

Ohio State Sports Medicine

Upper Extremity Rehabilitation: Medium Return to Throwing

Use – Medical diagnosis such as:

- Little League elbow and shoulder
- Conservative UCL strain
- Rotator Cuff strain, SLAP irritation
- Posterior impingement,
- Lower extremity sprain/strain,
- Lat/teres strain
- Players who have been held from throwing for longer than 4 weeks

Duration

- 4 weeks for position players
- 8 week for pitchers

Guidelines

- Throw every other day
- Proper mechanics must be utilized at all times
- If fatigue sets in during session need to stop
- If pain sets in during session need to stop and contact medical team member
- Normal diffuse muscle soreness after throwing session is acceptable and to be expected
- Resistance training program performed on rest days not on same day of throwing session

Criteria for ITP

- Successful completion rehabilitation program
- Non painful ROM
- Total Range Of Motion (ER + IR at 90 Abduction) within 5 degrees of non-dominant arm
- Satisfactory clinical exam
- ER/IR strength ratio: 65-75% isokinetic OR 80% of non-dominant with HHD testing
- Functional Testing Options:
 - Ball drop test: 90% or above dom/nondom ratio
 - UE Y-balance: 88 or above
 - CKC UE Test: 30 or above
 - Single arm seated shot put 6# ball: 10% or less difference dominant v. non-dominant



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Throwing Progression

- Throw Every Other Day

Workout	Throwing Distance	Position Players	Pitchers
1	To 60'	15 throws at 45' 15 throws at 60'	15 throws at 45' 15 throws at 60'
2	To 60'	20 throws at 45' 20 throws at 60'	20 throws at 45' 20 throws at 60'
3	To 75'	15 throws at 45' 15 throws at 60' 15 throws at 75'	15 throws at 45' 15 throws at 60' 15 throws at 75'
4	To 75'	15 throws at 60' 15 throws at 75' 15 throws at 75'	15 throws at 60' 15 throws at 75' 15 throws at 75'
5	To 90'	15 throws at 60' 15 throws at 75' 15 throws at 90'	15 throws at 60' 15 throws at 75' 15 throws at 90'
6	To 90'	15 throws at 75' 15 throws at 75' 15 throws at 90'	15 throws at 75' 15 throws at 75' 15 throws at 90'
7	To 90'	15 throws at 75' 15 throws at 90' 15 throws at 90'	15 throws at 75' 15 throws at 90' 15 throws at 90'
8	To 105'	15 throws at 90' 10 throws at 105' 10 throws at 105'	15 throws at 90' 10 throws at 105' 10 throws at 105'
9	To 105'	15 throws at 90' 15 throws at 105' 10 throws at 105'	15 throws at 90' 15 throws at 105' 10 throws at 105'
10	To 120'	15 throws at 90' 10 throws at 105' 10 throws at 120'	15 throws at 90' 10 throws at 105' 10 throws at 120'
11	To 120'	10 throws at 105' 10 throws at 120' 10 throws at 120'	10 throws at 105' 10 throws at 120' 15 flatground
12	To 120' Max at 150'	10 throws at 120' 10 throws at 120' 10 throws at 150'	10 throws at 120' 10 throws at 120' 15 flatground
13	To 120' Max at 150'	10 throws at 120' 10 throws at 120' 10 throws at 150'	10 throws at 120' 15 flatgrounds 15 flatgrounds



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Mound Work

- Warm-up throwing to 120' using proper mechanic and crow-hop
- 2 mound sessions per week (2-3 days in between)

Workout	Pitches
1	30 pitches (15 at 50%, rest 5 min, 15 at 50%)
2	30 pitches (15 at 50%, rest 5 min, 15 at 75%)
3	30 pitches (15 at 75%, rest 5 min, 15 at 75%)
4	30 pitches (15 at 75%, rest 5 min, 15 at full speed)
5	30 pitches (15 at 75%, rest 5 min, 15 at 75%) 15 pitches at full speed start to mix-in off-speed (every 5 th pitch)
6	15 pitches at 75% 30 pitches at full speed (15, rest 5 min, 15) Still mixing in off-speed
7	15 pitches at 75% 30 pitches at full speed (15, rest 5 min, 15) 15 pitches at 75%
8	45-60 pitches at full speed (dependent on timeline for return to competitive play)

References

1. Axe, M., Hurd, W., & Snyder-Mackler, L. (2009). Data-Based Interval Throwing Programs for Baseball Players.
2. Chang, E. S., Bishop, M. E., Baker, D., & West, R. V. (2016). Interval Throwing and Hitting Programs in Baseball: Biomechanics and Rehabilitation. American Journal Of Orthopedics (Belle Mead, N.J.), 45(3), 157–162.
3. Sgroi, T. A., & Zajac, J. M. (2018). Return to Throwing after Shoulder or Elbow Injury.

