

**ELBOW UCL REPAIR WITH AUGMENTATION-
INTERNAL BRACE UCL SURGERY (DUGUS)
DR. MENCIA, MD**

Initial phase:

1 WEEK POST OP

Goals:

Fabricate custom long arm splint with elbow at 90 degrees without wrist included.

Initiate full wrist ROM

Manage swelling and pain, prevent muscle atrophy

Initiate elbow motion 30-110 degrees outside of splint

Immediate post-op hand, wrist, and hand exercises

Putty/grip strengthening

Wrist flexor stretches

Wrist extensor stretches

Shoulder PROM- all directions

Pendulum exercises

PROM shoulder, wrist, hand

ER/IR PROM

Shoulder flexion to tolerance

Active scapular protraction/retraction, elevation/depress seated in brace

Continue UE exercises

Shoulder isometrics

ER/IR

Abduction, flexion, extension

Scapular strengthening- seated neuromuscular control drills with manual resistance- isometric resistance

Hand gripping exercises

2 WEEKS POST OP

Transition to hinge brace with permitted range 30-110 degrees. Progress by 10 degrees each week.

Patients can choose a nighttime splinting option (hinge versus LAS)

**Acute phase:
2-4 WEEKS POST OP**

Goals:

Gradually restore elbow joint ROM
Improve muscular strength and endurance
Normalize joint arthrokinematics

Beginning week 2:

Day 8:

Initiate PROM/AAROM elbow ROM 30-110 degrees
Initiate AROM shoulder and elbow
Scapular strengthening exercises
Progress to light isotonic strengthening at day 10

Week 3:

Progress elbow ROM to 12-125 degrees
Initiate thrower's ten exercise program

**Intermediate phase:
4-8 WEEKS POST OP**

Goals:

Restore full elbow ROM
Progress UE strength
Continue with functional progression

Week 4-6:

Progress elbow ROM 0-145 degrees
Progress to advanced thrower's ten program
Progress elbow and wrist strengthening exercises
Manual resistance wrist flexion and elbow flexion movements against manual resistance
Discontinue brace at the end of week 6

Week 7:

Initiate 2 hand plyometric throws
Prone planks

Week 8:

Continue with advanced thrower's ten program
Side planks with ER strengthening

Advanced phase:

9-14 WEEKS POST OP

Criteria to progress to this phase:

- Full nonpainful ROM
- No pain or tenderness
- Isokinetic test that fulfills criteria to throw
- Satisfactory clinical exam
- Completion of rehab phases without difficulty

Goals:

Advanced strengthening exercises

Initiate interval throwing program

Gradual return to throwing

Week 9:

Continue all strengthening exercises

Initiate 1 hand plyometric throws

Advanced thrower's ten program

Plyometrics program (1 & 2 hand program)

Week 10:

Seated machine Bench press

Initiate interval hitting program

Seated rowing

Biceps/triceps strengthening

Week 11-16

Long toss program phase I

Continue all exercises as in week 9-10

Week 12: Initiate interval throwing program

Week 16-20

Initiate interval throwing program phase

Off mound program

Initiate mound throwing when athlete is ready & completed ITP phase I

Continue advanced thrower 10 exercise program

Continue plyometrics

Continue ROM and strengthening programs

Week 20 >

Return to play phase

Goals:

Gradual return to competitive throwing

Continue all exercises and stretches

Initiate gradual return to competitive throwing

Perform dynamic warm-ups and stretches

Continue thrower's ten program

Return to competition when athlete is ready- per MD

Note: Each athlete may progress through ITP at different rates. Should complete 0-90 feet within 3 weeks of starting it and complete 120 feet within 8 weeks then begin mound program.

Surgery indicated only for 15-19 year olds