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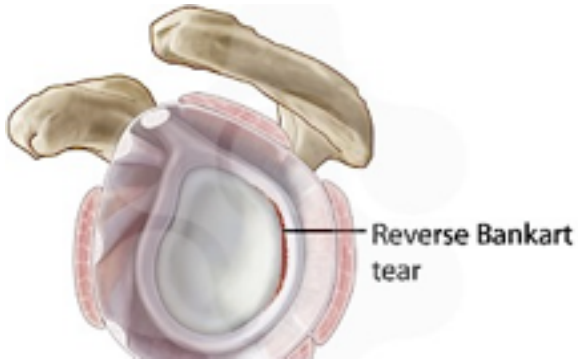
# Posterior Shoulder Instability

Posterior shoulder instability accounts for approximately 5% of cases of instability of the glenohumeral joint, although its incidence may be greater in population groups that routinely use their arms in ways likely to provoke injury to the shoulder joint, such as football players, weight lifters, and rock climbers.The condition can occur as a consequence of an acute event or through repeated microtranslation of the shoulder joint. Although acute injuries or dislocations of the shoulder are more readily identified than is repeated microtrauma, the latter can result from recurrent, insidious instances of instability, such as from the repeated imposition of a load posteriorly across the shoulder, as in the case of bench press or inclined press exercises in weight lifting, or in push-ups. The acute events responsible for PSI can be secondary to a forceful impact and shearing, as in blocking by a football lineman, or can result from fatigue of the structures that stabilize the shoulder, leading to laxity of the shoulder capsule, as in overhead throwing and swimming.




**Non Surgical treatment**

Physical therapy for patients with PSI should focus on scapulothoracic mechanics and strengthening of the rotator cuff, and specifically of the subscapularis muscle. Two thirds of patients will respond in programs for strengthening and improving proprioception. Most of these responders are patients with a history of repetitive microtrauma, as opposed to those who have had a single traumatic event or who have clear labral pathology, who will more likely require surgical stabilization. Although not a hard and fast rule, patients with GIRD and posterior instability are likely to derive greater benefit from therapy than those in whom labral pathology is the result of a forceful, shearing event, such as football linemen and weight lifters. Nevertheless, despite the tendency of GIRD to respond to therapy, labral pathology commonly requires arthroscopic treatment. The results in patients with GIRD and posterior instability are dramatic, with a 90% response to therapy, as opposed to only a 10% response in those with traumatic injuries. Notwithstanding this, patients who are identified as having PSI should have their scapular mechanics optimized and undergo strengthening before any surgical management of their condition is undertaken. Patients with a history of nontraumatic dislocation of the shoulder who do not have psychological pathology or a voluntary component of their disorder usually demonstrate stability at an average of 5 weeks with a dedicated program of scapular strengthening and

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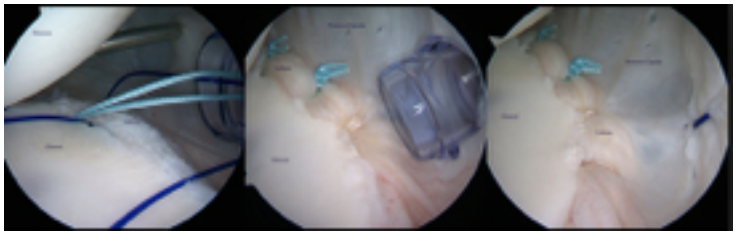
conditioning. Although there is no established duration for such a program, the authors believe that it should continue for at least 3 to 6 months.

**Surgical Management**

Indications for arthroscopic stabilization of the unstable posterior shoulder are recurrent, posttraumatic, unidirectional posterior subluxation; multidirectional instability with symptoms accompanying motion in the posteroinferior direction; and symptomatic posterior labral tears. There are rare instances for open surgery, but complications are significantly higher and historically only successful 30-70% of the time.

**Surgical Risks**

- Infection <1/1000
- Recurrent instability 12-15%
- Nerve palsy <1%
- Stiffness



**Outcomes**

Current studies show promising results of the arthroscopic surgical repair of PSI, although not as positive as those for anterior shoulder instability. In a series of 33 patients with an average follow-up of 39.1 months found an average score of 95 on the American Shoulder and Elbow Surgeons (ASES) Standardized Shoulder Assessment Form and a value of 82% of normal on the Western Ontario Shoulder Instability (WOSI) Index. Four of the patients had recurrent instability, with the worst outcomes occurring in patients whose PSI had a voluntary positional component. Similarly, Bradley et al reported an average ASES score of 85 at an average of 27 months after the arthroscopic repair of 100 shoulders with PSI, with a failure rate of about 15%. Ninety percent of the patients returned to athletic activity, with 67% resuming such activity at the same level as before their injuries.

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**Posterior Shoulder Instability**
**Phase 0: immediately after surgery.**

**POSTOPERATIVE INSTRUCTIONS**
You will wake up in the operating room. A sling and an ice pack will be in place. You will go to the recovery room and generally will be discharged after 1-2 hours. You can get out of bed when you wish. Apply ice to the front of the shoulder to reduce pain and swelling. You may remove the sling whenever you wish and gently move the elbow, wrist and fingers. Please follow Dr. Nelson's post operative instructions regarding moving your shoulder after surgery.

**GOALS:**
1. Control pain and swelling
2. Protect the repair
3. Begin early shoulder motion

**ACTIVITIES WHEN YOU GO HOME:**
1. Apply ice to the shoulder as tolerated to reduce pain and swelling. You can change the dressing to a smaller one to allow the cold therapy to reach the shoulder.
2. Remove the sling on the first day after surgery. Move your elbow, fingers and hand several times a day.
3. Begin the pendulum exercise several times a day:
Bend over at the waist and let the arm hang down. Using your body to initiate movement, swing the arm gently forward and backward and in a circular motion. Repeat for 2 to 3 minutes at a time.

4. Remove the outer dressing on the second day after surgery and shower. Leave the little pieces of tape (steri-strips) in place. You can get the wound wet after 2 days in a shower, but do not soak in a tub. To wash under the operated arm, bend over at the waist and let the arm passively swing away from the body. It is safe to wash under the arm in this position.
5. Keep your elbow slightly in front of your body; **do not reach behind your body**. When putting on clothing, lean forward and pull the shirt up and over the operated arm first. Then put the other arm into the opposite sleeve. To remove the shirt, take the unoperated arm out of the sleeve first, and then slip the shirt off of the operated arm.
5. Call or email Dr. Nelson with any questions or concerns.

**OFFICE VISIT:** Please arrange to return to Dr. Nelson's office in the office 10-14 days after surgery.

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**Rehabilitation after Arthroscopic Posterior Bankart Repair**
**Phase One: 0 to 4 weeks after surgery**
Goals:
• Allow healing of the repaired capsule
• Initiate early protected and restricted range of motion
• Retard muscular atrophy
• Decrease pain/inflammation
Activities:
1. Sling
Use your sling until 6 weeks post operative. If you remove the sling, be careful and keep the shoulder safe. The sling must be worn at all times with the exception of exercise activity and bathing. Keep the sling on when sleeping at night for the first four weeks.
2. Use of the operated arm
You may use your hand on the operated arm as long as you do not raise the hand above your head or reach across the front of your body. Also, do not reach your hand behind you as if to tuck in your shirt or to loop your belt. You should bend your arm at the elbow and use your fingers and hand, such as to reach up and touch your face. Keep your elbow in front of you. Do not bear the weight of the body on your arm.
3. Bathing and showering
You may shower or bath and wash the incision area. To wash under the operated arm, bend over at the waist and let the arm passively swing away from the body. It is safe to wash under the arm in this position. This is the same position as the pendulum exercise. Do not submerge the incisions under water
4. ICE continue to use ice as needed 15-20 minutes

**Stretches/Passive motion**
Days per week: 7 Times per day 1
Pendulum exercises
Supine External rotation
Supine forward elevation limit 120
No internal rotation
No horizontal adduction
Ball Squeeze

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**Rehabilitation after Arthroscopic Posterior Bankart Repair**

**Phase Two: 4 to 6 weeks after surgery**

**Goals:**

- Gradual increase in ROM
- Improve strength
- Decrease pain/inflammation
- Protect the labrum repair

**Activities:**

1. Sling-Continue sling until 6 weeks post surgery
2. Use of the operated arm. You may now carefully use your arm. Avoid having the arm forcefully pulled behind you or across your chest in front of you. Continue to avoid heavy weight lifting or manual labor. Follow any further instructions given to you by your doctor.
3. Precautions
   -You may use your hand on the operated arm as long as you **do not** raise the hand above your head or reach across the front of your body. Also, do not reach your hand behind you as if to tuck in your shirt or to loop your belt. You should bend your arm at the elbow and use your fingers and hand, such as to reach up and touch your face. Keep your elbow in front of you. Do not bear the weight of the body on your arm.
4. Ice-Use ice or cold as necessary 15-20 minutes.

**Stretching/ Active motion**

Times per week: 7 Times per day: 1-3

- Pendulum
- Supine External Rotation
- Hands-behind-head stretch
- Standing external rotation stretch
- Supine forward flexion: Limit 140 pain free

**Strengthening/Theraband**

Times per week 7 Times per day: 1

- Theraband internal (to neutral) and external rotation
- Standing forward flexion to 90 (scaption)
- Prone row
- Prone Extension
- Biceps curl
- Side-lying External rotation

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# Rehabilitation after Arthroscopic Posterior Bankart Repair

**Phase Three: 7 to 12 weeks after surgery**

**Goals:**

1. Protect the shoulder repair
2. Regain full range of motion
3. Continue gradual strengthening

**Activities:**

1. Use of the operated arm

You may now use your arm in a more normal fashion. You may move the arm into all positions including behind the back if it is comfortable. Avoid having the arm forcefully pulled behind you, pulled across the chest or bearing weight as if doing a push-up. Continue to avoid heavy weight lifting or manual labor. Follow any further instructions given to you by your doctor.

2. Precautions

Do not lift heavy objects overhead with the weight going behind the head. In other words, keep objects in front of you where you can see them.

**Stretching/ROM**

Times per week: 7 Times per day 1-2

- Pendulums
- External rotation at 90 abduction stretch
- Wall slide Stretch
- Hands behind Head stretch
- Standing External rotation Stretch
- Standing forward flexion
- Behind the back internal rotation (start week 8)
- Horizontal adduction stretch (start week 8)

**Strengthening/ Theraband**

- External rotation
- Internal rotation
- Standing forward punch
- Shoulder Shrug
- Dynamic hug
- “W’s”
- Seated row
- Biceps curl

**Strengthening/ Dynamic**

- Side-lying external rotation
- prone horizontal arm raises “T’s”
- Prone scaption ‘Y’
- Prone row
- Prone extension
- Standing forward flexion “full-can” exercise
- Rhythmic stabilization and proprioceptive

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**Rehabilitation after Arthroscopic Posterior Bankart Repair**

**Phase Four: 13-20 weeks after surgery**

Goals:
1. Protect the ligament repair
2. Regain full range of motion
3. Continue strengthening
4. Gradual return to full activity

Activities:
Use the arm for normal daily activities but continue to cautious to avoid excessive or forceful reaching across the front of the body. Also be cautious when reaching behind your body. Continue to avoid bearing weight as if pushing open a door or doing a push- up.

**STRETCHING / RANGE OF MOTION**
External rotation
Wall slide
Hands behind head
Behind back internal rotation
supine Corss-Chest stretch
Side-lying internal rotation (sleeper stretch)
External rotation at 90 abduction stretch

**STRENGTHENING / THERABAND**
Continue Previous plus
External rotation at 90
Internal rotation at 90
Standing 'T's'
Diagonal up
Diagonal down

**STRENGTHENING / DYNAMIC**
Continue Previous
resisted forearm supination pronation
resisted wrist flexion-extension
Machine resistance (see lifting last page)
Closed chain program (see last page)
PNF manual resistance with therapist

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**Rehabilitation after Arthroscopic Posterior Bankart Repair**
**Phase Five: 21 weeks after surgery and onward**

**Goals:**
1. Progression of functional activities
2. Maintain full range of motion
3. Continue progressive strengthening

**Exercise Program:**
**STRETCHING / RANGE OF MOTION**
Days per week: 5-7 Times per day: 1
- Continue all exercises from phase 4

**STRENGTHENING / THERABAND**
Days per week: 3 Times per day: 1
- Continue from phase 4

**STRENGTHENING / DYNAMIC**
Days per week: 3 Times per day: 1
- Continue from phase 4

**PLYOMETRIC PROGRAM**
Days per week per physical therapist
May process weight bearing program:
- Ball on wall
- **Pushup on unstable surface**

**WEIGHT TRAINING**

- **Days per week per physical therapist**
- See weight training precautions section Machine resistance (limited ROM):
- Latissimus dorsi pull downs
- Seated row
- **Seated bench press**

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## Guidelines for Returning to Weight Training After Arthroscopic Labrum Repair

You should not return to training using heavy weights or on weight machines until Dr. Nelson determines that it is safe. In general, it is usually safe to return to heavier weight training at three to four months following labrum repair. Before embarking on a weight-training program, you should have full range of shoulder motion and normal strength in the rotator cuff and scapular muscles. The doctor or a physical therapist will test your motion and strength before you start weight training.

When starting your weight-training program, you can start with 3 sets of 15-20 repetitions. Training with high repetition sets ensures that the weights that you are using are not too heavy.

NEVER perform any weight training exercise to the point of muscle failure. "Muscle failure" occurs when, in performing a weight training exercise, the muscle is no longer able to provide the energy necessary to contract and move the joint(s) involved in the particular exercise. Joint, muscle and tendon injuries are more likely to occur when muscle failure occurs.

The following weight training exercises should be avoided after Bankart repair for shoulder instability:

1. Pull downs behind-the-neck (wide-grip)
2. Behind-the-neck shoulder press
3. Wide-grip bench press
4. Standing lateral deltoid raises
5. Triceps press overhead

The following exercises require special cautions:

1. Pull downs should only be done in front of the head, to the chest, with a medium(not wide) grip.
2. Shoulder press overhead should be done carefully, avoiding heavy weights. If doing shoulder presses, always start with the hand in front of the shoulder and end overhead where you can still see your hand. For persons using barbells, this is the "military press".
3. If bench pressing, your grip should be no wider than the wider than the width of your shoulders. Avoid any exercises using grips wider or narrower than shoulder width.
4. Lateral deltoid raises should be avoided because of the impinging and wearing effect on the rotator cuff. Forward raises in the "thumb-up" position are usually safer and can be done with reasonable weights. Lateral raises from the prone or bent over position can be done as a substitute for standing lateral deltoid raises.
5. When doing incline bench press with barbells, there is a danger of shoulder dislocation if the lifter loses control of the bar when returning the barbell to the rack of the incline bench. Always have a spotter for removing and replacing the barbell in this exercise.
6. If you are doing any type of "chest-fly", keep in mind the following precautions.

Do not do any chest-fly exercise with straight elbows. Always allow the elbows to bend and never lower your hands (holding dumbbells) below the level of your chest.

7. If you are using a "Pec-Deck" machine, never let the weight stretch the arms so that your elbows pass behind your chin. You can set the arms on this machine a few clicks forward to adjust the maximum motion allowed.
8. If you a performing "dips" using a set of parallel bars, never lower yourself below the point where the elbows reach a 90-degree angle.
9. For triceps exercises, triceps pushdowns on a pulley system are safe as well as bent-over triceps extensions.
10. When doing the upright-rowing exercise, keep your grip at least 12 inches apart. When pulling the bar upward toward the chin, do not raise the bar higher than the point at which the elbow reaches shoulder level.

Exercises Usually Problem-Free 1. Biceps Curls 2. Cable and bent-over rowing 3. Shoulder shrugs

If your goal is returning to high-level weight training or weight lifting, it will take 3 to 6 months of cautious, gradual progression to return to top form. In general, avoid increasing the amount of weight lifted by more than 10-15% (at a time) of your present working weight every 10-14 days.

Remember: Weight training is beneficial to improve muscular strength and protect the joints from injury. If done improperly by using too much weight and/or improper technique, weight training can cause serious injury.

# Dr. Nelson's Posterior Bankart Repair Rehabilitation Protocol

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Diagnosis:** | | | | | | | | | | | | | | | |
| **Procedure date:** | **S/P:** | | | | | | | | | | | | | | |
| | **WEEK** | | | | | | | | | | | **MONTH** | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | 3 | 4 | 5 | 6 |
| ***PHASE 0 EXERCISES (week 0-2)*** | | | | | | | | | | | | | | | |
| Pendulum | • | • | • | • | • | • | • | • | • | • | | | | | |
| Continue Shoulder immobilizer | • | • | • | • | • | • | | | | | | | | | |
| ***PHASE 1 EXERCISES (week 0-4)*** | | | | | | | | | | | | | | | |
| Supine ER, forward elevation limit 120 | • | • | • | • | | | | | | | | | | | |
| Ball Squeeze | • | • | • | • | • | • | • | • | • | • | | • | • | • | • |
| ***PHASE 2 EXERCISES (week 4-6)*** | | | | | | | | | | | | | | | |
| Continue immobilizer except hygiene and exercise | • | • | • | • | • | • | | | | | | | | | |
| Supine external rotation | | | | • | • | • | • | • | • | • | | | | | |
| Hands-behind head stretch | | | | • | • | • | | | | | | | | | |
| Standing ER as tolerated | | | | • | • | • | | | | | | | | | |
| Supine forward flexion (140 degrees) | | | | • | • | • | | | | | | | | | |
| Theraband IR (neutral), ER as tolerated | | | | | | • | • | • | • | • | | | | | |
| Standing FF 90 (scaption) | | | | | | • | • | • | • | • | | | | | |
| Prone ROW, Extension | | | | | | • | • | • | • | • | | | | | |
| Biceps curls | | | | | | • | • | • | • | • | | | | | |
| Side-lying ER | | | | | | • | • | • | • | • | | | | | |
| ***PHASE 3 (weeks 7-12) Continue previous plus*** | | | | | | | | | | | | | | | |
| Wall slide stretch | | | | | | | • | • | • | • | | • | | | |
| Behind Back IR (start week 8) | | | | | | | | • | • | • | | • | | | |
| Horizontal adduction stretch (week 8) | | | | | | | | | • | • | | • | | | |
| Theraband, ER, IR | | | | | | | • | • | • | • | | • | | | |
| Standing forward punch | | | | | | | • | • | • | • | | • | | | |
| Shoulder shrug | | | | | | | • | • | • | • | | • | | | |
| Dynamic Hug | | | | | | | • | • | • | • | | • | | | |
| W's, T's, Y's | | | | | | | • | • | • | • | | • | | | |
| seated row, and prone row | | | | | | | • | • | • | • | | • | | | |
| Prone extension | | | | | | | • | • | • | • | | • | | | |
| Standing forward flexion "full can" | | | | | | | • | • | • | • | | • | | | |
| Rhythmic stabilization and proprioceptive | | | | | | | • | • | • | • | | • | | | |
| ***PHASE 4 (weeks 12-20) continue previous plus*** | | | | | | | | | | | | | | | |
| Side lying internal rotation (sleeper) | | | | | | | | | | | | • | • | • | • |
| Theraband ER, IR at 90 | | | | | | | | | | | | • | • | • | • |
| Diagonal up and down | | | | | | | | | | | | • | • | • | • |
| Resisted forearm supination/pronation | | | | | | | | | | | | • | • | • | • |
| Resisted wrist flexion-extension | | | | | | | | | | | | • | • | • | • |
| Machine resistance (see handout) | | | | | | | | | | | | • | • | • | • |
| ***PHASE 5 (weeks 20 onward)*** | | | | | | | | | | | | | | | |
| continue previous | | | | | | | | | | | | | | • | • |
| Initiate plyometrics/interval sports program | | | | | | | | | | | | | | • | • |
| May initiate pre injury level activities with clearance by Dr. Nelson | | | | | | | | | | | | | | | • |

Return to play typically 5-6 months

Call or email Dr. Nelson with any concern

**Additional Instructions:**