

## Rehabilitation Protocol for Bankart Repair

This protocol is intended to guide clinicians and patients through the post-operative course of a Bankart repair. Specific interventions should be based on the needs of the individual and should consider exam findings and clinical decision making. If you have questions, contact the referring physician.

### Considerations for the Post-operative Bankart Repair Rehabilitation Program

Many different factors influence the post-operative Bankart repair rehabilitation outcome, including severity of the damage to the labral and capsular structures and individual patient factors including co-morbidities.

### Post-operative Complications

If you develop a fever, unresolving numbness/tingling, excessive drainage from the incision, uncontrolled pain or any other symptoms you have concerns about you should contact the referring physician.

### PHASE I: IMMEDIATE POST-OP (0-3 WEEKS AFTER SURGERY)

<b>Rehabilitation Goals</b>	<ul style="list-style-type: none"> <li>Protect surgical repair</li> <li>Reduce swelling, minimize pain</li> <li>Maintain UE ROM in elbow, hand and wrist</li> <li>Gradually increase shoulder PROM</li> <li>Minimize substitution patterns with AAROM</li> <li>Minimize muscle inhibition</li> <li>Patient education</li> </ul>
<b>Sling</b>	<ul style="list-style-type: none"> <li>Neutral rotation</li> <li>Use of abduction pillow in 30-45 degrees abduction</li> <li>Use at night while sleeping</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>No shoulder AROM</li> <li>No lifting of objects</li> <li>No supporting of body weight with hands</li> </ul>
<b>Intervention</b>	<p><i>Swelling Management</i></p> <ul style="list-style-type: none"> <li>Ice, compression</li> </ul> <p><i>Range of motion/Mobility</i></p> <ul style="list-style-type: none"> <li>PROM: ER&lt;20 scapular plane, Forward elevation &lt;90, <a href="#">pendulums</a>, <a href="#">seated GH flexion table slide</a></li> <li>AROM: elbow, hand, wrist</li> <li>AAROM: <a href="#">Active assistive shoulder flexion</a>, <a href="#">shoulder flexion with cane</a>, <a href="#">cane external rotation stretch</a></li> </ul> <p><i>Strengthening (Week 2)</i></p> <ul style="list-style-type: none"> <li>Periscapular: <a href="#">scap retraction</a>, <a href="#">prone scapular retraction</a>, <a href="#">standing scapular setting</a>, <a href="#">supported scapular setting</a>, <a href="#">inferior glide</a>, <a href="#">low row</a></li> <li><a href="#">Ball squeeze</a></li> </ul>
<b>Criteria to Progress</b>	<ul style="list-style-type: none"> <li>90 degrees shoulder PROM forward elevation</li> <li>20 degrees of shoulder PROM ER and IR in the scapular plane</li> <li>Palpable muscle contraction felt in scapular and shoulder musculature</li> <li>No complications with Phase I</li> </ul>

### PHASE II: INTERMEDIATE POST-OP (4-6 WEEKS AFTER SURGERY)

<b>Rehabilitation Goals</b>	<ul style="list-style-type: none"> <li>Continue to protect surgical repair</li> <li>Reduce swelling, minimize pain</li> <li>Gradually increase shoulder PROM</li> <li>Minimize substitution patterns with AAROM/AROM</li> <li>Patient education</li> </ul>
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<b>Sling</b>	<ul style="list-style-type: none"> <li>Start to wean out of sling</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>No lifting of objects</li> <li>No supporting of body weight with hands</li> </ul>
<b>Intervention</b> <i>*Continue with Phase I interventions</i>	<p><i>Range of motion/Mobility</i></p> <ul style="list-style-type: none"> <li>PROM: ER&lt;50 scapular plane, ER @ 90 ABD &lt;45, Forward elevation &lt;135, <a href="#">horizontal table slide</a></li> <li>AAROM: <a href="#">washcloth press up</a>, <a href="#">seated table slides</a>, <a href="#">seated shoulder elevation with cane</a>, wall climbs</li> <li>AROM: elevation &lt; 115, <a href="#">supine flexion</a>, <a href="#">salutes</a>, <a href="#">supine punch</a>, <a href="#">seated shoulder elevation with cane and active lowering</a></li> </ul> <p><i>Strengthening</i></p> <ul style="list-style-type: none"> <li>Rotator cuff: <a href="#">internal external rotation isometrics</a></li> <li>Periscapular: <a href="#">Row on physioball</a>, <a href="#">shoulder extension on physioball</a>, <a href="#">rowing</a>, <a href="#">lawn mowers</a>, <a href="#">robbery</a>, <a href="#">serratus punches</a></li> </ul>
<b>Criteria to Progress</b>	<ul style="list-style-type: none"> <li>135 degrees shoulder PROM forward elevation</li> <li>50 degrees shoulder PROM ER and IR in scapular plane</li> <li>45 degrees shoulder PROM ER in 90 degrees ABD</li> <li>115 degrees shoulder AROM forward elevation</li> <li>Minimal substitution patterns with AAROM/AROM</li> <li>Pain &lt; 2/10</li> <li>No complications with Phase II</li> </ul>

### **PHASE III: INTERMEDIATE POST-OP CONTD (7-8 WEEKS AFTER SURGERY)**

<b>Rehabilitation Goals</b>	<ul style="list-style-type: none"> <li>Do not overstress healing tissue</li> <li>Reduce swelling, minimize pain</li> <li>Gradually increase shoulder PROM/AROM</li> <li>Initiate rotator cuff strengthening</li> <li>Progress periscapular strength</li> <li>Improve dynamic shoulder stability</li> <li>Gradually return to full functional activities</li> <li>Patient education</li> </ul>
<b>Sling</b>	<ul style="list-style-type: none"> <li>Discontinue</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>No lifting of heavy objects (&gt;10 lbs)</li> </ul>
<b>Intervention</b> <i>*Continue with Phase I-II interventions</i>	<p><i>Range of motion/Mobility</i></p> <ul style="list-style-type: none"> <li>PROM: ER&lt;65 scapular plane, ER @ 90 &lt;75, Forward elevation &lt;155</li> <li>AAROM: <a href="#">Pulleys</a></li> <li>AROM: Elevation &lt;145, <a href="#">supine forward elevation with elastic resistance to 90 degrees</a></li> </ul> <p><i>Strengthening</i></p> <ul style="list-style-type: none"> <li>Rotator cuff: <a href="#">side-lying external rotation</a>, <a href="#">standing external rotation w/ resistance band</a>, <a href="#">standing internal rotation w/ resistance band</a>, <a href="#">internal rotation</a>, <a href="#">external rotation</a></li> <li>Periscapular: <a href="#">Resistance band shoulder extension</a>, <a href="#">resistance band seated rows</a>, <a href="#">push-up plus on knees</a>, <a href="#">tripod</a>, <a href="#">pointer</a>, <a href="#">prone shoulder extension Is</a>, <a href="#">resistance band forward punch</a>, <a href="#">forward punch</a></li> </ul> <p><i>Motor Control</i></p> <ul style="list-style-type: none"> <li>Internal and external rotation in scaption and Flex 90-125 (rhythmic stabilization)</li> <li>IR/ER and Flex 90-125 (rhythmic stabilization)</li> <li>Quadruped alternating isometrics and ball stabilization on wall</li> </ul>
<b>Criteria to Progress</b>	<ul style="list-style-type: none"> <li>155 degrees shoulder PROM forward elevation</li> <li>65 degrees shoulder PROM ER and IR in scapular plane</li> <li>75 degrees shoulder PROM ER in 90 degrees ABD</li> <li>145 degrees shoulder AROM forward elevation</li> <li>Pain &lt; 2/10</li> </ul>

### PHASE IV: TRANSITIONAL POST-OP (9-11 WEEKS AFTER SURGERY)

<b>Rehabilitation Goals</b>	<ul style="list-style-type: none"> <li>Do not overstress healing tissue</li> <li>Gradually increase shoulder PROM/AROM</li> <li>Progress rotator cuff strengthening</li> <li>Progress periscapular strength</li> <li>Improve dynamic shoulder stability</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>No lifting of heavy objects (&gt; 10 lbs)</li> </ul>
<b>Intervention</b> <i>*Continue with Phase II-III interventions</i>	<p><i>Range of motion/mobility</i></p> <ul style="list-style-type: none"> <li>PROM: Full</li> <li>AROM: Full</li> </ul> <p><i>Strengthening</i></p> <ul style="list-style-type: none"> <li>Rotator cuff: sidelying ABD → standing ABD, <a href="#">scaption</a> and <a href="#">shoulder flexion</a> to 90 degrees elevation</li> <li>Periscapular: <a href="#">T and Y</a>, <a href="#">“T” exercise</a>, <a href="#">push-up plus knees extended</a>, prone external rotation at 90 degrees, <a href="#">wall push up</a>, <a href="#">“W” exercise</a>, <a href="#">resistance band Ws</a>, <a href="#">dynamic hug</a>, <a href="#">resistance band dynamic hug</a></li> <li>Elbow: <a href="#">Biceps curl</a>, <a href="#">resistance band bicep curls</a> and <a href="#">triceps</a></li> </ul> <p><i>Stretching</i></p> <ul style="list-style-type: none"> <li><a href="#">IR behind back with towel</a>, <a href="#">sidelying horizontal ADD</a>, <a href="#">sleeper stretch</a>, <a href="#">triceps</a> and lats, <a href="#">doorjam series</a></li> </ul> <p><i>Motor Control</i></p> <ul style="list-style-type: none"> <li><a href="#">PNF – D1 diagonal lifts</a>, <a href="#">PNF – D2 diagonal lifts</a></li> <li><a href="#">Field goals</a></li> </ul>
<b>Criteria to Progress</b>	<ul style="list-style-type: none"> <li>Full pain-free PROM and AROM</li> <li>Minimal to no substitution patterns with shoulder AROM</li> <li>Performs all exercises demonstrating symmetric scapular mechanics</li> <li>Pain &lt; 2/10</li> </ul>

### PHASE V: STRENGTHENING POST-OP (12-16 WEEKS AFTER SURGERY)

<b>Rehabilitation Goals</b>	<ul style="list-style-type: none"> <li>Maintain pain-free ROM</li> <li>Enhance functional use of upper extremity</li> </ul>
<b>Intervention</b> <i>*Continue with Phase II-V interventions</i>	<p><i>Strengthening</i></p> <ul style="list-style-type: none"> <li>Rotator cuff: <a href="#">External rotation at 90 degrees</a>, <a href="#">internal rotation at 90 degrees</a>, <a href="#">resistance band standing external rotation at 90 degrees</a>, <a href="#">resistance band standing internal rotation at 90 degrees</a></li> </ul> <p><i>Motor control</i></p> <ul style="list-style-type: none"> <li><a href="#">Resistance band PNF pattern</a>, <a href="#">PNF – D1 diagonal lifts w/ resistance</a>, <a href="#">diagonal-up</a>, <a href="#">diagonal-down</a></li> <li><a href="#">Wall slides w/ resistance band</a></li> </ul> <p><i>Stretching</i></p> <ul style="list-style-type: none"> <li><a href="#">External rotation (90 degrees abduction)</a>, <a href="#">hands behind head</a></li> </ul>
<b>Criteria to Progress</b>	<ul style="list-style-type: none"> <li>Clearance from MD and ALL milestone criteria below have been met</li> <li>QuickDASH</li> <li>PENN</li> <li><a href="#">Upper Extremity Functional Assessment</a> <ul style="list-style-type: none"> <li>Full pain-free PROM and AROM</li> <li>Joint position sense ≤ 5 degree margin of error</li> <li>Strength ≥ 85% of the uninvolved arm</li> <li>ER/IR ratio ≥ 64%</li> <li>Scapula Dyskinesis Test symmetrical</li> <li>Functional Performance and Shoulder Endurance Tests ≥ 85% of the uninvolved arm</li> <li>Males ≥ 21 taps; females ≥ 23 taps on CKCUEST</li> </ul> </li> <li>Return-to-sport testing can be performed at MGH Sports Physical Therapy, if necessary</li> <li>Negative impingement and instability signs</li> <li>Performs all exercises demonstrating symmetric scapular mechanics</li> </ul>

## **PHASE VII: EARLY RETURN-TO-SPORT (4-6 MONTHS AFTER SURGERY)**

<b>Rehabilitation Goals</b>	<ul style="list-style-type: none"> <li>• Maintain pain-free ROM</li> <li>• Continue strengthening and motor control exercises</li> <li>• Enhance functional use of upper extremity</li> <li>• Gradual return to strenuous work/sport activity</li> </ul>
<b>Intervention</b> <i>*Continue with Phase II-VI interventions</i>	<ul style="list-style-type: none"> <li>• See specific return-to-sport/throwing program (coordinate with physician)</li> </ul>
<b>Criteria to Progress</b>	<ul style="list-style-type: none"> <li>• Last stage-no additional criteria</li> </ul>
<b>Return-to-Sport</b>	<ul style="list-style-type: none"> <li>• For the recreational or competitive athlete, return-to-sport decision making should be individualized and based upon factors including level of demand on the upper extremity, contact vs non-contact sport, frequency of participation, etc. We encourage close discussion with the referring surgeon prior to advancing to a return-to-sport rehabilitation program.</li> </ul>

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<b>Contact</b>	Please email <a href="mailto:MGHSportsPhysicalTherapy@partners.org">MGHSportsPhysicalTherapy@partners.org</a> with questions specific to this protocol
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### References

- DeFroda SF, Mehta N, Owens BD. Physical therapy protocols for arthroscopic Bankart repair. *Sports Health*. 2018. May/June: 250-258.
- Gaunt BW, McCluskey GM, Uhl TL. An electromyographic evaluation of subdividing active-assistive shoulder elevation exercises. *Sports Health*. 2010. 2 (5): 424-432.
- Gaunt BW, Shaffer MA, et al. The American Society of Shoulder and Elbow Therapists' consensus rehabilitation guideline for arthroscopic anterior capsulolabral repair of the shoulder. *JOSPT*. 2010. 40 (3): 155-168.
- Kibler, W.B., Sciascia, A. D., Uhl, T. L., et al. Electromyographic analysis of specific exercises for scapular control in early phases of shoulder rehabilitation. *The American Journal of Sports Medicine*. 2008. 36(9): p. 1789-1798.
- Uhl TL, Muir TA, et al. Electromyographical assessment of passive, active assistive, and active shoulder rehabilitation exercises. *PM R*. 2010. 2: 132-141.

# Upper Extremity Functional Assessment

Patient Name: \_\_\_\_\_

MRN: \_\_\_\_\_

Date of Injury/Surgery: \_\_\_\_\_

Surgery/Surgeon: \_\_\_\_\_

Concomitant Injuries/Procedures: \_\_\_\_\_

	Operative Limb	Non-operative Limb	Limb Symmetry Index
Passive range of motion: ER-0-IR at 90 degrees ABD	- 0 -	- 0 -	-
Joint position sense-mid range (3 trials each limb)			-
Joint position sense-end range (3 trials each limb)			-
External rotation strength (average/3 trials)			
External rotation in scapular plane			
External rotation in 90 degrees abduction			
Eccentric external rotation in scapular plane			
Internal rotation strength (average/3 trials)			
Internal rotation in scapular plane			
Internal rotation in 90 degrees abduction			
Ratio ER/IR in scapular plane			
Ratio ER/IR in 90 degrees abduction			
Periscapular strength (average/3 trials)			
Middle Trapezius			
Lower Trapezius			
Motor Control			
Scapular Dyskinesis Test	Symmetry: Y or N		
Functional Performance Tests (average /3 trials)			
Upper Quarter Y-Balance			
Closed Kinetic Chain Upper Extremity Stability	Males: $\geq 21$ Y or N    Females: $\geq 23$ Y or N		
Single Arm Seated Shot-Put Test			
Shoulder Endurance			
Posterior Shoulder Endurance Test			

Ready to return to sport?

YES

NO

Recommendations: \_\_\_\_\_

Examiner: \_\_\_\_\_

### Upper Extremity Functional Assessment Videos

**Joint Position Sense** begins with the patient in a supine position. Arm is ABD to 90 degrees with elbow flexed to 90 degrees. With the patient's eyes closed, the arm is passively moved to an angle of either IR or ER by the clinician. This angle is measured with either an inclinometer or goniometer. The arm is then passively moved between IR and ER and then the patient is asked to actively reproduce the angle measured. This is repeated at varying angles for 3 trials and recorded for both mid-range and end range. A > 5 degree error is considered abnormal.

### ***Strength Testing***

**External rotation strength** is measured using a handheld dynamometer. The patient is lying in supine and instructed to apply a maximal isometric force against the HHD positioned just proximal to the wrist and the average of 3 trials is recorded for each limb. 3 trials each are taken in the scapular plane and ABD at 90 degrees.

**Internal rotation strength** is measured using a handheld dynamometer. The patient is lying in supine and instructed to apply a maximal isometric force against the HHD positioned just proximal to the wrist and the average of 3 trials is recorded for each limb. 3 trials each are taken in the scapular plane and ABD at 90 degrees.

**Eccentric external rotation strength** is measured using the HUMAC system seated in both the scapular plane and 90 degrees of abduction. An average of 3 trials is recorded for each limb.

**ER/IR Ratio** is calculated for each limb based on the average of 3 trials. The average isometric external rotation strength is divided by the average internal rotation strength.

**Middle Trapezius** is measured using a handheld dynamometer. The patient is lying in prone with the arm abducted to 90 degrees and instructed to apply maximal isometric force against the HHD positioned just proximal to the elbow in the horizontal abduction direction. An average of 3 trials is recorded for each limb.

**Lower Trapezius** is measured using a handheld dynamometer. The patient is lying in prone with the arm elevated to 120 degrees and instructed to apply maximal isometric force against the HHD positioned just proximal to the elbow in the elevation direction. An average of 3 trials is recorded for each limb.

### ***Motor Control***

**Scapular Dyskinesis Test** is performed with the patient standing facing away. Patient begins with the arms by the sides fully extended and shoulders in neutral rotation. Bilateral flexion and ABD are performed with full range of motion. Arms are elevated at a cadence of 25 beats per minute for five repetitions. Patients < 150 lbs use 3 lb weights, patients ≥ 150 lbs use 5 lb weights. The examiner determines symmetry or asymmetry and documents the quality of the movement.

## **Functional Performance Tests**

**Upper Quarter Y-Balance Test** starts with patient in a pushup position with the feet no more than 12 inches apart. The subject performs maximal effort reaches with the free hand in three directions (medial, superolateral, and inferolateral) named in relation to the stationary hand. The distance reached is recorded for each hand taking the average of 3 trials. The sum of the 3 reach directions is calculated for a total excursion score.

**Closed Kinetic Chain Upper Extremity Stability Test** starts with two strips of 1.5 inch athletic tape placed parallel to each other 36 inches apart measured with a standard tape measure. The starting position is the patient has one hand on each piece of tape in the pushup position. Males keep the knees off the ground, females take modified position (on knees). The patient moves one hand to reach across their body and touch the piece of tape lying under the opposing hand. After touching the tape line, the hand is returned to the original starting position. The patient performs the same movement with the other hand. The patient repeats this for 15 seconds and each touch to the tape is counted as one. An average of 3 trials is recorded.

The patient should be instructed to keep a straight back with their hands and shoulders in a perpendicular position.

**Single-Arm Seated Shot-Put Test** begins with the patient take a long-seated position against a backrest/wall. Grip a 2 kg medicine ball in their hand while keeping their elbow tucked against their torso as far back in the backrest/wall as possible. The opposite arm is placed in the patients lap. Patients are instructed to shot-put the medicine ball as hard as you can to obtain the greatest distance. Patients are also instructed not to bend knees during the test. Test is repeated if patients cross the midline of their torso with the test arm, moved torso from backrest/wall, bent their knees, or preloaded before putting the ball. An average of 3 trials is recorded.

## **Shoulder Endurance**

**Posterior Shoulder Endurance Test** starts with the patient in prone with the test shoulder off the table and the arm perpendicular to the floor with elbow extended. Patient holds a weight equal to 2% of body weight. Patient is instructed to horizontally abduct the arm to 90 degrees at a cadence of 30 beats per minute. There is a one second hold at the top of the arc of motion. Repeat until patient fatigues indicated by inability to hold arm at top of the arc of motion (1 second), compensation with elevation of entire upper torso, or verbal report of inability to continue. Repetitions are counted.

## References

- Ager LA, Roy JS, et al. Shoulder proprioception: how is it measured and is it reliable? A systematic review. *J of Hand Therapy*. 2017. 30: 221-231.
- Chmielewski TL, Martin C, et al. Normalization considerations for using the unilateral seated shot-put test in rehabilitation. *JOSPT*. 2014. 44(7): 518-524.
- Lee D-R, Kim LJ. Reliability and validity of the closed kinetic chain upper extremity stability test. *J Phys Ther Sci*. 2015. 27: 1071-1073.
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- Michener LA, Boardman ND, et al. Scapular muscle tests in subjects with shoulder pain and functional loss: reliability and construct validity. *Physical Therapy*. 2005. 85(11): 1128-1138.
- Moore SD, Uhl TL, et al. Improvements in shoulder endurance following a baseball-specific strengthening program in high school baseball players. *Sports Health*. 2013. 5(3): 233-238.
- Westrick RB, Miller, JM, et al. Exploration of the y-balance test for assessment of upper quarter closed kinetic chain performance. *IJSPT*. 2012. 7 (2): 139-147.

## quick DASH

Please rate your ability to do the following activities in the last week by circling the number below the appropriate response.

	<b>NO DIFFICULTY</b>	<b>MILD DIFFICULTY</b>	<b>MODERATE DIFFICULTY</b>	<b>SEVERE DIFFICULTY</b>	<b>UNABLE</b>
1. Open a tight or new jar	1	2	3	4	5
2. Do heavy household jobs (e.g. wash windows, clean floors)	1	2	3	4	5
3. Carry a shopping bag or briefcase	1	2	3	4	5
4. Wash your back	1	2	3	4	5
5. Use a knife to cut food	1	2	3	4	5
6. Recreational activities which require you to take some force or impact through your arm, shoulder or hand (e.g. golf, hammering, tennis etc)	1	2	3	4	5

	<b>NOT AT ALL</b>	<b>SLIGHTLY</b>	<b>MODERATELY</b>	<b>QUITE A BIT</b>	<b>EXTREMELY</b>
7. During the past week, <i>to what extent</i> has your arm, shoulder or hand problem interfered with your normal social activities with family, friends, neighbours or groups? <i>(circle number)</i>	1	2	3	4	5

	<b>NOT LIMITED AT ALL</b>	<b>SLIGHTLY LIMITED</b>	<b>MODERATELY LIMITED</b>	<b>VERY LIMITED</b>	<b>UNABLE</b>
8. During the past week, were you limited in your work or other regular daily activities as a result of your arm, shoulder or hand problem? <i>(circle number)</i>	1	2	3	4	5

<b>Please rate the severity of the following symptoms in the last week (circle number)</b>	<b>NONE</b>	<b>MILD</b>	<b>MODERATE</b>	<b>SEVERE</b>	<b>EXTREME</b>
9. Arm, shoulder or hand pain	1	2	3	4	5
10. Tingling (pins and needles) in your arm, shoulder or hand	1	2	3	4	5

	<b>NO DIFFICULTY</b>	<b>MILD DIFFICULTY</b>	<b>MODERATE DIFFICULTY</b>	<b>SEVERE DIFFICULTY</b>	<b>SO MUCH DIFFICULTY THAT I CAN'T SLEEP</b>
11. During the past week, how much difficulty have you had sleeping because of the pain in your arm, shoulder or hand? <i>(circle number)</i>	1	2	3	4	5

**quickDASH DISABILITY/SYMPTOM SCORE** =  $\frac{[(\text{sum of } n \text{ responses}) - 1]}{n} \times 25$  (where n is the number of completed responses)

A quickDASH score may not be calculated if there is greater than 1 missing item.



**WORK MODULE (OPTIONAL)**

The following questions ask about the impact of your arm, shoulder or hand problem on your ability to work (including home-making if that is your main work role).

Please indicate what your job / work is: \_\_\_\_\_

I do not work (you may skip this section).

**Please circle the number that best describes your physical ability in the past week.**

Did you have any difficulty:	NO DIFFICULTY	MILD DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	UNABLE
1. Doing your work in your usual way?	1	2	3	4	5
2. Doing your usual work because of arm, shoulder or hand pain?	1	2	3	4	5
3. Doing your work as well as you would like?	1	2	3	4	5
4. Spending your usual amount of time doing your work?	1	2	3	4	5

**SPORTS/PERFORMING ARTS MODULE (OPTIONAL)**

The following questions relate to the impact of your arm, shoulder or hand problem on playing *your musical instrument or sport or both*. If you play more than one sport or instrument (or play both), please answer with respect to that activity which is most important to you.

Please indicate the sport or instrument which is most important to you: \_\_\_\_\_

I do not play a sport or an instrument. (You may skip this section).

**Please circle the number that best describes your physical ability in the past week.**

Did you have an difficulty:	NO DIFFICULTY	MILD DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	UNABLE
1. Playing your instrument or sport in your usual way?	1	2	3	4	5
2. Playing your musical instrument or sport because of arm, shoulder or hand pain?	1	2	3	4	5
3. Playing your instrument or sport as well as you would like?	1	2	3	4	5
4. Spending your usual amount of time practising or playing your instrument or sport?	1	2	3	4	5

**Scoring the optional modules:** add up the assigned values for each response; divide by 4 (number of items); subtract 1; multiple by 25.

**An optional module score may not be calculated if there are any missing items.**

Hudak PL, Amadio PC, Bombardier C. Development of an upper extremity outcome measure: the DASH (disabilities of the arm, shoulder and hand) [corrected]. The Upper Extremity Collaborative Group (UECG). *Am J Ind Med.* 1996;(6):602-608.

### The Penn Shoulder Score, Part 1: Pain and Satisfaction Subscales

Please circle the number closest to your level of pain or satisfaction	Office Use Only
<p>Pain at rest with your arm by your side:</p> <p>0 1 2 3 4 5 6 7 8 9 10</p> <p>No pain Worst pain possible</p>	<p>_____</p> <p>(10 – # circled)</p>
<p>Pain with normal activities (eating, dressing, bathing):</p> <p>0 1 2 3 4 5 6 7 8 9 10</p> <p>No pain Worst pain possible</p>	<p>_____</p> <p>(10 – # circled)</p> <p>(Score 0 if not applicable)</p>
<p>Pain with strenuous activities (reaching, lifting, pushing, pulling, throwing):</p> <p>0 1 2 3 4 5 6 7 8 9 10</p> <p>No pain Worst pain possible</p>	<p>_____</p> <p>(10 – # circled)</p> <p>(Score 0 if not applicable)</p>
<p style="text-align: right;">Pain score: = _____/30</p>	
<p>How satisfied are you with the current level of function of your shoulder?</p> <p>0 1 2 3 4 5 6 7 8 9 10</p> <p>Not satisfied Very satisfied</p>	<p>_____ /10</p> <p>(# circled)</p>

## The Penn Shoulder Score: Function Subscale

Please circle the number that best describes the level of difficulty you might have performing each activity	No difficulty	Some difficulty	Much difficulty	Can't do at all	Did not do <u>before</u> injury
1. Reach the small of your back to tuck in your shirt with your hand	3	2	1	0	X
2. Wash the middle of your back/hook bra	3	2	1	0	X
3. Perform necessary toileting activities	3	2	1	0	X
4. Wash the back of opposite shoulder	3	2	1	0	X
5. Comb hair	3	2	1	0	X
6. Place hand behind head with elbow held straight out to the side	3	2	1	0	X
7. Dress self (including put on coat and pull shirt off overhead)	3	2	1	0	X
8. Sleep on affected side	3	2	1	0	X
9. Open a door with affected arm	3	2	1	0	X
10. Carry a bag of groceries with affected arm	3	2	1	0	X
11. Carry a briefcase/small suitcase with affected arm	3	2	1	0	X
12. Place a soup can (1-2 lb) on a shelf at shoulder level without bending elbow	3	2	1	0	X
13. Place a one gallon container (8-10 lb) on a shelf at shoulder level without bending elbow	3	2	1	0	X
14. Reach a shelf above your head without bending your elbow	3	2	1	0	X
15. Place a soup can (1-2 lb) on a shelf overhead without bending your elbow	3	2	1	0	X
16. Place a one gallon container (8-10 lb) on a shelf overhead without bending your elbow	3	2	1	0	X
17. Perform usual sport/hobby	3	2	1	0	X
18. Perform household chores (cleaning, laundry, cooking)	3	2	1	0	X
19. Throw overhand/swim/overhead racquet sports (circle all that apply to you)	3	2	1	0	X
20. Work full-time at your regular job	3	2	1	0	X

### SCORING

Total of columns = \_\_\_\_ (a)

Number of Xs × 3 = \_\_\_\_ (b), 60 – \_\_\_\_ (b) = \_\_\_\_ (c) (if no Xs are circled, function score = total of columns)

Function Score = \_\_\_\_ (a) ÷ \_\_\_\_ (c) = \_\_\_\_ × 60 \_\_\_\_ /60

Leggin BG, Michener, LA, et al. The Penn Shoulder Score: reliability and validity. *JOSPT*. 36 (3): 138-151.