeding with exercises specific to the activity setting.
9. Continue total body conditioning program with emphasis on the shoulder (rotator cuff).
10. **Skill Mastery:** Begin practicing skills specific to the activity (work, recreational activity, sport, etc.). *For example, throwing athletes, (e.g., pitchers) may proceed to throwing program.*