



Pitchers UCL Reconstructon - 12 Month Recovery Program

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 on line, but throw with sub-maximal effort and throw within your comfort level. **We insist that the velo guidelines at the bottom of this document are utilized. This is the best way to monitor intensity!** Throw to the target, and not through the target at each specified distance. If you cannot throw on line at a given distance or adhere to the velo guidelines, 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:

- 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 and meeting the velo ranges.
- 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 ***adapted or modified*** to meet your individual progress and problems. **Anticipate throwing every other day for three days at each throwing level.** 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 or Athletic Trainer if your problem is not resolved.

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.

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 12-18	WEEK 19	WEEK 21	6 months
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 2 hand plyometric work, and ball flips (prone and forearm on alternate days)	initiate one hand plyometrics, sock drills, initiate body blade work	Start Interval Throwing plan



6 months post op

Week 1 Throwing (45 ft. phase)

Day 1	Warm-up throws to 45 ft. 1 set of 25 throws at 45 feet Warm-down throws (5-10 throw max)
Day 2	No Throwing
Day 3	Warm-up throws to 45 ft. 1 set of 25 throws at 45 feet Warm-down throws (5-10 throw max)
Day 4	No Throwing
Day 5	Warm-up throws to 45 ft. 1 set of 25 throws at 45 feet Warm-down throws (5-10 throw max)
Day 6/7	No Throwing

Week 2 Throwing (60 ft. phase)

Day 1	Warm-up throws to 60 ft. 1 set of 25 throws at 60 ft. Warm-down throws (5-10 throw max)
Day 2	No Throwing
Day 3	Warm-up throws to 60 ft. 1 set of 25 throws at 60 ft. Warm-down throws (5-10 throw max)
Day 4	No Throwing
Day 5	Warm-up throws to 60 ft. 1 set of 25 throws at 60 ft. Warm-down throws (5-10 throw max)
Day 6/7	No Throwing



Week 3 Throwing (60 ft. phase)

- Day 1 Warm-up throws to 60 ft.
2 sets of 25 throws at 60 ft. (rest 5 minutes between sets)
Warm-down throws (5-10 throw max)
- Day 2 **No Throwing**
- Day 3 Warm-up throws to 60 ft.
2 sets of 25 Throws at 60 ft. (5 minute rest between set)
Warm-down throws (5-10 throw max)
- Day 4 **No Throwing**
- Day 5 Warm-up throws to 60 ft.
2 sets of 25 Throws at 60 ft. (5 minute rest between set)
Warm-down throws (5-10 throw max)
- Day 6/7 **No Throwing**

Week 4 Throwing (60 ft. phase)

- Day 1 Warm-up throws to 60 ft.
3 sets of 25 Throws at 60 ft. (5 minute rest between set)
Warm-down throws (5-10 throw max)
- Day 2 **No Throwing**
- Day 3 Warm-up throws to 60 ft.
3 sets of 25 throws at 60 ft. (5 minute rest between set)
Warm-down throws (5-10 throw max)
- Day 4 **No Throwing**
- Day 5 Warm-up throws to 60 ft.
3 sets of 25 throws at 60 ft. (5 minute rest between set)
Warm-down throws (5-10 throw max)
- Day 6/7 **No Throwing**



Week 5 Throwing (75 ft. phase)

- Day 1 Warm-up throws to 75 ft.
1 set of 25 throws at 75 ft.
Warm-down throws (5-10 throw max)
- Day 2 **No Throwing**
- Day 3 Warm-up throws to 75 ft.
1 set of 25 throws at 75 ft.
Warm-down throws (5-10 throw max)
- Day 4 **No Throwing**
- Day 5 Warm-up throws to 75 ft.
1 set of 25 throws at 75 ft.
Warm-down throws (5-10 throw max)
- Day 6/7 **No Throwing**

Week 6 Throwing (75 ft. phase)

- Day 1 Warm-up throws to 75 ft.
2 sets of 25 Throws at 75 ft. (5 minute rest between set)
Warm-down throws (5-10 throw max)
- Day 2 **No Throwing**
- Day 3 Warm-up throws to 75 ft.
2 sets of 25 Throws at 75 ft. (5 minute rest between set)
Warm-down throws (5-10 throw max)
- Day 4 **No Throwing**
- Day 5 Warm-up throws to 75 ft.
2 sets of 25 Throws at 75 ft. (5 minute rest between set)
Warm-down throws (5-10 throw max)
- Day 6/7 **No Throwing**



Week 7 Throwing (75 ft. phase)

Day 1	Warm-up throws to 75 ft. 3 sets of 25 Throws at 75 ft. (5 minute rest between set) Warm-down throws (5-10 throw max)
Day 2	No Throwing
Day 3	Warm-up throws to 75 ft. 3 sets of 25 Throws at 75 ft. (5 minute rest between set) Warm-down throws (5-10 throw max)
Day 4	No Throwing
Day 5	Warm-up throws to 75 ft. 3 sets of 25 Throws at 75 ft. (5 minute rest between set) Warm-down throws (5-10 throw max)
Day 6/7	No Throwing

Week 8 Throwing (90 ft. phase)

Day 1	Warm-up throws to 90 ft. 1 set of 25 throws at 90 ft. Warm-down throws (5-10 throw max)
Day 2	No Throwing
Day 3	Warm-up throws to 90 ft. 1 set of 25 throws at 90 ft. Warm-down throws (5-10 throw max)
Day 4	No Throwing
Day 5	Warm-up throws to 90 ft. 1 set of 25 throws at 90 ft. Warm-down throws (5-10 throw max)
Day 6/7	No Throwing



Week 9 Throwing (90 ft. phase)

Day 1	Warm-up throws to 90 ft. 2 sets of 25 Throws at 90 ft. (rest 5 minutes between sets) Warm-down throws (5-10 throw max)
Day 2	No Throwing
Day 3	Warm-up throws to 90 ft. 2 sets of 25 Throws at 90 ft. (rest 5 minutes between sets) Warm-down throws (5-10 throw max)
Day 4	No Throwing
Day 5	Warm-up throws to 90 ft. 2 sets of 25 Throws at 90 ft. (rest 5 minutes between sets) Warm-down throws (5-10 throw max)
Day 6/7	No Throwing

Week 10 Throwing (90 ft. phase)

Day 1	Warm-up throws to 90 ft. 3 sets of 25 Throws at 90 ft. (rest 5 minutes between sets) Warm-down throws (5-10 throw max)
Day 2	No Throwing
Day 3	Warm-up throws to 90 ft. 3 sets of 25 Throws at 90 ft. (rest 5 minutes between sets) Warm-down throws (5-10 throw max)
Day 4	No Throwing
Day 5	Warm-up throws to 90 ft. 3 sets of 25 Throws at 90 ft. (rest 5 minutes between sets) Warm-down throws (5-10 throw max)
Day 6/7	No Throwing



Week 11 Throwing (105 ft. phase) + intro to daily throwing

Day 1	Warm-up throws to 105 ft. 1 set of 25 throws at 105 ft. Warm-down throws (5-10 throw max)
Day 2	5 minute toss @ 60 feet
Day 3	Warm-up throws to 105 ft. 1 set of 25 throws at 105 ft. Warm-down throws (5-10 throw max)
Day 4	5 minute toss @ 60 feet
Day 5	Warm-up throws to 105 ft. 1 set of 25 throws at 105 ft. Warm-down throws (5-10 throw max)
Day 6	5 minute toss @ 60 feet
Day 7	No Throwing

Week 12 Throwing (105 ft. phase)

Day 1	Warm-up throws to 105 ft. 2 sets of 25 Throws at 105 ft. (rest 5 minutes between sets) Warm-down throws (5-10 throw max)
Day 2	10 minute toss @ 60 feet
Day 3	Warm-up throws to 105 ft. 2 sets of 25 Throws at 105 ft. (rest 5 minutes between sets) Warm-down throws (5-10 throw max)
Day 4	10 minute toss @ 60 feet
Day 5	Warm-up throws to 105 ft. 2 sets of 25 Throws at 105 ft. (rest 5 minutes between sets) Warm-down throws (5-10 throw max)
Day 6	10 minute toss @ 60 ft.
Day 7	No Throwing



Week 13 Throwing (105 ft. phase) + intro to throwing change-up on light catch days

- Day 1 Warm-up throws to 105 ft.
3 sets of 25 Throws at 105 ft. (rest 5 minutes between sets)
Warm-down throws (5-10 throw max)
- Day 2 **10 min throwing program (75 ft max) return to CH's @ 60**
- Day 3 Warm-up throws to 105 ft.
3 sets of 25 Throws at 105 ft. (rest 5 minutes between sets)
Warm-down throws (5-10 throw max)
- Day 4 **10 min throwing program (75 ft max) return to CH's @ 60**
- Day 5 Warm-up throws to 105 ft.
3 sets of 25 Throws at 105 ft. (rest 5 minutes between sets)
Warm-down throws (5-10 throw max)
- Day 6 **10 min throwing program (75 ft max) return to CH's @ 60**
- Day 7 **No Throwing**

Week 14 Throwing (120 ft. phase) + FB and CH @ 60' 5X week

- Day 1 1 set of 25 Throws at 120 ft.
End session with Flat Ground (10 throw max)
- Day 2 **10 min throwing program (75 ft max) return to CH's @ 60**
- Day 3 1 set of 25 Throws at 120 ft.
End session with Flat Ground (10 throw max)
- Day 4 **10 min throwing program (75 ft max) return to CH's @ 60**
- Day 5 1 set of 25 Throws at 120 ft.
End session with Flat Ground (10 throw max)
- Day 6 **10 min throwing program (75 ft max) return to CH's @ 60**
- Day 7 **No Throwing**



Week 15 Throwing (120 ft. phase)

- Day 1 Warm-up throws (under 120 ft)
2 set of 25 Throws at 120 ft (rest 5 minutes)
End session with Flat Ground (12 throw max)
- Day 2 **Light catch up to 75 ft.**
- Day 3 Warm-up throws (under 120 ft)
2 set of 25 Throws at 120 ft. (rest 5 minutes)
End session with Flat Ground (12 throw max)
- Day 4 **Light catch up to 75 ft.**
- Day 5 Warm-up throws (under 120 ft)
2 set of 25 Throws at 120 ft. (rest 5 minutes)
End session with Flat Ground (12 throw max)
- Day 6 **Light catch up to 75 ft.**
- Day 7 **No Throwing**

Week 16 Throwing (120 ft. + Cone Drill Phase)

Cone Drills: The Cone Drill Program is designed to improve your ability to throw on a downward plane with better arm strength and throwing accuracy. Place a cone at 90-105 feet from your position. Your throwing partner is positioned behind the cone to catch the ball on a hop. 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 cone. Attempt to hit the cone.

- Day 1 Warm-up throws up to 120 ft.
1 Set of 25 throws @ a cone placed at 90 ft.
End session with Flat ground or Flat mound 10 – 15 pitches
- Day 2 Light catch up to 90 ft.
- Day 3 Warm-up throws up to 120 ft.
1 Set of 25 throws @ a cone placed at 90 ft.
End session with Flat ground or Flat mound 10 – 15 pitches
- Day 4 Light catch up to 90 ft.
- Day 5 Warm-up throws up to 120 ft.
1 Set of 25 throws @ a cone placed at 90 ft.
End session with Flat ground or Flat mound 10 – 15 pitches
- Day 6/7 Light catch up to 90 ft. / No throwing



Week 17: 5-7 days no throwing if timing and permits

Week 18 Resume throwing for mound preparation.

7- day progression out to 120 Ft. and flat ground

Week 19 Recovery 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)
Day 4	10 min throwing program * NO EXERCISE *
Day 5	10 Minute toss Warm-up 120 ft Half Mound with catcher full distance (20 pitches)
Day 6	10 min throwing program * NO EXERCISE *
Day 7	No Throwing

Mound Progression

Week 20 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. **The Wednesday mound session is for feel and mound repetition. It may be removed and a 2 bull pen/per week plan can be implemented. We recommend a Tuesday/Friday bull pen schedule if the Wednesday bull pen is removed.** 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.**

Day 1	10 Minute toss / Warm-up 120 ft Bullpen. Full distance 20 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 20 Pitches
Day 6	10 min throwing program * NO EXERCISE *
Day 7	Light Toss



Week 21 Throwing

Day 1	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	Light Toss

Week 22 Throwing

Day 1	10 Minute toss / Warm-up 120 ft Bullpen. Full distance 30 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 30 Pitches
Day 6	10 min throwing program * NO EXERCISE *
Day 7	Light Toss



Mound Progression-Addition of change-ups
Week 23 Throwing

Day 1 10 Minute toss / Warm-up 120 ft
 Bullpen. Full distance 35 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 **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

Day 6 **10 min throwing program * NO EXERCISE ***
Day 7 **Light Toss**

Week 24 Throwing

Day 1 10 Minute toss / Warm-up 120 ft
 Bullpen 40 Pitches 20/20 split
 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 **15 Pitches (work on mechanics)**

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

Day 5 10 Minute toss / Warm-up 120 ft
 Bullpen 40 Pitches 20/20 split
 10-15 Change-ups

Day 6 **10 min throwing program * NO EXERCISE ***
Day 7 **Light Toss Start throwing breaking pitch on the flat ground**



Week 25 Throwing

Day 1	10 Minute toss / Warm-up 120 ft Bullpen 45 Pitches 25/20 split 10-15 Change-ups / 5-8 Breaking Balls
Day 2	10 min throwing program * NO EXERCISE *
Day 3	Throwing program out to 120 ft. max
Day 4	10 min throwing program * NO EXERCISE *
Day 5	10 Minute toss / Warm-up 120 ft. Bullpen 45 Pitches 25/20 split 10-15 Change-ups / 5-8 Breaking Balls
Day 6	10 min throwing program * NO EXERCISE *
Day 7	Light Toss

Week 26 Throwing

Day 1	10 Minute toss / Warm-up 120 ft. Bullpen 50 Pitches 25/25 split 10-15 Change-ups / 5-8 Breaking Balls
Day 2	10 min throwing program * NO EXERCISE *
Day 3	Throwing program out to 120 ft. max
Day 4	10 min throwing program * NO EXERCISE *
Day 5	10 Minute toss / Warm-up 120 ft. Bullpen 50 Pitches 25/25 split 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



Week 27 Throwing

Day 1	10 Minute toss / Warm-up 120 ft Bullpen 55 Pitches 20/20/15 split 10-15 Change-ups / 5-8 Breaking Balls
Day 2	10 min throwing program * NO EXERCISE *
Day 3	Throwing program out to 120 Ft. max
Day 4	10 min throwing program * NO EXERCISE *
Day 5	10 Minute toss / Warm-up 120 ft Bullpen 55 Pitches 20/20/15 split 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

Recovery Phase

Week 28 Throwing

3 days No throw / 4 days return to 120

Week 29 Throwing

Day 1	10 Minute toss / Warm-up 120 Ft Bullpen 55 Pitches 55 Split inning 10-15 Change-ups / 8-10 Breaking Balls
Day 2	10 min throwing program * NO EXERCISE *
Day 3	Throwing program out to 120 Ft. max
Day 4	10 min throwing program * NO EXERCISE *
Day 5	30 – 35 pitch bullpen
Day 6/7	10 min throwing program * NO EXERCISE *



Live Batting Practice

Week 30 - 34 Throwing

This is where the programs will deviate. A starting pitcher will switch to his 5 day starting rotation plan. 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 follow the plan below and progress towards pitching on consecutive days if pitching coach feels this is necessary at this point.

STARTER (5 day rotation with regular bullpens)

- 1st Start: 1 inning 20 pitch limit
- 2nd Start: 1-2 innings 30 pitch limit
- 3rd Start: 2 innings 30 pitch limit
- 4th Start: 3 innings 45 pitches
- 5th Start: 3 innings 45 pitch limit
- 6th Start: 4 innings 60 pitch limit

RELIEVER

- Week 1: Pitch 1 inning, 2 days off, pitch 1 inning
- Week 2: Pitch 1 inning on alternate days (i.e. MWF)
- Week 3: Pitch 1 inning, 2 days off, pitch 1+ inning
- Week 4: Pitch 1 inning on consecutive days once this week

Radar Gun Velocity Ranges

For Pitchers with Average FB velo between 80-85 mph

<u>Distance</u>		<u>Avg.</u>		<u>Range</u> Start at low end of Range and progress to top end of range
60'		56 mph		52-60 mph
75'		62 mph		60-64 mph
90'		67 mph		65-69 mph
105'		73 mph		70-75 mph
120'		76 mph		75-77 mph

Keith Meister, MD
Sports Medicine / Arthroscopy
Head Team Physician Texas Rangers



Radar Gun Velocity Ranges

For Pitchers with Average FB velo between 85-90 mph

<u>Distance</u>		<u>Avg.</u>		<u>Range</u> Start at low end of Range and progress to top end of range
60'		57 mph		55-60 mph
75'		63 mph		61-66 mph
90'		69 mph		67-72 mph
105'		74 mph		72-77 mph
120'		79 mph		78-81 mph

Keith Meister, MD
Sports Medicine / Arthroscopy
Head Team Physician Texas Rangers



Radar Gun Velocity Ranges

For Pitchers with Average FB velo between 90-95 mph

<u>Distance</u>		<u>Avg.</u>		<u>Range</u> Start at low end of Range and progress to top end of range
60'		62 mph		59-64mph
75'		67 mph		64-69 mph
90'		73 mph		70-75 mph
105'		77 mph		75-80 mph
120'		84 mph		81-86 mph

Keith Meister, MD
Sports Medicine / Arthroscopy
Head Team Physician Texas Rangers

