



ULNAR COLLATERAL LIGAMENT RECONSTRUCTION REHABILITATION PROTOCOL

COLUMBIA UNIVERSITY CENTER FOR SHOULDER, ELBOW & SPORTS MEDICINE

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TIME PERIOD

(post-operation)

EXERCISE PROGRAM

0 to 10 days

- Elbow is immobilized in a splint
- Perform passive elbow range of motion (ROM) exercises
- Squeeze sponge or a soft ball, as comfort permits

10 days to

4 weeks:

- Remove splint
- Active-assistive and/or active elbow ROM exercises, as tolerated
- Begin wrist (flexion and extension) and forearm (pronation and supination) strengthening exercises

1 to 2 months:

- Continue shoulder & elbow ROM exercises and wrist & forearm strengthening exercises as above
- ADD elbow strengthening exercises
- May add radial and ulnar deviation to wrist

3 to 4 months:

- Continue with strengthening exercises to the wrist, elbow and shoulder
- Start a total body conditioning program
- May include running and bicycling
- May begin easy tossing (no wind-up), start with 25 to 30 throws, building up to 70 throws and gradually increase the throwing distance

NOTE:

The Throwing Program is performed 3 - 4 times per week. Apply ice after each throwing session to help decrease the inflammatory response to microtrauma.

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Throwing Program

3 to 4 months:

<u># of THROWS</u>	<u>DISTANCE (ft)</u>
20	<i>20 (warm-up phase)</i>
25 - 40	<i>30 - 40</i>
10	<i>20 (cool down phase)</i>

4 - 5 months:

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

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

5 - 6 months:

- *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 (ft)</u>
10	<i>30 (warm up)</i>
10	<i>40 - 45</i>
30 - 40	<i>60 - 70</i>
10	<i>30 (cool down)</i>

6 to 7 months:

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

Phase I:

<u># of THROWS</u>	<u>DISTANCE (ft)</u>
10	<i>40 (warm up)</i>
10	<i>50 - 60</i>
15 - 20	<i>70 - 80</i>
10	<i>50 - 60</i>
10	<i>40 (cool down)</i>

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Phase II:	<u># of THROWS</u>	<u>DISTANCE (ft)</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 (ft)</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 (ft)</u>
	10	40 (warm up)
	10	60
	15 - 20	120 - 150
	20	60
	10	40 (cool down)

7 to 8 months: · Progress to throwing off the mound at 1/2 to 3/4 speed. Try to use proper body mechanics, especially when throwing off the mound:

- 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 (ft)</u>
	10	60 (warm up)
	10	120 - 150 (lobbing)
	30	45 (off the mound)
	10	60 (off the mound)
	10	40 (cool down)

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<i>Phase II:</i>	<u># OF THROWS</u>	<u>DISTANCE (ft)</u>
	10	50 (warm up)
	10	120 - 150 (lobbing)
	20	45 (off the mound)
	20	60 (off the mound)
	10	40 (cool down)
<i>Phase III:</i>	<u># OF THROWS</u>	<u>DISTANCE (ft)</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)
<i>Phase IV:</i>	<u># OF THROWS</u>	<u>DISTANCE (ft)</u>
	10	50 (warm up)
	10	120 - 150 (lobbing)
	10	45 (off the mound)
	40 - 50	60 (off the mound)
	10	40 (cool down)

At this time, if the pitcher has successfully completed the above phase without pain or discomfort and is throwing approximately 3/4 speed, the pitching coach and trainer 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 - 3/4 speed)

<i>Day 1:</i>	<u># OF THROWS</u>	<u>DISTANCE (ft)</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)

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Day 2: **OFF**

Day 3:	<u># OF THROWS</u>	<u>DISTANCE (ft)</u>
	<i>10 warm-up</i>	<i>120 - 150 (lobbing)</i>
	<i>10 warm-up</i>	<i>60 (off the mound)</i>
	<i>30 pitches</i>	<i>60 (off the mound)</i>
		<i>REST 10 MINUTES</i>
	<i>10 warm-up</i>	<i>60 (off the mound)</i>
	<i>20 pitches</i>	<i>60 (off the mound)</i>
		<i>REST 10 MINUTES</i>
	<i>10 warm-up</i>	<i>60 (off the mound)</i>
	<i>20 pitches</i>	<i>60 (off the mound)</i>

Day 4: **OFF**

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

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 physician, athletic trainer or physical therapist.