

Physical Therapy Protocol: Distal Biceps Repair

Philosophy:

Distal biceps rupture is an injury most commonly seen in men, usually during middle age, although it can truly happen to anyone. The most common mechanism of injury is a forced elbow extension while the muscle is tensioned in flexion. A distinct “pop” is often felt at the elbow, and a soft retraction of the tendon is palpable into the upper arm area. Loss of supination strength and even elbow flexion strength is common with unrecognized injuries. If your doctor does recommend surgery, here is a guideline for recommended treatment following the repair procedure. Initially, immobilization will be held at flexion, followed by gradual return to a neutral position. A strong, pain-free elbow with functional range-of-motion only comes about through an anatomic reconstruction of the biceps with aggressive (but appropriate) physical therapy performed with the therapist and at home.

Phase I, surgery to 6 weeks

OSMS appointments:

- Medical appointments at 1 and 6 weeks with films at first visit
- Physical therapy will begin as directed by your physician and as indicated on your physical therapy order

Rehabilitation Goals:

- Achieve excellent hand and shoulder range-of-motion
- Reduce swelling in the limb
- Control pain

Precautions:

- Posterior elbow splint at 90 degrees with forearm neutral

Range-of-Motion Exercises:

- Post-surgical splint for 7 days
- After seven days, elbow is placed in hinged IROM with brace unlocked at 45° to full flexion.
- Week 2: 45° to full flexion
- Week 4: 30° to full flexion
- Week 5: 20° to full flexion
- Week 6: 10° to full flexion
- Week 8: Unlock completely and discontinue brace if adequate motor control is achieved

Suggested Therapeutic Exercises:

- Ball squeezes, submaximal shoulder isometrics with forearm in neutral

Cardiovascular Exercises:

- Lower body circuit training or lower body cardio

Progression Criteria:

- Patient may progress to phase II after 4 weeks if they have pain well-controlled

Phase II, (after Phase I criteria met, usually at 6-8 weeks)

OSMS appointments:

- Medical appointments at 6 weeks
- Physical therapy appointments continue at every 5-7 days or so

Rehabilitation Goals:

- Restore full ROM and adequate motor control

Precautions:

- No biceps strength training outside of supervised PT visits

Range-of-Motion Exercises:

- Continue progression as outlined
- Week 6: 10 to full flexion
- Week 8: Unlock completely and discontinue brace if adequate motor control is achieved

Suggested Therapeutic Exercises:

- Begin muscle strengthening exercises for wrist and forearm
- Shoulder strengthening

Progression Criteria:

- Patient may progress to phase III after 2 weeks if they have met the above stated goals & have pain well-controlled.

Phase III, (after Phase II criteria met, usually 8-16 weeks)

OSMS appointments:

- Medical appointment at 12 weeks
- Physical therapy appointments adjust to every 10-14 days, advance to home program

Rehabilitation Goals:

- PREs for elbow flexion, extension, supination, and pronation
- Allow light biceps training from 12-14 weeks
- Initiate endurance program to simulate desired work or sport requirements
- Begin a return to sport specific exercises
- Full resistance biceps curls allowed at 16 weeks

References:

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