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### POSTERIOR SHOULDER INSTABILITY - CONSERVATIVE PROTOCOL

The physical therapy rehabilitation for posterior shoulder instability will vary in length depending on factors such as:

- Degree of shoulder instability/axity
- Acute vs. chronic condition
- Length of time immobilized
- Strength/range-of-motion status
- Performance/activity demands

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 posterior joint capsule as dynamic joint stability is restored. An isokinetic strength and endurance test 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.*).

#### PHASE I:

1. Apply modalities as needed (*heat, ice, electrotherapy, etc.*).
2. Perform ROM exercises (*passive, active-assistive*) for flexion, abduction, horizontal abduction, external rotation, and internal rotation (*as needed*).
3. Shoulder stretch - anterior cuff/capsule stretch (*as needed*).
4. Add joint mobilization (*e.g., emphasis on anterior glides*) as needed.
5. Active external rotation may be performed from 0° rotation to full external rotation. Arm is positioned at side with elbow flexed at 90°. Use surgical or rubber tubing for resistance. If pain persists, isometric exercises may be added. As strength improves, progress to using free weights, lying prone with arm abducted to 90° or sidelying with arm at side.
  - **Prone:** Perform the combined movements of horizontal abduction followed by external rotation to protect the posterior joint capsule
  - **Sidelying:** Limit the degrees of internal rotation to protect the posterior joint capsule
6. Add active internal rotation performed from full external rotation to 0° rotation using surgical or rubber tubing. Limiting the degrees of internal rotation "is necessary to avoid excessive stress to the posterior joint capsule. If there is pain with active movements, Strength can be maintained by performing an isometric contraction. The shoulder position may be adjusted to allow a pain free muscle contraction to occur.
7. Add supraspinatus exercise, if adequate range-of-motion is available (0° to 90°). Shoulder is positioned in the scapular plane approximately 20°-30° forward of the coronal plane.
8. Active shoulder flexion exercise through available range-of-motion.
9. Active shoulder abduction exercise to 90°.

10. Shoulder shrug exercise - 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 horizontal abduction exercise (*posterior deltoid*) in prone lying position. Avoid excessive stress to the posterior capsule by limiting movement from 45° of horizontal adduction to full horizontal abduction.
12. Add forearm-strengthening exercises (*elbow, wrist*).

#### **PHASE II:**

1. Continue anterior cuff/capsule stretch, mobilization, and range-of-motion exercises (*as necessary*).
2. Continue shoulder strengthening (*emphasis on rotator cuff and posterior deltoid*) with surgical tubing and/or free weights. Emphasis may be placed on the eccentric phase of contraction in strengthening the rotator cuff.
3. Add arm ergometer for endurance exercise.
4. Active shoulder internal rotation, using free weights, may be added performed supine with the arm positioned at the side.
5. Horizontal abduction may be performed through an increased range (*starting position at 90° of horizontal adduction as tolerated*).
6. Add total body conditioning with emphasis on strength and endurance. Include flexibility . exercises as needed.

#### **PHASE III:**

1. Continue anterior capsule stretching (*as needed*).
2. Continue to emphasize the eccentric phase in strengthening the rotator cuff.
3. Continue arm ergometer training.
4. Add military press. Press the weight directly over or behind the head.
5. Add isokinetic strengthening and endurance exercises (*high speeds - 200+ degrees/second*) for shoulder internal and external rotation with the arm at the side.
6. Isokinetic strengthening for horizontal abduction/adduction may be added. Shoulder flexion/extension and abduction/adduction may be added as needed.
7. Continue total body conditioning program with emphasis on the shoulder (*rotator cuff, posterior deltoid*)
8. Skill mastery. Begin practicing skills specific to the activity (*work, recreational activity, sport, etc.*). For example, throwing athletes (*e.g., pitchers*) may proceed to a throwing program.