

Shane Seroyer, MD Sports Medicine / Arthroscopy Joint Replacement

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# Post-Op UCL Throwing Program for Pitchers

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 heal and adapt to the imposed demand. Progression too rapidly in the throwing program will DELAY your recovery and return to sport.

Always pay careful attention to your throwing motion / mechanics:

- -Use a gathering step to initiate your throwing motion on all "long toss" throws,
- -Use a 4 seam grip to allow better view of ball rotation,
- -Stay on top of the ball,
- -Throw over the top,
- -Keep your elbow at or above shoulder level,
- -Avoid trunk extension or shoulder dip (causes high arc on throws),
- -Use your legs,
- -Follow through with your arm and trunk. Emphasize your follow through in the early part of the throwing program to promote good mechanics.

Throw on line, but throw with sub-maximal effort and throw within your comfort level. If you cannot throw on line at a given distance, do not lob the ball in an attempt to move to the next level. Example: At 90 feet, the arc or the path of the ball should not carry the ball higher than approximately ten feet.

Throwing with a qualified coach or pitching instructor 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:

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

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

The interval 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 your problem is corrected or resolves. Do not hesitate to take an extra day or two off if you are having problems. If your problems do not resolve, see your athletic trainer or doctor.

Rehab and shoulder exercise should now only be performed on the specified throwing days. Recovery is an integral portion 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 an exercise on the off days. Please take advantage of the non-throwing days to train balance, proprioception, core and the lower body.

# 16 Weeks Post-op (or as directed by your Physician / Therapist)

#### Week 1 Throwing (45 ft. phase)

Day 1 Warm-up throws (under 45 ft)

25 Throws at 45 feet

Warm-down throws (5-10 throw max)

1 Set only / Rest the next day

Day 2 **No Throwing** 

Day 3 Warm-up throws (under 45 ft)

25 Throws at 45 feet

Warm-down throws (5-10 throw max)

1 Set only / Rest the next day

Day 4 **No Throwing** 

Day 5 Warm-up throws (under 45 ft)

25 Throws at 45 feet

Warm-down throws (5-10 throw max) 1 Set only / Rest the next 2 days

Day 6 **No Throwing** 

Day 7 **No Throwing** 

17 Weeks Post-op

#### Week 2 Throwing (45 ft. phase)

Day 1 Warm-up throws (under 45 ft)

2 sets of 25 Throws at 45 feet (rest 5 minutes between sets)

Warm-down throws (5-10 throw max)

Rest the next day

Day 2 **No Throwing** 

Day 3 Warm-up throws (under 45 ft)

2 sets of 25 Throws at 45 feet (rest 5 minutes between sets)

Warm-down throws (5-10 throw max)

Rest the next day

Day 4 **No Throwing** 

Day 5 Warm-up throws (under 45 ft)

2 sets of 25 Throws at 45 feet (rest 5 minutes between sets)

Warm-down throws (5-10 throw max)

Rest the next 2 days

Day 6 **No Throwing** 

Day 7 **No Throwing** 

18 Weeks Post-op	,
Week 3 Throwing Day 1	Warm-up throws (under 45 ft) 3 sets of 25 Throws at 45 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day
Day 2	No Throwing
Day 3	Warm-up throws (under 45 ft) 3 sets of 25 Throws at 45 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day
Day 4	No Throwing
Day 5	Warm-up throws (under 45 ft) 3 sets of 25 Throws at 45 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next 2 days
Day 6	No Throwing
Day 7	No Throwing
19 Weeks Post-op Week 4 Throwing	
Day 1	Warm-up throws (under 60 ft) 1 set of 25 throws at 60 feet Warm-down throws (5-10 throw max) 1 Set only / Rest the next day
Day 2	No Throwing
Day 3	Warm-up throws (under 60 ft) 1 set of 25 throws at 60 feet Warm-down throws (5-10 throw max) 1 Set only / Rest the next day
Day 4	No Throwing
Day 5	Warm-up throws (under 60 ft) 1 set of 25 throws at 60 feet Warm-down throws (5-10 throw max)

1 Set only / Rest the next day

No Throwing

No Throwing

Day 6

Day 7

Day 7

No Throwing

20 Weeks Post-op	
Week 5 Throwing	(60 ft. phase)
Day 1	Warm-up throws (under 60 ft) 2 sets of 25 Throws at 60 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day
Day 2	No Throwing
Day 3	Warm-up throws (under 60 ft) 2 sets of 25 Throws at 60 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day
Day 4	No Throwing
Day 5	Warm-up throws (under 60 ft) 2 sets of 25 Throws at 60 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next 2 days
Day 6	No Throwing
Day 7 21 Weeks Post-op	No Throwing
Week 6 Throwing	(60 ft nhase)
Day 1	Warm-up throws (under 60 ft) 3 sets of 25 Throws at 60 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day
Day 2	No Throwing
Day 3	Warm-up throws (under 60 ft) 3 sets of 25 Throws at 60 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day
Day 4	No Throwing
Day 5	Warm-up throws (under 60 ft) 3 sets of 25 Throws at 60 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next 2 days
Day 6	No Throwing

# 22 Weeks Post-on

22 Weeks Post-op	
Week 7 Throwing	(75 ft. phase)
Day 1	Warm-up throws (under 75 ft) 2 sets of 25 Throws at 75 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day
Day 2	No Throwing
Day 3	Warm-up throws (under 75 ft) 2 sets of 25 Throws at 75 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day
Day 4	No Throwing
Day 5	Warm-up throws (under 75 ft) 2 sets of 25 Throws at 75 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next 2 days
Day 6	No Throwing
Day 7	No Throwing
23 Weeks Post-op	(75 %)
Week 8 Throwing  Day 1	Warm-up throws (under 75 ft) 3 sets of 25 Throws at 75 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day
Day 2	
Day 2	No Throwing
Day 3	No Throwing  Warm-up throws (under 75 ft) 3 sets of 25 Throws at 75 feet (rest 5 minutes between sets)  Warm-down throws (5-10 throw max)  Rest the next day
•	Warm-up throws (under 75 ft) 3 sets of 25 Throws at 75 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max)
Day 3	Warm-up throws (under 75 ft) 3 sets of 25 Throws at 75 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day

Day 7 **No Throwing** 

#### 24 Weeks Post-op Week 9 Throwing (90 ft. phase) Warm-up throws (under 90 ft) Day 1 2 sets of 25 Throws at 90 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day Day 2 No Throwing Day 3 Warm-up throws (under 90 ft) 2 sets of 25 Throws at 90 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day No Throwing Day 4 Day 5 Warm-up throws (under 90 ft) 2 sets of 25 Throws at 90 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next 2 days Day 6 No Throwing Day 7 No Throwing 25 Weeks Post-op Week 10 Throwing (90 ft. phase) Warm-up throws (under 90 ft) Day 1 3 sets of 25 Throws at 90 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day Day 2 No Throwing Day 3 Warm-up throws (under 90 ft) 3 sets of 25 Throws at 90 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max) Rest the next day Day 4 No Throwing Day 5 Warm-up throws (under 90 ft) 3 sets of 25 Throws at 90 feet (rest 5 minutes between sets) Warm-down throws (5-10 throw max)

Rest the next 2 days

No Throwing

No Throwing

Day 6

Day 7

26	Weeks	Post-op	(Introduction	to down	nward n	lane)
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# Week 11 Throwing (105 ft. phase)

Day 1 Warm-up throws (under 105 ft)

25 Throws at 105 feet

End session with Flat Ground / Catcher down (10 throw max)

1 Set only / Rest the next day

Day 2 **No Throwing** 

Day 3 Warm-up throws (under 105 ft)

25 Throws at 105 feet

End session with Flat Ground / Catcher down (10 throw max)

1 Set only / Rest the next day

Day 4 Off

Day 5 Warm-up throws (under 105 ft)

25 Throws at 105 feet

End session with Flat Ground / Catcher down (10 throw max)

1 Set only / Rest the next 2 day

Day 6 **No Throwing** 

Day 7 **No Throwing** 

27 Weeks Post-op (Introduction of daily throwing)

# Week 12 Throwing (105 ft. phase)

Day 1 Warm-up throws (under 105 ft)

2 sets of 25 Throws at 105 feet (rest 5 minutes between sets) End session with Flat Ground / Catcher down (10 throw max))

Day 2 5 min throwing program (60 ft max) \* NO EXERCISE \*

Day 3 Warm-up throws (under 105 ft)

2 sets of 25 Throws at 105 feet (rest 5 minutes between sets) End session with Flat Ground / Catcher down (10 throw max)

Day 4 5 min throwing program (60 ft max) \* NO EXERCISE \*

Day 5 Warm-up throws (under 105 ft)

2 sets of 25 Throws at 105 feet (rest 5 minutes between sets) End session with Flat Ground / Catcher down (10 throw max)

Day 6 5 min throwing program (60 ft max)

Day 7 **No Throwing** 

28 Weeks Post-op

#### Week 13 Throwing (105 ft. phase)

Day 1 Warm-up throws (under 105 ft)

3 sets of 25 Throws at 105 feet (rest 5 minutes between sets) End session with Flat Ground / Catcher down (10 throw max)) Day 2 5 min throwing program (60 ft max) \* NO EXERCISE \*

Day 3 Warm-up throws (under 105 ft)

3 sets of 25 throws at 105 feet (rest 5 minutes between sets) End session with Flat Ground / Catcher down (10 throw max)

Day 4 5 min throwing program (60 ft max) \* NO EXERCISE \*

Day 5 Warm-up throws (under 105 ft)

3 sets of 25 Throws at 105 feet (rest 5 minutes between sets)

End session with **HALF MOUND**/ Catcher standing on plate (10 throw max)

Day 6 5 min throwing program (60 ft max)

Day 7 **No Throwing** 

29 Weeks Post-op

#### Week 14 Throwing (120 ft. phase)

Day 1 Warm-up throws (under 120 ft)

1 set of 25 throws at 120 feet (rest 5 minutes)

End session with Half Mound Catcher down on the plate (10-15 pitches)

Day 2 5 min throwing program (60 ft max) \* NO EXERCISE \*

Day 3 Warm-up throws (under 120 ft)

1 set of 25 throws at 120 feet (rest 5 minutes)

End session with Half Mound Catcher down on the plate (10-15 pitches)

Day 4 5 min throwing program (60 ft max) \* NO EXERCISE \*

Day 5 Warm-up throws (under 120 ft)

1 set of 25 throws at 120 feet (rest 5 minutes)

End session with Half Mound Catcher down on the plate (10-15 pitches)

Day 6 5 min throwing program (60 ft max)

Day 7 **No Throwing** 

30 Weeks Post-op

#### Week 15 Throwing (120 ft. phase)

Hat Drills: The Hat Drill Program is designed to improve your ability to throw flat or slightly down with better arm strength and throwing accuracy. Place a hat at 105 feet from your position. Your throwing partner is positioned behind the hat to catch the ball on one bounce. Your goal is to throw with effort, imagining that you are throwing through the chest of another throwing partner standing thirty feet in front of the hat. Attempt to hit the hat.

Day 1 Warm-up throws (under 120 ft)

1 set of 25 throws at 120 feet (rest 5 minutes)

1 Set of 25 throws @ a hat

End session with Half Mound Catcher down on the plate (10-15 pitches)

Day 2 5 min throwing program (60 ft max) \* NO EXERCISE \*

Day 3 Warm-up throws (under 120 ft) 1 set of 25 throws at 120 feet (rest 5 minutes) Set of 25 throws @ a hat 1 End session with Half Mound Catcher down on the plate (10-15 pitches) Day 4 5 min throwing program (60 ft max) \* NO EXERCISE \* Day 5 Warm-up throws (under 120 ft) 1 set of 25 throws at 120 feet (rest 5 minutes) Set of 25 throws @ a hat End session with Half Mound Catcher down on the plate (10-15 pitches) Day 6 5 min throwing program (60 ft max) \* NO EXERCISE \* Day 7 No Throwing 31 Weeks Post-op Week 16 Throwing (120 ft. phase) Day 1 10 Minute toss Warm-up 120 ft Half Mound with catcher full distance (20 pitches) Day 2 **10 min throwing program** \* NO EXERCISE \* Day 3 10 Minute toss Warm-up 120 ft Half Mound with catcher full distance (20 pitches) 10 min throwing program \* NO EXERCISE \* Day 4 Day 5 10 Minute toss Warm-up 120 ft Half Mound with catcher full distance (20 pitches) 10 min throwing program \* NO EXERCISE \* Day 6 Day 7 No Throwing

# 32 Weeks Post-op (mound progression)

# Week 17 Throwing

We will be throwing on a daily basis at this stage unless soreness or fatigue has occurred. The work days will still remain heavier on the days that you throw off the mound. The 10 min toss days are designed for recovery and to work on your mechanics. We will introduce throwing a change-up at this stage while you are playing catch but not from the mound. **Absolutely NO breaking pitches still**.

	os. We will introduce throwing a change-up at this stage while you blutely NO breaking pitches still.  10 Minute toss / Warm-up 120 ft Bullpen. Full distance 25 pitches
Day 2	10 min throwing program * NO EXERCISE *
Day 3	LIGHT WORK DAY 10 Minute toss / Warm-up Bullpen. Full distance <u>15 Pitches (work on mechanics)</u>
Day 4	10 min throwing program * NO EXERCISE *
Day 5	10 Minute toss / Warm-up 120 ft Bullpen. Full distance 25 pitches
Day 6	10 min throwing program * NO EXERCISE *
Day 7 33 Weeks Post-o	Light Toss op (mound progression)
Week 18 Throw	ing
Day 1	10 Minute toss / Warm-up 120 ft Bullpen. Full distance 35 pitches
Day 2	10 min throwing program * NO EXERCISE *
Day 3	LIGHT WORK DAY 10 Minute toss / Warm-up Bullpen. Full distance <u>15 Pitches (work on mechanics)</u>
Day 4	10 min throwing program * NO EXERCISE *
Day 5	10 Minute toss / Warm-up 120 ft Bullpen. Full distance 35 Pitches
Day 6	10 min throwing program * NO EXERCISE *
Day 7	Light Toss
	pp (mound progression)
Week 19 Throw	<u>ing</u>
Day 1	10 Minute toss / Warm-up 120 ft Bullpen. Full distance 45 pitches
Day 2	10 min throwing program * NO EXERCISE *
Day 3	LIGHT WORK DAY

10 Minute toss / Warm-up

	Bullpen. Full distance <u>15 Pitches (work on mechanics)</u>
Day 4	10 min throwing program * NO EXERCISE *
Day 5	10 Minute toss / Warm-up 120 ft Bullpen. Full distance 45 pitches
Day 6	10 min throwing program * NO EXERCISE *
Day 7	Light Toss
35 Weeks Post-op	o (mound progression)
Week 20 Throwing Day 1	10 Minute toss / Warm-up 120 ft Bullpen. Full distance 45 pitches with rest 10-15 Change-ups
Day 2	10 min throwing program * NO EXERCISE *
Day 3	LIGHT WORK DAY 10 Minute toss / Warm-up Bullpen. Full distance <u>15 Pitches (work on mechanics)</u>
Day 4	10 min throwing program * NO EXERCISE *
Day 5	10 Minute toss / Warm-up 120 ft Bullpen. Full distance 45 pitches with rest 10-15 Change-ups
Day 6	10 min throwing program * NO EXERCISE *
Day 7	Light Toss
36 Weeks Post-op	o (mound progression)
Week 21 Throwin	
Day 1	10 Minute toss / Warm-up 120 ft Bullpen. Full distance 55 pitches with rest 10-15 Change-ups
Day 2	10 min throwing program * NO EXERCISE *
Day 3	LIGHT WORK DAY 10 Minute toss / Warm-up Bullpen. Full distance <u>15 Pitches (work on mechanics)</u>
Day 4	10 min throwing program * NO EXERCISE *
Day 5	10 Minute toss / Warm-up 120 ft Bullpen. Full distance 55 pitches with rest 10-15 Change-ups
Day 6	10 min throwing program * NO EXERCISE *

Day 7 **Light Toss** Start throwing breaking pitch on the flat ground 37 Weeks Post-op (mound progression)

Day 1 10 Minute toss / Warm-up 120 ft

Bullpen. Full distance 55 pitches with rest 10-15 Change-ups / 5-8 Breaking Balls

Day 2 **10 min throwing program** \* NO EXERCISE \*

Day 3 LIGHT WORK DAY

10 Minute toss / Warm-up

Bullpen. Full distance 15 Pitches (work on mechanics)

Day 4 **10 min throwing program** \* NO EXERCISE \*

Day 5 10 Minute toss / Warm-up 120 ft

Bullpen. Full distance 35 pitches with rest 10-15 Change-ups / 5-8 Breaking Balls

Day 6 **10 min throwing program** \* NO EXERCISE \*

Day 7 **Light Toss** Start throwing breaking pitch on the flat ground 38 Weeks Post-op (Pitching Progression)

#### Week 23 Throwing

Day 1 10 Minute toss / Warm-up

1 Inning Live BP (15-20 pitches)

3 Breaking ball max

Day 2 **10 min throwing program** \* NO EXERCISE \*

Day 3 LIGHT WORK DAY

10 Minute toss / Warm-up

Towel drills

Day 4 **10 min throwing program** \* NO EXERCISE \*

Day 5 10 Minute toss / Warm-up

2 Innings Live BP (25-30 pitch max)

5 Breaking pitch max

Day 6 **10 min throwing program** \* NO EXERCISE \*

Day 7 **Light Toss** Start throwing breaking pitch on the flat ground 39 Weeks Post-op (Pitching Progression)

### Week 24 Throwing

Day 1 10 Minute toss / Warm-up

2 Inning Simulated Game (25-30 pitches)

5 Breaking ball max

Day 2	10 min throwing program * NO EXERCISE *
Day 3	LIGHT WORK DAY 10 Minute toss / Warm-up Towel drills
Day 4	10 min throwing program * NO EXERCISE *
Day 5	10 Minute toss / Warm-up 3 Innings Simulated Game (35-40 pitch max) 8 Breaking pitch max
Day 6	10 min throwing program * NO EXERCISE *
Day 7	<b>Light Toss</b> Start throwing breaking pitch on the flat ground

# 40 Weeks Post-op (Pitching Progression)

# Week 25 Throwing

This is where the programs will deviate. A starting pitcher will switch to his starting rotation plan. Pitch/Off/Bullpen/Bullpen/Off/Pitch. As a starter you are trying to build endurance as well as your pitch counts and innings. It is ok for both if it takes time before you return to an affiliate to pitch (we are not in a rush at this point). A reliever will begin pitching on a every other day basis and progress towards pitching on back to back days. "off" = 10 min toss at this point"

Day 1	10 Minute toss / Warm-up 2 Innings Live Game (35 pitch Max)
Day 2	10 min throwing program * NO EXERCISE *
Day 3	Starter = Bullpen Reliever = 1 inning in a game
Day 4	Starter = Light side Reliever = Off
Day 5	Starter = Off Reliever = Off
Day 6	Starter = 3 innings Live Game Reliever = 2 Innings Live Game
Day 7	Repeat cycle per pitching coach at this time