## STEVEN CHUDIK MD

## SHOULDER, KNEE & SPORTS MEDICINE

# Brachialis/Anterior Capsular Elbow Strain (Climber's Elbow)

Climber's elbow presents with pain in the front of the elbow due to strain (overstretching) of the brachialis muscle or strain of the capsule in the front of the elbow joint. The brachialis muscle attaches to bone via tendons. It attaches to the humerus bone (upper arm bone) and to the ulnar bone just below the elbow. It functions to flex (bend) the elbow as climbers hang or pull themselves up. Climber's elbow is an overuse injury in which the pain starts slowly and gradually gets worse. The capsule in the front of the elbow (anterior capsule) can also become strained and painful by excessive straightening of the elbow.



### **Frequent Signs and Symptoms**

- Pain, aching, tenderness, and sometimes warmth over the front of the elbow
- Pain that is worse with elbow bending against resistance, with rock climbing, or throwing
- Pain that is worse when attempting to completely straighten the elbow
- Crepitation (a crackling sound) when the tendon or elbow is moved or touched
- Inability to completely straighten the elbow



Schedule online now

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### **Etiology (Causes)**

- Strain from sudden increase in intensity, duration, or frequency of activity
- Overuse or repetitive elbow bending, such as with rock climbing, pull-ups, or bowling
- Forced elbow hyperextension (excessive straightening)

#### **Risk Factors**

- Contact sports, throwing sports, gymnastics, weightlifting, bowling, bodybuilding, and rock climbing
- Heavy labor
- Poor physical conditioning (strength and flexibility)
- Inadequate warm-up before participation
- Previous injury to the elbow
- Immobilization of the elbow

#### Prevention

- Appropriately warm up and stretch before practice or competition.
- Allow time for adequate rest and recovery between practices and competition.
- Maintain appropriate conditioning:
  - Elbow flexibility
  - Muscle strength and endurance
  - Cardiovascular fitness
- Use proper technique.

#### Outcomes

This condition will typically resolve within 6 weeks if treated appropriately with conservative treatment, resting of the affected area, and a gradual return to the activity.

### **Potential Complications**

- Prolonged healing time or re-injury if not appropriately treated or if not given adequate time to heal
- Chronically inflamed tendon or capsule resulting in persistent pain with activity that may progress to constant pain (with or without activity) and potentially rupture of the brachialis tendon (rare)
- Recurrence of symptoms, especially if activity is resumed too soon, with overuse, or with poor technique
- Heterotopic ossification (calcification and bone formation in the soft tissues in the front of the elbow)
- Loss of motion (inability to fully straighten the elbow)



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### **Treatment Considerations**

Initial treatment consists of anti-inflammatory medications and ice to relieve the pain and inflammation. Rest and avoidance of the aggravating activities is important to allow healing. Later, stretching, strengthening, and gradually returning to the activities that stress the elbow muscles and the brachialis muscle are performed which may be carried out at home or with a physical therapist or athletic trainer. A therapist may use other treatment modalities, such as ultrasound and heat. Surgery is rarely necessary or recommended.

### **Possible Medications**

- Nonsteroidal anti-inflammatory medications, such as ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are sometimes recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers are usually not prescribed for this condition.

### Modalities (Heat and Cold)

- Cold is used to relieve pain and reduce inflammation for acute and chronic cases. Cold should be applied for 20 minutes every 3 to 4 hours as needed for inflammation and pain and immediately after any activity that aggravates your symptoms. Be careful not to apply the ice directly on the skin and do not leave the ice on too long as it can cause severe injury to the skin.
- Heat may be used to warm-up before performing stretching and strengthening activities. Use a heat pack warm soak. Again, be careful not to burn or injure the skin.

### Notify my office if symptoms get worse





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