Keith Meister, MDSports Medicine / Arthroscopy Head Team Physician Texas Rangers

SPORTS MEDICINE

Texas Metroplex Institute
for Sports Medicine & Orthopedics

Shane Seroyer, MD Sports Medicine / Arthroscopy Joint Replacement

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Post-Operative UCL Interval Hitting and Throwing Program for Position Players

If you want to throw hard and throw accurately you must throw hard and throw repeatedly. However, your shoulder and arm must have time to gradually adapt to the throwing you will do. Progressing too rapidly in the throwing program will DELAY your recovery and return to sport.

Always pay careful attention to your throwing motion and mechanics:

Use a gathering step to initiate your throwing motion on all "long toss" throws,

Use four-seam grip to allow better view of ball rotation,

Stay on top of the ball and throw over the top,

Keep your elbow at or above shoulder level,

Avoid trunk extension or shoulder dip causing high arc on throws,

Use your legs, and follow through with your arm and trunk.

Emphasize your follow through during early phases of the throwing program to promote good habits.

Throw to the target and not through the target at each specified distance.

Throwing with a qualified coach will improve your ability to progress in the throwing program. Videotape your throwing workout at least once a week to analyze your throwing motion / mechanics and your progress.

You must meet the following criteria to move to the next level:

- No pain or stiffness while throwing,
- No pain or stiffness after throwing (mild muscle soreness acceptable),
- Submaximal and fundamentally sound throwing motion / mechanics,
- Good throwing accuracy throughout the current level,
- Throws are consistently on line,
- Good Strength throughout the current level with little fatigue.

Continue your upper trunk, scapula and rotator cuff rehabilitation program throughout the throwing program.

The throwing program is a guide that should be <u>adapted or modified</u> to meet your individual progress and problems. <u>Anticipate throwing every other day for three days at each throwing level</u>. However, if you are having any problems at a given level, remain at that level or return to the previous level until the problem resolves. Do not hesitate to take an extra day(s) off if you are having problems. Notify your physician, athletic trainer, or physical therapist if your problem does not resolve.

Rehab and shoulder exercise should now only be performed on the specified throwing days. Recovery is an integral part of a successful throwing program. We will use the off days as recovery for the shoulder and arm. It is ok to use light tubing or a cuff program as a daily warm-up but it should not be used as a strengthening exercise on off throwing days. Please take advantage of the non-throwing days to train balance, proprioception, core and the lower body.

Warm Up:

Jogging, jump rope etc. to increase blood flow to muscles. Once a light sweat has developed you can move on to a full body stretch.

Stretch:

Incorporate a full body stretch daily to maintain muscular balance and avoid future muscular injury.

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RETURN TO HITTING

6 Months Post-Op: (Initiate dry swings 1 week prior MWF at 15/20/25)

Week 1: Tee work MWF at 15/20/25

Week 2: Tee work (M-F) x 25; soft toss MWF 10/15/20

Week 3: Tee work warm-up; soft toss M/T 15/20 and TH/F 20/25

Week 4: Tee warm-up; soft toss not to exceed 75 swings

Week 5: Tee & soft toss warm-up; BP MWF 60 swings max

Week 6: Tee/soft toss; Daily BP 75 swings max

Week 7: Tee/soft toss; Daily BP 75 swings max

Week 8: Tee/soft toss; Daily BP hitting coaches discretion

RETURN TO PLAY CRITERIA

DH in rehab game: 8 months.

Progressive rehab game recommendations:

Week 1: 2-3 games (based on positional activity)

Week 2: 3-5 games (based on positional activity)

Week 3: 5+ games Week 4: 6 games

1st Base: Rehab games at 9 months. Return to regular game at 10 months.

3rd Base/Short Stop: Rehab games at 10 months. Return to regular game at 11 months.

Integrate infield throws when throwing program is complete

Integrate footwork with throwing program (ball on ground) when returning to shorter distances after 8 weeks into throwing program.

Footwork with underhand flips are started after 2 weeks of throwing program is completed.

2nd Base/Outfield/Catchers: Rehab games at 11 months. Return to regular games at 12 months.

2nd Base integrate infield throws when throwing program is complete

Initiate footwork with throwing (ball on ground) when returning to shorter distances at 8 weeks into throwing program.

<u>Outfielders</u> progress with 180 ft interval throwing program and integrate outfield throws into throwing program with progressive cut-off distances

<u>Catchers</u> progress to throws from home plate to cut of grass at end of throwing program x 2 weeks before throws to 2nd base. Catchers' footwork with throws can be integrated with gradual progression and shortened distance after 120 ft phase has been completed.

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WEEKS 1-6	WEEK 2	WEEK 2-3	WEEK 4	WEEK 6
Restore full ROM initiate grip strength	initiate isometric shoulder program and scapular stabilization program	initiate cardio work when wounds are closed, initiate lower body work using no upper extremity (body weight circuits, abdominal work (no upper extremity)	initiate progressive isotonic shoulder program with no valgus stress	initiate light forearm strengthening (manual resistance for control), initiate PRI program
WEEK 6-12	WEEK 12-16	WEEK 17	WEEK 18	WEEK 19
continue with progressive lower body, cardio, core and arm care, addition of forearm dumbbells and rice at week 10	initiate low- level upper body workouts (tubing program)	initiate sock drills, 2 hand plyometric work, and ball flips (prone and forearm on alternate days)	initiate one hand plyometrics, initiate body blade work	begin doing week 17 and 18 workouts daily

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20 Weeks Post-op

Week 1 Throwing (60 ft. phase)

Day 1	20 throws at 45 ft 15 throws at 60 ft 10 throws at 45 ft
Day 2	No Throwing
Day 3	20 throws at 45 ft 20 throws at 60 ft 10 throws at 45 ft
Day 4	No Throwing
Day 5	20 throws at 45 ft 25 throws at 60 ft 10 throws at 45 ft
Day 6/7	No Throwing

21 Weeks Post-op

Week 2 Throwing (60 ft. phase)

Day 1	20 throws at 45 ft 20 throws at 60 ft 10 throws at 45 ft
Day 2	No Throwing
Day 3	20 throws at 45 ft 25 throws at 60 ft 10 throws at 45 ft.
Day 4	No Throwing
Day 5	20 throws at 45 ft 30 throws at 60 ft 10 throws at 45 ft
Day 6/7	No Throwing

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22 Weeks Post-op

Week 3 Throwing (60 ft. phase)

Day 1	10 throws at 45 ft 25 throws at 60 ft 10 throws at 45 ft
Day 2	No Throwing
Day 3	10 throws at 45 ft 30 throws at 60 ft 10 throws at 45 ft
Day 4	No Throwing
Day 5	10 throws at 45 ft 35 throws at 60 ft 10 throws at 45 ft
Day 6/7	No Throwing

23 Weeks Post-op

Day 1

Week 4 Throwing (60 ft. phase)

, -	25 throws at 60 ft 10 throws at 45 ft
Day 2	No Throwing
Day 3	20 throws at 45 ft 30 throws at 60 ft 10 throws at 45 ft
Day 4	No Throwing
Day 5	20 throws 45 ft - 60 ft 15 throws at 75 ft 10 throrws at 60 ft - 45 ft
Day 6/7	No Throwing

20 throws at 45 ft

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24 Weeks Post-op

Week 5 Throwing (75 ft. phase)

Day 1	15 throws 45 ft – 60 ft 25 throws at 75 ft. 10 throws 60 ft – 45 ft
Day 2	No Throwing
Day 3	10 throws 45 ft – 60 ft 25 throws at 75 ft 20 throws at 60 ft – 45 ft
Day 4	No Throwing
Day 5	20 throws 45 ft – 60 ft 30 throws at 75 ft 15 throws at 60 ft – 45 ft

No Throwing

25 Weeks Post-op

Day 6/7

Week 6 Throwing (75 ft. phase)

Day 1	20 throws at 45 ft – 60 ft 25 throws at 75 ft 10 throws at 60 ft – 45 ft
Day 2	No Throwing
Day 3	20 throws at 45 ft – 60 ft 30 throws at 75 ft 15 throws at 60 ft – 45 ft
Day 4	No Throwing
Day 5	15 throws 45 ft – 75 ft 15 throws at 90 ft 25 throws at 75 ft – 45 ft
Day 6/7	No Throwing

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26 Weeks Post-op

Week 7 Throwing (90 ft. phase)

Day 1	20 throws 60 ft - 75 ft 20 throws at 90 ft 20 throws 75 ft - 60 ft
Day 2	No Throwing
Day 3	20 throws 60 ft - 75 ft 25 throws at 90 ft 15 throws 75 ft - 60 ft
Day 4	No Throwing
Day 5	20 throws at 60 ft – 75 ft 30 throws at 90 ft 15 throws at 75 ft – 60 ft

No Throwing

27 Weeks Post-op

Day 6/7

Week 8 Throwing (90 ft. phase)

Day 1	20 throws 60 ft – 75 ft 25 throws at 90 ft 20 throws 75 ft – 60 ft
Day 2	No Throwing
Day 3	20 throws 60 ft – 75 ft 30 throws at 90 ft 15 throws 75 ft – 60 ft
Day 4	No Throwing
Day 5	20 throws 60 ft – 75 ft 35 throws at 90 ft 15 throws at 75 ft – 60 ft
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Day 6	Light catch out to 75 ft

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28 Weeks Post-op

Week 9 Throwing (105 ft. phase)+ Intro to daily throwing

Day 1	20 throws 60 ft – 75 ft
-	20 throws at 90 ft
	10 throws at 105 ft
	15 throws 90 ft – 60 ft

Day 2 Light catch to 75 ft

Day 3	20 throws 60 ft – 75 ft
	20 throws at 90 ft
	15 throws at 105 ft
	15 throws 90 ft – 60 ft

Day 4 Light catch to 75 ft

15 throws 60 ft – 75 ft
20 throws at 90 ft
20 throws at 105 ft
10 throws at 90 ft -60 ft

Day 6 Light catch to 75 ft

Day 7 **No throwing**

29 Weeks Post-op

Day 7

Week 10 Throwing (105 ft. phase)

Day 1	20 throws 60 ft – 75 ft 20 throws at 90 ft 20 throws at 105 ft 15 throws 90 ft – 60 ft
Day 2	Light catch to 75 ft
Day 3	20 throws 60 ft – 75 ft 15 throws at 90 ft 25 throws at 105 ft 15 throws 90 ft – 60 ft
Day 4	Light catch to 75 ft
Day 5	20 throws 60 ft – 75 ft 20 throws at 90 ft 30 throws at 105 ft 15 throws 90 ft – 60 ft
Day 6	Light catch to 75 ft

No throwing

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30 Weeks Post-op

Week 11 Throwing (105 ft – 120 ft phase)

Day 1	25 throws 60 ft – 90 ft 30 throws at 105 ft 10 throws 90 ft – 60 ft
Day 2	Light catch to 75 ft
Day 3	25 throws 60 ft – 90 ft 30 throws at 105 ft 10 throws 90 ft – 60 ft
Day 4	Light catch to 75 ft
Day 5	25 throws 60 ft- 90 ft 10 throws at 105 ft 10 throws at 120 ft 10 throws 90 ft - 60 ft
Day 6	Light catch to 75 ft
Day 7	No Throwing

31 Weeks Post-op

Week 12 Throwing (120 ft. phase)

Day 1	15 throws 60 ft – 90 ft 10 throws at 105 ft 15 throws at 120 ft 10 throws 105 ft – 60 ft
Day 2	Light catch to 75 ft
Day 3	15 throws 60 ft – 90 ft 10 throws at 105 ft 20 throws at 120 ft 10 throws 105 ft – 60 ft
Day 4	Light catch to 75 ft
Day 5	15 throws 60 ft – 90 ft 10 throws at 105 ft 25 throws at 120 ft 10 throws 105 ft – 60 ft
Day 6	Light catch to 75 ft
Day 7	No Throwing

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32 Weeks Post-op

Week 13 Throwing (120 ft. phase)

May progress to play as DH in rehab games

Day 1 25 throws 60 ft - 90 ft 10 throws at 105 ft 15 throws at 120 ft 10 throws 105 ft - 60 ft

Day 2 Light catch to 75 ft

Day 3 25 throws 60 ft - 90 ft 10 throws at 105 ft 20 throws at 120 ft 10 throws at 105 ft - 60 ft

Day 4 Light catch to 75 ft

Day 5 25 throws 60 ft - 90 ft 10 throws at 105 ft 25 throws at 120 ft

10 throws 90 ft - 60 ft

Day 6 Light catch to 75 ft

No Throwing Day 7

33 Weeks Post-op

Day 5

Week 14 Throwing (135 ft phase)

Day 1 10 throws 60 ft - 90 ft 15 throws at 105 ft - 120 ft

10 throws at 135 ft 20 throws 120 ft - 60 ft

Day 2 Light catch to 75 ft

Day 3 10 throws 60 ft - 90 ft

15 throws at 105 ft - 120 ft

15 throws at 135 ft 20 throws at 120 ft - 60 ft

Day 4 Light catch to 75 ft

> 10 throws 60 ft - 90 ft 15 throws at 105 ft – 120 ft

20 throws at 135 ft 20 throws 120 ft - 60 ft

Day 6 Light catch to 75 ft

Day 7 Light catch or off

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34 Weeks Post-op

Week 15 Throwing (135 ft phase)

Day 1 10 throws 60 ft - 90 ft 15 throws at 105 ft - 120 ft 10 throws at 135 ft 20 throws 120 ft - 60 ft

Day 2 Light catch to 75 ft

Day 3 10 throws 60 ft – 90 ft 15 throws at 105 ft – 120 ft 15 throws at 135 ft 20 throws at 120 ft – 60 ft

Day 4 Light catch to 75 ft

Day 5 10 throws 60 ft – 90 ft 15 throws at 105 ft – 120 ft 20 throws at 135 ft 20 throws 120 ft – 60 ft

Day 6 Light catch to 75 ft

Day 7 Light catch or off

35 Weeks Post-op

Week 16 Throwing (150 phase)

Day 1	25 warm-up throws out to 120 ft
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Day 1 10 throws 60 ft - 90 ft 15 throws at 105 ft - 120 ft 15 throws at 135 ft 10 throws at 150 ft 10 throws 120 ft - 60 ft

Day 2 Light catch no farther than 90 ft

Day 3 10 throws 60 ft – 90 ft 15 throws at 105 ft – 120 ft

10 throws at 135 ft 15 throws at 150 ft 10 throws at 120 ft – 60 ft

Day 4 Light catch no farther than 90 ft

Day 5 10 throws 60 ft - 90 ft

15 throws at 105 ft - 120 ft

10 throws at 135 ft 20 throws at 150 ft 10 throws at 120 ft – 60 ft

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Day 6 Light catch no farther than 90 ft

Day 7 Light catch or off

36 Weeks Post-op

May progress to rehab games playing First Base at 9 months post-op

THROWING PROGRAM WILL DEVIATE BASED ON POSITION HERE PLEASE PROGRES WITH CORRESPONDING POSITION SPECIFIC THROWING PROGRAM (catcher, 3B, SS, 2B, OF)