

WRIST SPRAIN



■ ■ ■ Description

Wrist sprain is a violent overstretching and tearing of one or more ligaments in the wrist. Sprains involving two or more ligaments cause more disability than a single-ligament sprain. Sprains are classified into three grades. In a *first-degree* sprain, the ligament is not lengthened but is painful. With a *second-degree* sprain, the ligament is stretched or a portion of the ligament is ruptured, but it still functions (although there is some loss of function). With a *third-degree* sprain, the ligament is torn (complete rupture) and does not function. Severe sprains may require surgery.

■ ■ ■ Common Signs and Symptoms

- Severe pain at the time of injury
- Often a feeling of popping or tearing inside the wrist
- Tenderness and swelling in the wrist, starting at the side of injury, that may progress to the whole wrist and occasionally the hand
- Some bruising soon after the injury
- Impaired ability to use the hand and wrist

■ ■ ■ Causes

Wrist sprains are caused stress imposed to the wrist or hand that temporarily forces or pries the wrist out of its normal joint location. The ligaments that normally hold the joint in place are stretched or torn.

■ ■ ■ Risk Increases With

- Previous wrist sprain or injury
- Contact sports, such as boxing or wrestling
- Sports in which falling is possible, such as soccer, basketball, and volleyball

- Other sports, such as skiing, bowling, pole vaulting
- Poor physical conditioning (strength and flexibility)
- Inadequate or poorly fitting protective equipment

■ ■ ■ Preventive Measures

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
 - Wrist and forearm flexibility
 - Muscle strength and endurance
- Taping, protective strapping, bracing, or wrist splints may help prevent injury.
- Provide the wrist with support during sports and practice activities for 6 to 12 months following injury.

■ ■ ■ Expected Outcome

If this is a first-time injury, proper care and sufficient healing time before resuming activity should prevent permanent disability. Ligaments have poor blood supply and when torn require as much healing time as fractures. Average healing time for a *first-degree* sprain is 2 to 6 weeks, for a *second-degree* sprain is up to 8 weeks, and for a *third-degree* sprain is up to 12 weeks.

■ ■ ■ Possible Complications

- Prolonged healing time if usual activities are resumed too soon
- Frequent recurrence of symptoms and repeated injury, resulting in a chronic problem; appropriately addressing the problem the first time decreases frequency of recurrence and optimizes healing time
- Injury to other structures, such as bone, cartilage, nerve, or tendon

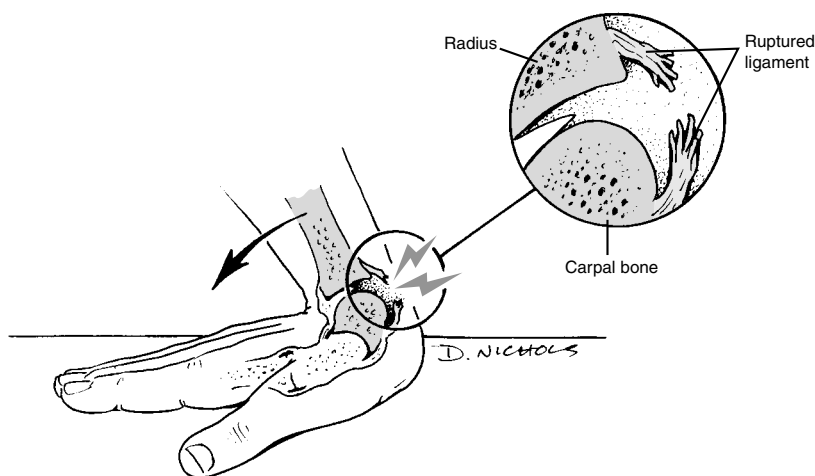


Figure 1

From Shankman GA: Fundamental Orthopaedic Management for the Physical Therapy Assistant. St. Louis, Mosby Year Book, 1997, p. 286.

- Chronically unstable or arthritic wrist joint with repeated sprains
- Prolonged disability (sometimes)
- Wrist stiffness or weakness

■ ■ ■ General Treatment Considerations

Initial treatment consists of medication and ice to relieve the pain and compressive elastic bandaging and elevation to help reduce swelling and discomfort. A cast, splint, or brace may be recommended to provide support to the joint for varying times, depending on severity of injury. After immobilization, stretching and strengthening of the injured and weakened joint and surrounding muscles (due to the injury and the immobilization) are necessary. These may be done with or without the assistance of a physical therapist or athletic trainer. The need for surgical treatment is uncommon except in specific instances with a third-degree sprain.

■ ■ ■ 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.

- Pain relievers may be prescribed as necessary by your physician. Use only as directed.

■ ■ ■ 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.
- 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

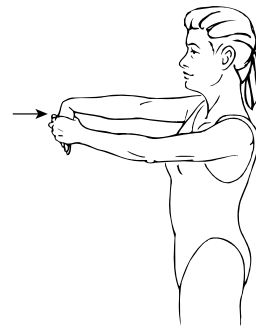
- Pain, swelling, or bruising worsens despite treatment or you have persistent pain lasting more than 2 to 4 weeks
- You experience pain, numbness, discoloration, or coldness in the hand or fingers or blue, gray, or dusky color in the fingernails
- Any of the following occur after surgery: increased pain, swelling, redness, drainage, or bleeding in the surgical area or signs of infection, including fever
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)

EXERCISES

> RANGE OF MOTION AND STRETCHING EXERCISES • Wrist Sprain

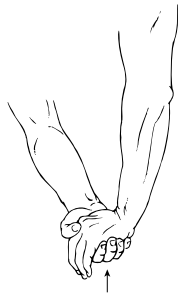
These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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 Flexion

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



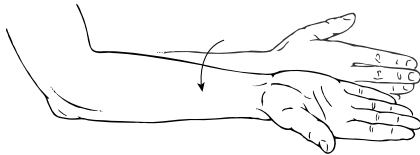
RANGE OF MOTION • Wrist Extension

1. 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.



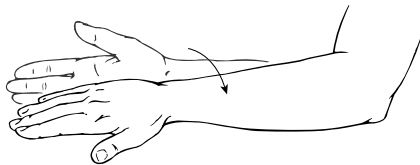
RANGE OF MOTION • Supination

1. Stand or sit with your elbow bent to 90 degrees.
2. Turn your palm upward as far as possible.
3. Hold this position for _____ seconds and then *slowly* return to the starting position.
4. Repeat exercise _____ times, _____ times per day.



RANGE OF MOTION • Wrist Flexion

1. Place the back of your _____ hand flat on the top of a table as shown. Your shoulder should be turned in and your fingers facing away from your body.
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.



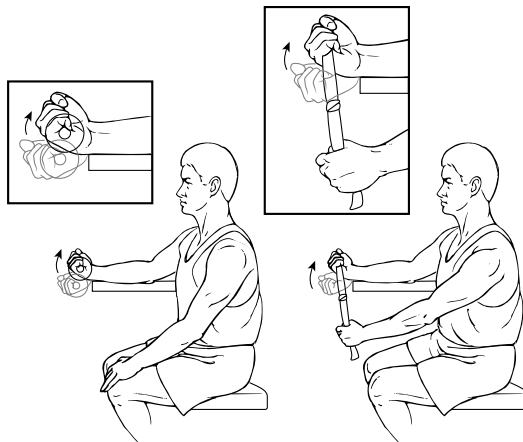
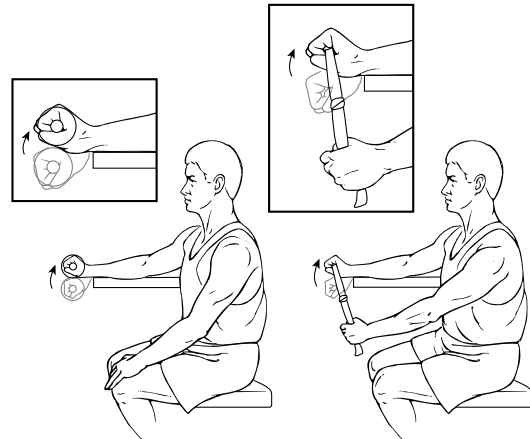
RANGE OF MOTION • Pronation

1. Stand or sit with your elbow bent to 90 degrees.
2. Turn your palm down toward the floor as far as possible.
3. Hold this position for _____ seconds and then *slowly* return to the starting position.
4. Repeat exercise _____ times, _____ times per day.

> STRENGTHENING EXERCISES • Wrist Sprain

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.

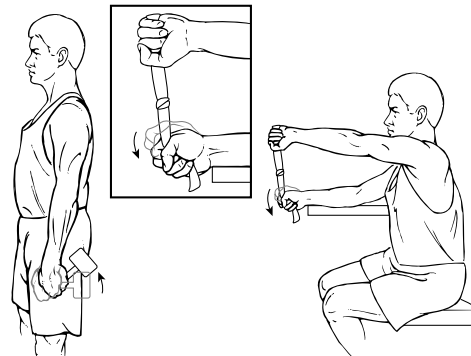


STRENGTH • Wrist Flexors

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.

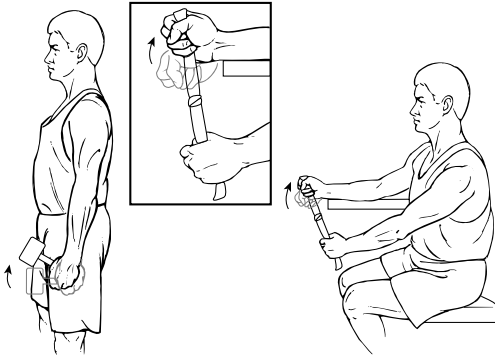
STRENGTH • Wrist Extensors

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.



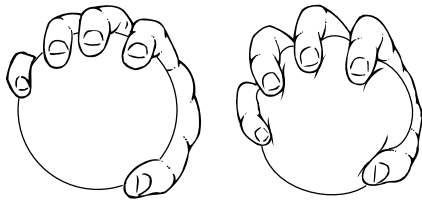
STRENGTH • Wrist, Ulnar Deviation

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.



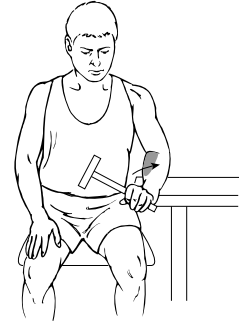
STRENGTH • Wrist, Radial Deviation

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 in front of you or pull up 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.



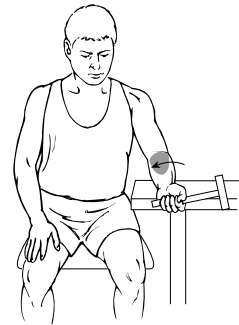
STRENGTH • Grip

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 • Supination

1. Sit with your forearm supported on a table and the hand over the edge and your palm facing the floor.
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.



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