

Specializing in Upper Limb and Trauma Surgery

ULNAR COLLATERAL LIGAMENT RECONSTRUCTION PROTOCOL

Day 1-7 Post operative

- Elbow in immobilizer with sling at 90 degrees flexion
- Active assisted to active wrist flexion and extension
- Finger flexion/ extension
- Gripping exercises

Week 2

- -35 to 100° in functional brace (IROM)
- Active Shoulder ROM (No weights)
- PROM elbow flex/ extension within -35 to 100°
- Submaximal **pain free** wrist isometrics (NO PRONATION)
- Submaximal **pain free** shoulder isometrics (NO INT/ EXT ROTATION)

Week 3

- -25 to 110° in IROM
- PROM elbow flex/ extension within -25 to 110°
- Submaximal **pain free** elbow flexion/ extension isometrics
- Upright bike for aerobic conditioning

Week 4

- -15 to 120° in IROM
- PROM elbow flex/ extension within -15 to 120°
- Active elbow flexion and extension within limits of pain and permitted range
- Lower extremity and trunk conditioning

Week 5

- -5 to 130° in IROM
- Continue to progress exercises in permitted range

Week 6

- 0 to 130° in IROM
- Can increase PROM elbow flexion to 145° out of brace within limits of pain
- Begin light resisted exercises shoulder, elbow, and wrist
- Continue to avoid increased valgus loads

**** Brace can be discontinued at end of week 6 or as instructed by your surgeon.**

Weeks 8-12

- Initiate elbow eccentric flexion/ extension
- Progress all strengthening as able
- Resisted diagonal patterns (PNF)
- Light plyometrics (ensure proper technique)

****Should have close to full elbow ROM, minimal pain and swelling, and good strength at this point**

Week 12-16

- Begin swimming if able
- Light sport specific training
- Continue to increase strength, power, and flexibility

****At week 14, may begin light ball toss if pain free and full range of motion**

- **Every second day**, icing after each session
- NO WIND UP
- High arc on ball, no hard ground level throwing
- Start with 25 throws at 20 feet
- Progress to 70 throws and gradually progress to 40 feet

Example:

<u># of Throws</u>	<u>Distance (feet)</u>
20	20 (warm up)
25-40	30-40
10	20 (cool down)

Week 16-20 (4-5 months)

Throwing program to begin during this 4-5 month time frame as per your surgeon
It is VERY important to progress to the next stage ONLY if current phase has not caused any substantial increase in pain or inflammation
ICE must be applied after EVERY throwing session

Throwing Program

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MONTHS 4 - 5

Continue the Throwing Program by tossing the ball with an easy wind-up on alternate days.

<u># of THROWS</u>	<u>DISTANCE (Feet)</u>
10	20 (warm-up phase)
10	30 – 40
30 – 40	50
10	20 – 30 (cool down)

MONTHS 5 – 6

Continue increasing the throwing distance to a maximum of 60 feet.

Continue tossing the ball with an occasional throw at no more than half speed.

<u># of THROWS</u>	<u>DISTANCE</u>
10	30 (warm-up phase)
10	40 – 45
30 – 40	60 – 70
10	30 (cool down)

MONTHS 6 – 7

During this step gradually increase the distance to 150 feet maximum.

PHASE I:	<u># of THROWS</u>	<u>DISTANCE</u>
	10	40 (warm-up)
	10	50 – 60
	15- 20	70 – 80
	10	50 – 60
	10	40 (cool down)

PHASE II:	<u># of THROWS</u>	<u>DISTANCE</u>
	10	40 (warm-up)
	10	50 – 60
	20 – 30	80 – 90
	20	50 – 60
	10	40 (cool down)

PHASE III:	<u># of THROWS</u>	<u>DISTANCE</u>
	10	40 (warm-up)
	10	60
	15 – 20	100 – 110
	20	60
	10	40 (cool down)

PHASE IV:	<u># of THROWS</u>	<u>DISTANCE</u>
	10	40 (warm-up)
	10	60
	15 – 20	120 – 150

20
10

60
40 (cool down)

MONTHS 7 – 8

Progress to throwing off the mound at $\frac{1}{2}$ to $\frac{3}{4}$ speed.

Try to use proper body mechanics, especially when throwing off the mound.

Remember:

- Stay on top of the ball
- Keep the elbow up
- Throw over the top
- Follow through with the arm and trunk

PHASE I:	<u># of THROWS</u>	<u>DISTANCE</u>
	10	60 (warm-up)
	10	120 – 150 (lobbing)
	30	45 (off the mound)
	10	60 (off the mound)
	10	40 (cool down)

PHASE II:	<u># of THROWS</u>	<u>DISTANCE</u>
	10	50 (warm-up)
	10	120 – 150 (lobbing)
	20	45 (off the mound)
	20	60 (off the mound)
	10	40 (cool down)

PHASE III:	<u># of THROWS</u>	<u>DISTANCE</u>
	10	50 (warm-up)
	10	60
	10	120 – 150 (lobbing)
	10	45 (off the mound)
	30	60 (off the mound)
	10	40 (cool down)

PHASE IV:	<u># of THROWS</u>	<u>DISTANCE</u>
	10	50 (warm-up)
	10	120 – 150 (lobbing)
	10	45 (off the mound)
	40 - 50	60 (off the mound)
	10	40 (cool down)

MONTHS 9 – 10

At this time, if the pitcher has successfully completed the above phase without pain or discomfort and is throwing approximately $\frac{3}{4}$ speed, the pitching coach, trainer, or therapist may allow the pitcher to proceed to the next step of “Up/Down Bullpens”. Up/Down Bullpens is used to simulate a game situation. The pitcher rests in between a series of pitches to reproduce the rest period in between innings.

Up / Down Bullpens: (1/2 to $\frac{3}{4}$ speed)

Day 1:	<u># of THROWS</u>	<u>DISTANCE</u>
	10 warm-up	120 – 150 (lobbing)
	10 warm-up	60 (off the mound)
	40 pitches	60 (off the mound)
	REST 10 MINUTES	
	20 pitches	60 (off the mound)

DAY 2: OFF

DAY 3:	<u># of THROWS</u>	<u>DISTANCE</u>
	10 warm-up	120 – 150 (lobbing)
	10 warm-up	60 (off the mound)
	30 pitches	60 (off the mound)
	REST 10 MINUTES	
	10 warm-up	60 (off the mound)
	20 pitches	60 (off the mound)
	REST 10 MINUTES	
	10 warm-up	60 (off the mound)
	20 pitches	60 (off the mound)

DAY 4: OFF

DAY 5:	<u># of THROWS</u>	<u>DISTANCE</u>
	10 warm-up	120 – 150 (lobbing)
	10 warm-up	60 (off the mound)
	30 pitches	60 (off the mound)
	REST 8 MINUTES	
	20 pitches	60 (off the mound)
	REST 8 MINUTES	
	20 pitches	60 (off the mound)
	REST 8 MINUTES	
	20 pitches	60 (off the mound)

MONTHS 10 - 12

At this point, the pitcher is ready to begin a normal routine, from throwing, batting practice to pitching in the bullpen. This program should be adjusted as needed by your

surgeon or physiotherapist.