

LITTLE LEAGUER'S ELBOW

(Medial Epicondylar Apophysitis)



■ ■ ■ Description

Little leaguer's elbow is characterized by inflammation of the growth plate of the inner elbow. The medial epicondylar growth plate of the elbow becomes inflamed due to repetitive injury from muscular contraction. The muscles that bend the wrist attach to the medial epicondyle. The growth plate is an area of relative weakness, and injury to it occurs due to repeated stress or vigorous exercise. It is a temporary condition of the medial epicondyle that is uncommon after age 16.

■ ■ ■ Common Signs and Symptoms

- Slightly swollen, warm, and tender bump of the inner elbow
- Pain with activity, especially bending the wrist against force (curls, lifting, throwing) or following an extended period of vigorous exercise in an adolescent
- In more severe cases, pain during less vigorous activity
- Inability to throw at full speed
- Inability to fully straighten the elbow

■ ■ ■ Causes

Little leaguer's elbow is caused by stress or injury to the medial epicondyle growth plate (which is still developing during adolescence) from overuse or fall. Repeated stress or injury interferes with development, causing inflammation.

■ ■ ■ Risk Increases With

- Throwing sports, such as baseball
- Overzealous conditioning routines, such as weightlifting
- Being overweight
- Boys between 11 and 18 years of age
- Rapid skeletal growth
- Poor physical conditioning (strength and flexibility)

■ ■ ■ Preventive Measures

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
 - Arm, forearm, and wrist strength
 - Flexibility and endurance
 - Cardiovascular fitness
- Exercise moderately, avoiding extremes.
- Rest appropriately after vigorous exercise.
- Use proper technique.

■ ■ ■ Expected Outcome

Mild cases can be resolved with slight reduction of activity level, whereas moderate to severe cases may require significantly reduced activity for 3 to 4 months.

■ ■ ■ Possible Complications

- Bone infection
- Growth plate pulling off the arm bone, resulting in a fracture
- Persisting inability to fully straighten the elbow

■ ■ ■ General Treatment Considerations

Initial treatment consists of medications and ice to relieve pain, stretching and strengthening exercises (particularly the muscles that bend the wrist), and modification of activities. Specifically, throwing and heavy lifting should be avoided. The exercises can all be carried out at home for acute cases. Chronic cases often require a referral to a physical therapist or athletic trainer for further evaluation or treatment. Occasionally the affected elbow may need to be immobilized for a few weeks (brace, cast, or splint). A counterforce brace (tennis elbow brace) may help relieve symptoms. Surgery is rarely needed (if conservative treatment fails) in the growing patient; however, surgery is necessary if the growth plate separates completely and moves away from where it should be.

■ ■ ■ Medication

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Cortisone injections are rarely, if ever, indicated. Cortisone injections may weaken tendons, so it is better to give the condition more time to heal than to use them.

■ ■ ■ Heat and Cold

- Cold is used to relieve pain and reduce inflammation for acute and chronic cases. Cold should be applied for 10 to 15 minutes every 2 to 3 hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage. Use a towel between the ice and your elbow to reduce the chance of injury to the ulnar nerve at the inner elbow.
- Heat may be used before performing stretching and strengthening activities prescribed by your physician, physical therapist, or athletic trainer. Use a heat pack or a warm soak.

■ ■ ■ Notify Our Office If

- Symptoms get worse or do not improve in 4 weeks despite treatment
- You develop a fever greater than 101°F

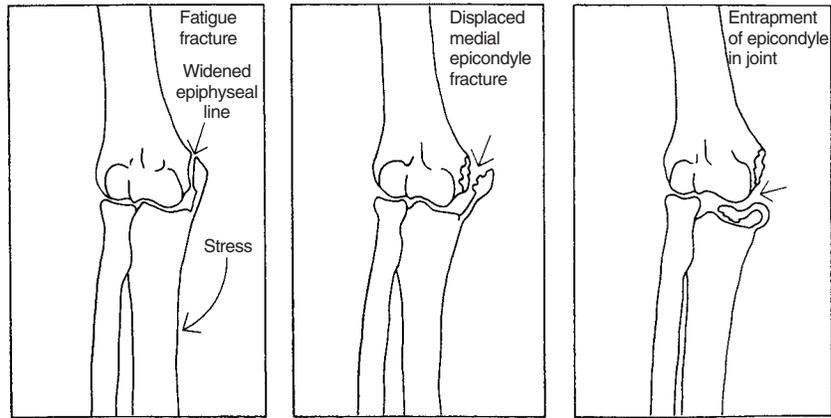


Figure 1

From Zachazewski JE, Magee DJ, Quillen WS: Athletic Injuries and Rehabilitation. Philadelphia, WB Saunders, 1997, p. 550.

EXERCISES

> RANGE OF MOTION AND STRETCHING EXERCISES • Little Leaguer's Elbow

These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- Flexible tissue is more tolerant of the stresses placed on it during activities.
- Each stretch should be held for 20 to 30 seconds.
- A *gentle* stretching sensation should be felt.



RANGE OF MOTION • Wrist Extension

1. Hold your _____ wrist as shown with the fingers pointing away from the floor.
2. Pull up on the wrist until you feel a stretch.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.
5. This exercise should be done with the elbow **bent to 90 degrees / straight**. (physician, physical therapist, or athletic trainer should circle one of these)



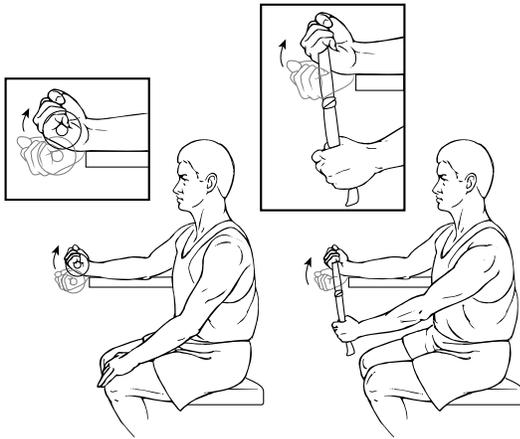
RANGE OF MOTION • Wrist Extension

1. Place the palm of your _____ hand flat on the top of a table as shown. Your fingers should be pointing backward.
2. Press down, bending your wrist and straightening your elbow until you feel a stretch.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.

> STRENGTHENING EXERCISES • Little Leaguer's Elbow

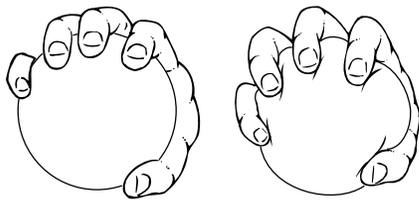
These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- Strong muscles with good endurance tolerate stress better.
- Do the exercises as *initially* prescribed by your physician, physical therapist, or athletic trainer. Progress slowly with each exercise, gradually increasing the number of repetitions and weight used under their guidance.



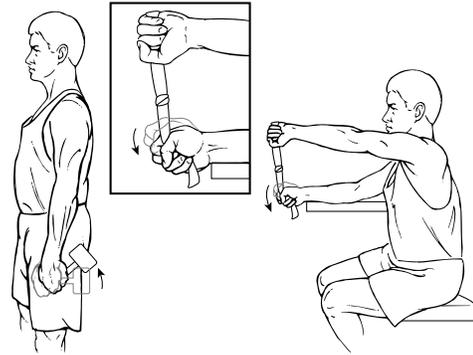
STRENGTH • Wrist Flexors

1. Sit or stand with your forearm supported as shown.
2. Using a _____ pound weight or a piece of rubber band/tubing, bend your wrist slowly upward toward you.
3. Hold this position for _____ seconds and then *slowly* lower the wrist back to the starting position.
4. Repeat exercise _____ times, _____ times per day.



STRENGTH • Grip

1. Hold a wad of putty, soft modeling clay, a large sponge, a soft rubber ball, or a soft tennis ball in your hand as shown.
2. Squeeze as hard as you can.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.



STRENGTH • Wrist, Ulnar Deviation

1. Stand with a _____ oz. hammer in your hand as shown, or sit holding on to the rubber band/tubing with your arm supported as shown.
2. Raise your hand upward behind you or pull down on the rubber tubing.
3. Hold this position for _____ seconds and then *slowly* lower the wrist back to the starting position.
4. Repeat exercise _____ times, _____ times per day.



STRENGTH • Pronation

1. Sit with your forearm supported on a table and the hand over the edge and your palm facing up toward the ceiling.
2. Hold a _____ oz. hammer or a stick with a weight on the end in your hand as shown.
3. Turn your palm and hand toward you to a "thumbs up" position.
4. Hold this position for _____ seconds and then *slowly* return to the starting position.
5. Repeat exercise _____ times, _____ times per day.

Notes:

(Up to 4400 characters only)

Notes and suggestions