

Johns Hopkins Shoulder Surgery Ulnar Collateral Ligament Reconstruction Rehabilitation Protocol

Johns Hopkins Shoulder Surgeons

INTRODUCTION:

For reconstruction of the ulnar collateral ligament (UCL) of the elbow the most frequently utilized tissue is the patient's own (i.e. autograft) palmaris longus tendon. This rehabilitation protocol is written for autologous grafts only. If other tissues are utilized the physician will specify.

There are basically three phases of tissue healing: inflammation, repair and remodeling. The length of each phase will vary from patient to patient. The rehabilitation program is based upon these phases of wound healing.

A fourth phase addresses return to sport. In most instances, a throwing athlete can gradually return to competitive throwing between 6 and 9 months following an UCL reconstruction. The athlete is encouraged to continue an aggressive strengthening and stretching program, during and after his/her return to sport.

Phase I: Immediate Postoperative Phase / Inflammatory Phase

(0 - 14 days)

Goals:

1. Protect healing tissue
 2. Decrease pain/inflammation
 3. Prevent muscular atrophy
- Postoperative week 1
1. Posterior splint at 90 elbow flexion; arm sling
 2. Wrist AROM ext/flex; finger AROM

3. Exercises: gripping exercises, wrist ROM, shoulder isometrics and ROM (except shoulder ER), Biceps isometrics.

4. Cryotherapy

Postoperative week 2

1. Application of functional brace unlimited motion; lock at 90 when not performing range of motion; arm sling for comfort; in some cases may want to increase ROM in brace 20 of flexion and extension every week.

2. Increase motion as tolerated (no full extension until weeks 3-4); gentle passive and active ROM

3. Initiate wrist isometrics

4. Initiate elbow flex/ext isometrics

5. Continue all exercises listed above

Phase II: Intermediate Phase: Repair

(Week 2-12) Goals:

1. Gradual increase in range of motion

2. Protect repair while elbow healing

3. Regain and improve muscular strength as secondary goal

Week 3-4

1. ROM expected (10-120)

2. Begin isometric forearm exercises

3. Begin grip strengthening

1. ROM expected 0-145 (without brace)

2. Initiate shoulder external rotation strengthening

3. Progress shoulder program

4. Continue brace outdoors and to sleep only

Week 6-12

1. Full ROM (0-145)
2. Begin light resistance exercises for arm (1 lb) wrist curls, extensions, Pronation/supination, elbow ext/flexion
3. Continue brace outdoors only as needed

Phase III: Remodeling Phase

(Week 12-24) Goals:

1. Increase strength, power, endurance
2. Maintain full elbow ROM
3. Gradually initiate sporting activitiesWeek 12-24
1. Initiate eccentric elbow flexion/extension
2. Continue isotonic program; forearm and wrist
3. Continue shoulder program - Thrower's Ten Program
4. Manual resistance diagonal patterns
5. Initiate plyometric exercise program
6. Begin light sporting activities

Phase IV: Return to Activity Phase

(Week 24-56) Goals:

1. Continue to increase strength, power, and endurance of upper extremity musculature
2. Gradual return to sport programWeek 20-24
1. Initiate interval throwing program (Phase I)
2. Continue strengthening program
3. Emphasis on elbow and wrist strengthening and flexibility exercises