



# HARVARD MEDICAL SCHOOL AND BRIGHAM AND WOMEN'S HOSPITAL

## Return to Throwing Program

The intent of these guidelines is to provide the athlete with a framework for return to throwing following injury. These guidelines should not take the place of medical advice. If an athlete requires assistance in the progression of a return to sport program they should consult with their primary care sports medicine physician, surgeon, or physical therapist.

These guidelines are based on a modified program from:

*Reinold, M. Wilk, K. Reed, J. Crenshaw, K. Andrews, JR. Interval Sport Programs: Guidelines for Baseball, Tennis, and Golf. Journal of Orthopedic & Sports Physical Therapy. 32(6): 293- 298.*

### Rehabilitation Program

M/W/F	Tu/Th/Sat	Sun
<ul style="list-style-type: none"> <li>• Throwers Ten UE Strengthening Program</li> </ul>	<ul style="list-style-type: none"> <li>• LE Strengthening</li> </ul>	<ul style="list-style-type: none"> <li>• Light ROM</li> </ul>
<ul style="list-style-type: none"> <li>• Plyometrics</li> <li>• Control Drills</li> <li>• Stretching</li> </ul>	<ul style="list-style-type: none"> <li>• Cardiovascular</li> <li>• Core Stability</li> <li>• Stretching</li> </ul>	<ul style="list-style-type: none"> <li>• Stretching</li> </ul>
<ul style="list-style-type: none"> <li>• Sport Specific Program</li> </ul>	<ul style="list-style-type: none"> <li>• Rotator Cuff &amp; Scapular Strengthening</li> </ul>	

### Throwing Sport Specific Program:

- **During warm-up, it is very important to use heat prior to stretching (e.g., hot pack, whirlpool, hot shower, etc.)**
- **Perform stretching exercises after applying the heat modality and then proceed with the throwing program**
- **Throw on line, sub maximal, pain free / comfort zone**
- **Pay attention to mechanics to avoid re-injury**
- **Use ice after throwing to decrease the inflammatory response**

**Criteria for progression to the next level:**

- **No pain or stiffness when throwing**
- **No pain or stiffness after throwing**
- **All throwing should be effortless motion**
- **Every other day – may go to every 3<sup>rd</sup> day if fatigue/soreness persists**
- **Satisfactory response following 3 days of activity at each level**

**45 FEET:**

- First day
  - Warm-up throws at 20-45 feet
  - 25 throws at 45 feet – 1 set only
  - Warm-down throws
  - Rest next day
- Level 2
  - Warm-up throws at 20-45 feet
  - 25 throws at 45 feet – 2 sets
  - Rest 10 minutes between sets
  - Warm-down throws
  - Throw on alternate days

**60 FEET:**

- Level 1
  - Warm-up throws at 20-60 feet
  - 25 throws at 60 feet – 2 sets
  - Rest 10 minutes between sets
  - Warm-down throws
  - Throw on alternate days
- Level 2
  - Warm-up throws at 20-60 feet
  - 25 throws at 60 feet – 2 sets
  - Rest 5-10 minutes between sets
  - Warm-down throws
  - Throw on alternate days

**90 FEET:**

- Level 1
  - Light warm-up throws at 20-90 feet
  - 25 throws at 90 feet – 2 sets
  - Rest 10 minutes between sets
  - Warm-down throws
  - Throw on alternate days
- Level 2
  - Light warm-up throws at 20-90 feet

- 25 throws at 90 feet – 2 sets
- Rest 5-10 minutes between sets
- Warm-down throws
- Throw on alternate days

### **105 FEET:**

- Level 1
  - Warm-up throws at 20-105 feet
  - 25 throws at 105 feet – 2 sets
  - Rest 10 minutes between sets
  - Warm-down throws
  - Throw on alternate days
- Level 2
  - Warm-up throws at 20-105 feet
  - 25 throws at 105 feet – 2 sets
  - Rest 5-10 minutes between sets
  - Warm-down throws
  - Throw on alternate days

### **120 FEET**

- Level 1
  - Warm-up throws at 20-120 feet
  - Throws at 120 feet (25 throws)
  - Rest 10 minutes between sets
  - Warm-down throws
  - Throw on alternate days
  - 10 minute toss on off day
- Level 2
  - Warm-up throws at 20-120 feet
  - Throws at 120 feet (25 throws)
  - Rest 5-10 minutes between sets
  - Warm-down throws
  - Begin flat ground pitching at 45 feet
  - Throw on alternate days
  - 10-minute toss on off day

## **MOUND PROGRAM:**

Fast Ball (FB), Change (CH), Breaking Ball (BrB), Bullpen/Batting Practice (BP)

- Level 1** Warm-up throws at 20-120 feet  
1 set throws at 120 feet - 25 throws  
Rest 10 minutes  
Throw from mount (FB only) - 25 throws  
50 foot throws – move catcher forward  
Warm-down throws  
Throw on alternate days  
10 minute toss on off day  
Rotate as follows: Thr/Off/Thr/Off/Off/Thr/Off/Thr/Off/Off
- Level 2** Warm-up throws at 20-120 feet  
1 set throws at 120 feet - 25 throws  
Rest 10 minutes  
Throw from mount (FB, CH: 1 of 5 CH) - 35 throws  
55 foot throw – move catcher forward  
Warm-down throws  
Throw on alternate days  
10 minute toss on off day  
Rotate as follows: Thr/Off/Thr/Off/Off/Thr/Off/Thr/Off/Off
- Level 3** Warm-up throws at 20-120 feet  
1 set throws at 120 feet - 25 throws  
Rest 10 minutes  
Throw from mount (FB, CH: 1 of 5 CH) - 40 throws  
55 foot throw – move catcher forward  
Warm-down throws  
Throw on alternate days  
10 minute toss on off day  
Rotate as follows: Thr/Off/Thr/Off/Off/Thr/Off/Thr/Off/Off
- Level 4** Routine warm-up  
Short Bullpen (1 of 5 BrB)  
Routine warm-down  
10 minute toss on off day  
Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off
- Level 5** Routine warm-up  
Short Bullpen (1 of 5 BrB)  
Routine warm-down  
10 minute toss on off day  
Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off

- Level 6** Routine warm-up  
Full Bullpen  
Routine warm-down  
10 minute toss on off-day  
Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off
- Level 7** Routine warm-up  
Short Batting Practice  
Routine warm-down  
10 minute toss on off-day  
Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off
- Level 8** Routine warm-up  
Short Batting Practice  
Routine warm-down  
10 minute toss on off-day  
Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off
- Level 9** Routine warm-up  
Batting Practice/Simulated Game  
Routine warm-down  
10 minute toss on off-day  
Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off
- Level 10** Routine Pre-game warm-up  
Pitch in game (40 pitch count)  
1-2 Innings Routine Post-game warm-down  
Increase pitch count and innings based on progress

