

Ohio State Sports Medicine

Upper Extremity Rehabilitation: Long Return to Throwing

Use

- Medical diagnosis such as: Post-operative shoulder and elbow cases (i.e. SLAP repair, UCL reconstruction, anterior and posterior stabilization, rotator cuff repair)
 - Each phase of throwing progression 3 times before moving on
- Players who have been held from throwing longer than 12 weeks

Guidelines

- Follow post-operative protocols along with clinical judgement to determine appropriate time to initiate return to throwing program
- Complete each phase 2 times for non-surgical patients
- Complete each phase 3 times for surgical patients
- 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



Throwing Progression: Throw Every Other Day

Workout	Throwing Distance	Position Players	Pitchers
Week 1	To 45'	25 throws	25 throws
Week 2	To 45'	25 throws 25 throws	25 throws 25 throws
Week 3	To 60'	25 throws	25 throws
Week 4	To 60'	25 throws 25 throws	25 throws 25 throws
Week 5	To 60'	25 throws 25 throws 25 throws	25 throws 25 throws 25 throws
Week 6	To 90'	25 throws	25 throws
Week 7	To 90'	25 throws 25 throws	25 throws 25 throws
Week 8	To 90'	25 throws 25 throws 25 throws	25 throws 25 throws 25 throws
Week 9	To 120'	25 throws	25 throws
Week 10	To 120'	25 throws 25 throws	25 throws 25 throws
Week 11	To 120'	25 throws 25 throws 25 throws	25 throws 25 throws 25 throws
Week 12	To 120', max at 150'	25 throws	25 throws
Week 13	To 120', max at 150'	25 throws 25 throws	25 throws 15 flatground at 60'
Week 14		25 at 150' infielders 25 at 180' outfielders	25 throws at 120-150' 25 throws at 120-150'
Week 15		2x25 at 150' infielders 2x25 at 180' outfielders	25 throws at 120-150' 25 throws at 120-150'



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
Week 1	Flatground: 25 pitches at 50%
Week 2	Flatground: 25 pitches at 50%, rest, 25 pitches at 50%
Week 3	Mound: 25 pitches at 50%
Week 4	Mound: 25 pitches at 50%, rest, 25 pitches at 50%
Week 5	Mound: 20 pitches at 50%, rest, 15 pitches at 75%, 20 pitches at 50%
Week 6	Mound: 15 pitches at 50%, rest, 20 pitches at 75%, rest, 20 pitches at 75%
Week 7	Mound: 20 pitches at 75%, rest, 20 pitches at full speed, rest, 20 pitches at full speed Every 5 th pitch off-speed
Week 8	Mound: 3 sets of 20 pitches at full speed Every 5 th pitch off-speed
Week 9	Mound: 5 sets of 15 at full speed Every 5 th pitch off-speed
Week 10	Mound: 5 sets of 15 at full speed Variable pitch sequence
Week 11	Mound: batting practice to live hitters 15-20 pitches then rest Max at 75 pitches
Week 12	Simulated game

