

# Rehabilitation Guidelines for Tommy John Surgery- UCL Reconstruction

Josef K. Eichinger, MD

- General Information
  - Total Recovery time is between 4-6 months depending on factors such as injury severity, patient sport/activity/age and type of repair.
  - Adherence to rehab protocol guidelines and restrictions is critical in avoiding re-injury or failures.
- Immobilization
  - Initial post-op splint is worn continuously
  - Elbow range of motion brace is worn continuously for 6 weeks after first post-op visit.
- Personal Hygiene / Showering
  - Avoid getting incision/portal sites wet for 48 hours.
  - Ok to begin showering 48 hours after surgery (if no wound related issues).
  - Avoid baths, saunas, pools, lakes, etc. for two weeks.
  - DO NOT remove steristrips, allow them to fall off on their own.
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The rehabilitation protocol after a Tommy John surgery typically involves several phases. The length of each phase varies depending on each patient and depends on tissue healing and progression.

- Right after the surgery, the elbow is secured in a brace at a 60- to 90-degree angle. The goal is to protect the healing tissue and reduce inflammation. You can start physical therapy right away, focusing on your wrist, fingers, shoulder and biceps to help avoid muscle atrophy.
- One or two weeks after the surgery, you can start moving your elbow joint. You will be placed in a hinged brace that can be locked at a certain angle when you are not exercising but typically is unlocked to allow for full range of motion. You can also wear an arm sling for comfort. Physical therapy at this stage focuses on gradually increasing your range of motion in the elbow.
- By the end of the first month, you may be able to fully extend your elbow and eventually stop wearing the brace. With regular physical therapy, most patients regain their normal range of motion in the elbow in two to four months after the surgery.

### **3 to 4 months:**

- If there is no swelling and the athlete has full, pain free elbow range of motion, the athlete 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.**

| # of Throws | Distance (ft)        |
|-------------|----------------------|
| 20          | 20 (warm-up phase)   |
| 25-40       | 30-40                |
| 10          | 20 (cool down phase) |

**4 to 5 months:**

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

| # of Throws | Distance (ft)     |
|-------------|-------------------|
| 10          | 20 (warm-up)      |
| 10          | 30-40             |
| 30-40       | 50                |
| 10          | 20-30 (cool down) |

**5 to 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.

| # of Throws | Distance (ft)  |
|-------------|----------------|
| 10          | 30 (warm-up)   |
| 10          | 40-45          |
| 30-40       | 60-70          |
| 10          | 30 (cool down) |

**6 to 7 months:**

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

| Phase 1 | # of Throws | Distance (ft)  |
|---------|-------------|----------------|
|         | 10          | 40 (warm-up)   |
|         | 10          | 50-60          |
|         | 15-20       | 70-80          |
|         | 10          | 50-60          |
|         | 10          | 40 (cool down) |

| Phase 2 | # of Throws | Distance (ft)  |
|---------|-------------|----------------|
|         | 10          | 40 (warm-up)   |
|         | 10          | 50-60          |
|         | 20-30       | 80-90          |
|         | 20          | 50-60          |
|         | 10          | 40 (cool down) |

| Phase 3 | # of Throws | Distance (ft) |
|---------|-------------|---------------|
|---------|-------------|---------------|

|       |                |
|-------|----------------|
| 10    | 40 (warm-up)   |
| 10    | 60             |
| 15-20 | 100-110        |
| 20    | 60             |
| 10    | 40 (cool down) |

| <b>Phase 4</b> | <b># of Throws</b> | <b>Distance (ft)</b> |
|----------------|--------------------|----------------------|
|                | 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.

| <b>Phase 1</b> | <b># of Throws</b> | <b>Distance (ft)</b> |
|----------------|--------------------|----------------------|
|                | 10                 | 60 (warm-up)         |
|                | 10                 | 120-150 (lobbing)    |
|                | 30                 | 45 (off the mound)   |
|                | 10                 | 60 (off the mound)   |
|                | 10                 | 40 (cool down)       |

| <b>Phase 2</b> | <b># of Throws</b> | <b>Distance (ft)</b> |
|----------------|--------------------|----------------------|
|                | 10                 | 50 (warm-up)         |
|                | 10                 | 120-150 (lobbing)    |
|                | 20                 | 45 (off the mound)   |
|                | 20                 | 60 (off the mound)   |
|                | 10                 | 40 (cool down)       |

| <b>Phase 3</b> | <b># of Throws</b> | <b>Distance (ft)</b> |
|----------------|--------------------|----------------------|
|                | 10                 | 50 (warm-up)         |
|                | 10                 | 120-150 (lobbing)    |
|                | 10                 | 45 (off the mound)   |
|                | 30                 | 60 (off the mound)   |
|                | 10                 | 40 (cool down)       |



|                |                    |
|----------------|--------------------|
| REST 8 Minutes |                    |
| 20 pitches     | 60 (off the mound) |
| REST 8 Minutes |                    |
| 20 pitches     | 60 (off the mound) |

**9 to 12 months:**

- 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.

*Phase 1 (0-2 wks):*

*Aerobic*

- Easy walking on level surface x 30 mins

*Range of motion*

**0 to 14 days:**

- Splint is work for 1-2 weeks.
- No valgus stress to the elbow.
- Full active forearm pronation and supination range of motion.
- Full active wrist radial and ulnar deviation range of motion. Gentle stretching of write and fingers is okay.
- Active and active assistive wrist flexion and extension range of motion exercises.
- 

*Strength*

- None

*Modalities*

- Ice for 20 minutes, 3 times per day

*Phase I Goals*

- Pain and swelling controll

*Phase II (2-4 wks):*

- Discontinue splint at first post-op visit.
- Transition to hinged elbow brace which is worn at all time except bathing.
- A sling may be worn for one more week, if necessary for comfort.
- Gradually achieve full elbow range of motion.

*Aerobic*

- Two weeks post-operation, begin a Total Body Conditioning Program after incision is closed {starting earlier, there is the risk of getting perspiration in or on the wound, increasing the risk of infection}.

*Range of motion*

- obtain full elbow wrist and hand motion.
- No valgus stress to the elbow.
- Full active forearm pronation and supination range of motion.
- Full active wrist radial and ulnar deviation range of motion. Gentle stretching of write and fingers is okay.
- Active and active assistive wrist flexion and extension range of motion exercises.
- Avoid excessive shoulder motion

*Strength*

- No strengthening

*Phase II Goals*

- Passive ROM to limits above
- DO NOT EXCEED 45 degrees of ER at side

*Phase III (1-2 months):*

- Athlete should have full range of motion at elbow, wrist, forearm, and shoulder joints.

*Aerobic*

- Same as phase II

*Range of motion*

- Full Range of motion fingers, hand, wrist, elbow, shoulder

*Strength*

- One month post-operation, add light weights for resistive elbow and forearm exercises (i.e. elbow flexion and extension, forearm pronation and supination).

*Phase III Goals*

- ROM as above
- Begin light strengthening as above

*Phase IV (2-3 months):*

*Aerobic*

- Light jogging after cleared by surgeon
- Begin stationary bike

*Range of motion*

- continue

*Strength*

- Continue active, resistive exercises for the entire extremity, including the rotator cuff.
- Continue lower body and trunk conditioning program.

*Phase IV Goals*

- Progression with strengthening
- Discontinue hinged elbow brace at 8 weeks after surgery

*Phase V (3-12 months):*

**3 to 4 months:**

- If there is no swelling and the athlete has full, pain free elbow range of motion, the athlete 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.**

**# of Throws**

20  
25-40

**Distance (ft)**

20 (warm-up phase)  
30-40

10

20 (cool down phase)

**4 to 5 months:**

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

**# of Throws**

**Distance (ft)**

10

20 (warm-up)

10

30-40

30-40

50

10

20-30 (cool down)

**5 to 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.

**# of Throws**

**Distance (ft)**

10

30 (warm-up)

10

40-45

30-40

60-70

10

30 (cool down)

**6 to 7 months:**

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

**Phase 1**

**# of Throws**

**Distance (ft)**

10

40 (warm-up)

10

50-60

15-20

70-80

10

50-60

10

40 (cool down)

**Phase 2**

**# of Throws**

**Distance (ft)**

10

40 (warm-up)

10

50-60

20-30

80-90

20

50-60

10

40 (cool down)

**Phase 3**

**# of Throws**

**Distance (ft)**

10

40 (warm-up)

10

60

15-20

100-110

20

60

10

40 (cool down)

**Phase 4**

**# of Throws**

**Distance (ft)**

|       |                |
|-------|----------------|
| 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.

| <b>Phase 1</b> | <b># of Throws</b> | <b>Distance (ft)</b> |
|----------------|--------------------|----------------------|
|                | 10                 | 60 (warm-up)         |
|                | 10                 | 120-150 (lobbing)    |
|                | 30                 | 45 (off the mound)   |
|                | 10                 | 60 (off the mound)   |
|                | 10                 | 40 (cool down)       |

| <b>Phase 2</b> | <b># of Throws</b> | <b>Distance (ft)</b> |
|----------------|--------------------|----------------------|
|                | 10                 | 50 (warm-up)         |
|                | 10                 | 120-150 (lobbing)    |
|                | 20                 | 45 (off the mound)   |
|                | 20                 | 60 (off the mound)   |
|                | 10                 | 40 (cool down)       |

| <b>Phase 3</b> | <b># of Throws</b> | <b>Distance (ft)</b> |
|----------------|--------------------|----------------------|
|                | 10                 | 50 (warm-up)         |
|                | 10                 | 120-150 (lobbing)    |
|                | 10                 | 45 (off the mound)   |
|                | 30                 | 60 (off the mound)   |
|                | 10                 | 40 (cool down)       |

| <b>Phase 4</b> | <b># of Throws</b> | <b>Distance (ft)</b> |
|----------------|--------------------|----------------------|
|                | 10                 | 50 (warm-up)         |
|                | 10                 | 120-150 (lobbing)    |
|                | 10                 | 45 (off the mound)   |
|                | 40-50              | 60 (off the mound)   |
|                | 10                 | 40 (cool down)       |

**9 to 10 months:**

- 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.

|              |                    |                      |
|--------------|--------------------|----------------------|
| <b>Day 1</b> | <b># of Throws</b> | <b>Distance (ft)</b> |
|              | 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)   |
| <b>Day 2</b> | <b>OFF</b>         |                      |
| <b>Day 3</b> | <b># of Throws</b> | <b>Distance (ft)</b> |
|              | 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) |                      |
| <b>Day 4</b> | <b>OFF</b>         |                      |
| <b>Day 5</b> | <b># of Throws</b> | <b>Distance (ft)</b> |
|              | 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) |                      |

**9 to12months:**

- 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.