Kansas City Orthopedic Alliance

Rehabilitation Guidelines For Lateral Epicondyler Debridements And Repairs Of The Elbow

Lateral epicondylalgia (LE), more commonly known as tennis elbow, is the most common musculoskeletal pain condition affecting the elbow. It causes significant pain, disability and lost productivity. Approximately 40% of people will experience LE at some point in their life. It typically presents in men and women between 35 and 54 years of age. LE most commonly affects the dominant arm, particularly when performing repetitive activity at work, sports or home. LE is diagnosed by history and physical examination, with diagnostic imaging used when a differential diagnosis is possible. The presence of pain over the lateral epicondyle that may radiate distally into the forearm is the usual cause for concern. This pain is aggravated by palpation, gripping and resisted wrist and/or second or third finger extension.

LE is primarily related to tendinopathy to the extensor tendons of the elbow. This is different from tendonitis in that there are no inflammatory cells but areas of tendon degeneration. In the early phases of reactive tendinopathy this may include changes in cell activation, proteoglycan release, vascular ingrowth and change in tissue stiffness. Tendinopathy is caused by excessive load to the tendons based on how often an activity is done (volume), how intense the activity is (maximum loading) or how stressful the position of the activity is (biomechanics).

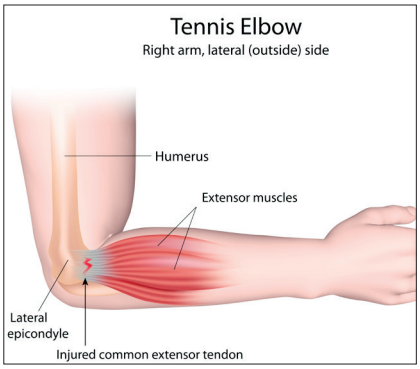

Figure 1 *Tennis Elbow*

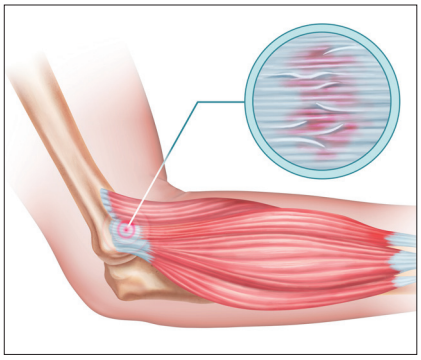

Figure 2 *Diagram showing an area of chronic tendinopathy.*

Treatment starts with non-surgical approaches to modify loading of the tendons and stimulate healing. Common treatments include therapeutic exercise programs, biomechanical modifications for your job or sport, dry needling, taping and manual therapy. Most patients will improve over several months. Surgery is an option for cases where these conservative approaches are unable to eliminate the pain and restore function.

Surgical care for LE is termed a lateral epicondyler debridement. It involves making a small incision on the outside of the elbow and exposing the extensor tendons as they insert on the upper arm bone (humerus). The surgeon will then remove and clean up (debride) the areas of tendon degeneration and may also do some boney debridement to stimulate bleeding and healing near the attachment of the tendons to the bone. Larger tendon debridements may need to be stitched together afterward, smaller ones will heal without it. If the tendon is stitched together that is referred to as a repair.

After surgery you will be required to complete a rehabilitation program, as outlined below. Your therapist will guide you through this process and make adjustments that are necessary to your individual needs and situation.

PHASE I (surgery to 2 weeks after surgery)

Appointments	• Rehabilitation appointments begin 1-3 days after first post-op visit with the surgeon
Rehabilitation Goals	• Protection of the post-surgical elbow
Precautions	• 5-pound lifting restriction for 2 weeks • Avoid typing if painful • Wear wrist splint for the first 4 weeks
Cardiovascular Exercise	• No gripping or impact
Suggested Therapeutic Exercise	• Pain free hand, wrist, elbow active assisted range of motion (AAROM) • Active range of motion (AROM) of the involved shoulder • Scapular retractions
Progression Criteria	• Four weeks after surgery • No effusion • Full elbow extension

PHASE II (begin after meeting Phase 1 criteria, usually 3-6 weeks after surgery)

Appointments	• Rehabilitation appointments are once a week
Rehabilitation Goals	• Increase flexor/extensor strength and endurance in preparation for functional rehab and training
Precautions	• Edema and inflammation control with ice application for 20 minutes after activity and rehab • Wear wrist splint for the first four weeks • Avoid post-exercise elbow pain that lasts more than 12 hours • Avoid activity or rehab related elbow pain that is four or greater on the 10-point pain scale and activities that cause an increase in soreness for greater than four hours post activity
Suggested Therapeutic Exercise	• Flexor/extensor strengthening progression – begin with sub-max isometrics gradually progressing intensity, but stay pain free. Isometrics have been shown to have a strengthening and analgesic effect for tendinopathies and injuries • ROM with continued emphasis on restoring full A/PROM. • AROM for rotational movements • Scapular strengthening and posture
Cardiovascular Exercise	• Stationary bike or elliptical with arm supported without significant pressure or gripping
Progression Criteria	• Seven weeks post-op • No effusion • 5/5 strength without pain for flexor/extensor with elbow bent and straight for one repetition

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PHASE III (begin after meeting Phase II criteria, usually 7-12 weeks after surgery)

Appointments	• Rehabilitation as needed for progressions
Rehabilitation Goals	• Good control and no pain with sport and work specific movements, including impact and ballistic speed movement.
Precautions	• Avoid activity or rehab related elbow pain that is four or greater on the 10-point pain scale • Post-activity soreness should resolve within 24 hours • Avoid post-activity swelling
Suggested Therapeutic Exercise	• Flexor/extensor strengthening progression – progressing to eccentrics. Also begin to push muscular endurance and rate of force development as needed • Flexibility exercises for two joint muscles of the forearm • Proximal strengthening and posture – shoulder and scapular • Hip and Core strengthening
Cardiovascular Exercise	• Replicate sport or work specific energy demands
Progression Criteria	• Return to work and sport once you are cleared by your therapist based your strength, endurance and mobility. Specific testing may be done to compare to the uninvolved side or specific work requirements