

## K-W URGENT CARE CLINICS INC.

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OPEN Mon-Fri 8am-5pm, Sa & Su 8am-3pm, Holidays 8am-3pm CLOSED Dec25, Jan1  
Onsite Xray, Ultrasound, MRI, Laboratory Services, Foot Clinic, Physio, Massage  
We treat all non-life threatening Urgencies and minor Emerg, WSIB, Travel Health

### Special Instructions:

### Follow Up:

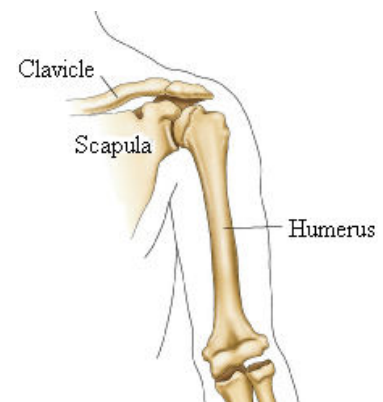
# Radius Fracture

## with Rehab

A radius fracture is a partial or complete break (*fracture*) in the thumb side forearm bone ( *radius*). This document does not discuss radius fractures that include the elbow or wrist.

## SYMPTOMS

- Severe pain over the site of fracture immediately after injury.
- Tenderness, inflammation and/or bruising ( *contusion*) over the forearm.
- Contusion usually occurs within 48 hours.
- If the fractured bone fragments are out of alignment ( *displaced*), then a visible deformity may be present.
- Signs of nerve or vascular damage, such as numbness, coldness or

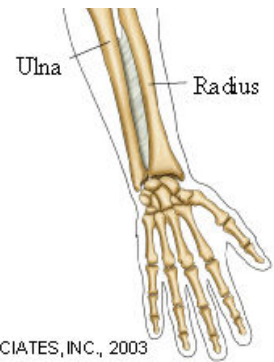


paralysis below the fracture site.

## CAUSE

A fracture occurs when a force is placed on the bone that is greater than it can withstand. Common mechanisms of injury include:

- Direct trauma to the forearm.
- Indirect stress on the bone, such as falling on an outstretched hand.



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## RISK INCREASES WITH

- Contact sports (football, rugby, soccer, martial arts, lacrosse or hockey).
- Activities in which falling is likely to occur.
- Bone disease (osteoporosis or bone tumor).
- Previous arm injury or immobilization.
- Poor strength and flexibility.

## PREVENTIVE MEASURES

- Warm up and stretch properly before activity.
- Maintain physical fitness:
  - Strength, flexibility and endurance.
  - Cardiovascular fitness.
- Learn and use proper technique, especially when falling. When possible, have a coach correct improper technique.
- Wear properly fitted and padded protective equipment.

## PROGNOSIS

If treated properly, then radius fractures typically heal in 6 to 8 weeks in adults and 4 to 6 weeks in children. Occasionally surgery is necessary to realign the fracture.

## POSSIBLE COMPLICATIONS

- Failure of the fracture to heal ( *nonunion* ).
- Healing of the fracture in a poor position ( *malunion* ).
- Chronic pain, stiffness, loss of motion or swelling of the elbow or wrist.
- Bleeding within the forearm that causes pressure to be placed on the nerves and vessels ( *compartment syndrome* ).
- Heterotopic calcification of the soft tissues about the forearm ( *ossification* ).
- Injury to the nerves of the hand or wrist due to stretching from the fracture, causing numbness, weakness or paralysis.

- Shortening of the arm.
- Loss of motion in the elbow, forearm or wrist.

## GENERAL TREATMENT CONSIDERATIONS

Treatment initially involves the use of ice and medication to help reduce pain and inflammation. If the fractured bone fragments displaced, then the fracture must be realigned ( *reduced*) immediately by a person trained in the procedure. Once the fracture is properly aligned, then forearm, elbow and wrist must be immobilized for a period to allow for healing of the bone. After immobilization, it is important to perform strengthening and stretching exercises to help regain strength and a full range of motion. These exercises may be completed at home or with a therapist.

## MEDICATION

- If pain medication is necessary, then nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen, or other minor pain relievers, such as acetaminophen, are often recommended.
- Do not take pain medication for 7 days before surgery.
- Prescription pain relievers may be given if deemed necessary by your caregiver. Use only as directed and only as much as you need.

## COLD THERAPY

- **Cold** treatment (icing) relieves pain and reduces inflammation. Cold treatment 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 massage the area with a piece of ice (ice massage).

## SEEK MEDICAL CARE IF:

- Treatment seems to offer no benefit or the condition worsens.
- Any medications produce adverse side effects.
- Any complications from surgery occur:
- Pain, numbness or coldness in the extremity operated upon.
- Discoloration of the nail beds (they become blue or gray) of the extremity operated upon.
- Signs of infections (fever, pain, inflammation, redness, or persistent bleeding).

## EXERCISES

### RANGE OF MOTION AND STRETCHING EXERCISES - Radius Fracture

These exercises may help you when beginning to rehabilitate your injury. Your symptoms may resolve with or without further involvement from your physician, physical therapist or athletic trainer. While completing these exercises, remember:

- Restoring tissue flexibility helps normal motion to return to the joints. This allows healthier, less painful movement and activity.

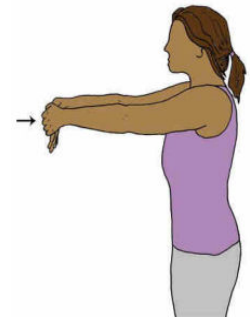
- An effective stretch should be held for at least 30 seconds.
- A stretch should never be painful. You should only feel a gentle lengthening or release in the stretched tissue.

### RANGE OF MOTION – Wrist Flexion, Active-Assisted

- Extend your \_\_\_\_\_ elbow with your fingers pointing down.\*
- Gently pull the back of your hand towards you until you feel a gentle stretch on the top of your forearm.
- Hold this position for \_\_\_\_\_ seconds.

Repeat \_\_\_\_\_ times. Complete this exercise \_\_\_\_\_ times per day.

\*If directed by your physician, physical therapist or athletic trainer, complete this stretch with your elbow bent rather than extended.

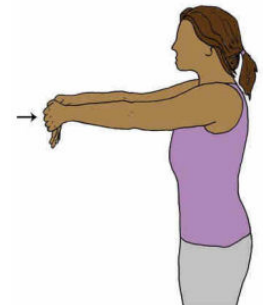


### RANGE OF MOTION – Wrist Extension, Active-Assisted

- Extend your \_\_\_\_\_ elbow and turn your palm upwards.\*
- Gently pull your palm/fingertips back so your wrist extends and your fingers point more toward the ground.
- You should feel a gentle stretch on the inside of your forearm.
- Hold this position for \_\_\_\_\_ seconds.

Repeat \_\_\_\_\_ times. Complete this exercise \_\_\_\_\_ times per day.

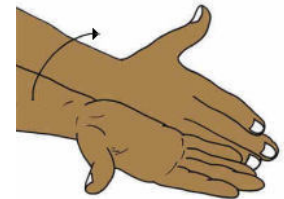
\*If directed by your physician, physical therapist or athletic trainer, complete this stretch with your elbow bent, rather than extended.



### RANGE OF MOTION – Supination, Active

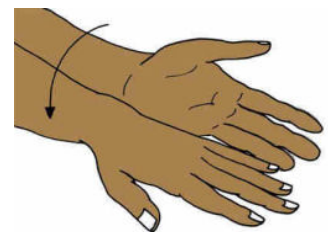
- Stand or sit with your elbows at your side. Bend your \_\_\_\_\_ elbow to 90 degrees.
- Turn your palm upward until you feel a gentle stretch on the inside of your forearm.
- Hold this position for \_\_\_\_\_ seconds. Slowly release and return to the starting position.

Repeat \_\_\_\_\_ times. Complete this stretch \_\_\_\_\_ times per day.



### RANGE OF MOTION – Pronation, Active

- Stand or sit with your elbows at your side. Bend your \_\_\_\_\_ elbow to 90 degrees.
- Turn your palm downward until you feel a gentle stretch on the top of your forearm.
- Hold this position for \_\_\_\_\_ seconds. Slowly release and return to the starting position.



Repeat \_\_\_\_\_ times. Complete this stretch \_\_\_\_\_ times per day.

### STRETCH - Wrist Flexion

- Place the back of your \_\_\_\_\_ hand on a tabletop leaving your elbow slightly bent. Your fingers should point away from your body.
- Gently press the back of your hand down onto the table by straightening your elbow. You should feel a stretch on the top of your forearm.
- Hold this position for \_\_\_\_\_ seconds.

Repeat \_\_\_\_\_ times. Complete this stretch \_\_\_\_\_ times per day.

### STRETCH – Wrist Extension

- Place your \_\_\_\_\_ fingertips on a tabletop leaving your elbow slightly bent. Your fingers should point backwards.
- Gently press your fingers and palm down onto the table by straightening your elbow. You should feel a stretch on the inside of your forearm.
- Hold this position for \_\_\_\_\_ seconds.

Repeat \_\_\_\_\_ times. Complete this stretch \_\_\_\_\_ times per day.



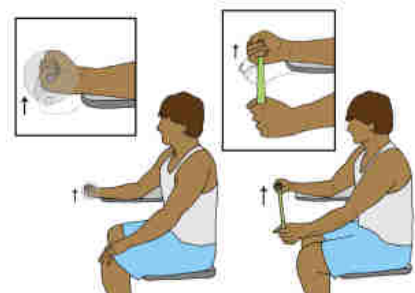
### STRENGTHENING EXERCISES - Radius Fracture

These exercises may help you when beginning to rehabilitate your injury. They may resolve your symptoms with or without further involvement from your physician, physical therapist or athletic trainer. While completing these exercises, remember:

- Muscles can gain both the endurance and the strength needed for everyday activities through controlled exercises.
- Complete these exercises as instructed by your physician, physical therapist or athletic trainer. Progress the resistance and repetitions only as guided.

### STRENGTH – Wrist Flexors

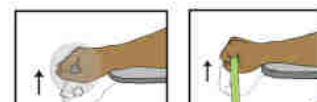
- Sit with your \_\_\_\_\_ forearm palm-up and fully supported. Your elbow should be resting below the height of your shoulder. Allow your wrist to extend over the edge of the surface.
- Loosely holding a \_\_\_\_\_ weight or a piece of rubber exercise band/tubing, slowly curl your hand up toward your forearm.
- Hold this position for \_\_\_\_\_ seconds. Slowly lower the wrist back to the starting position in a controlled manner.



Repeat \_\_\_\_\_ times. Complete this exercise \_\_\_\_\_ times per day.

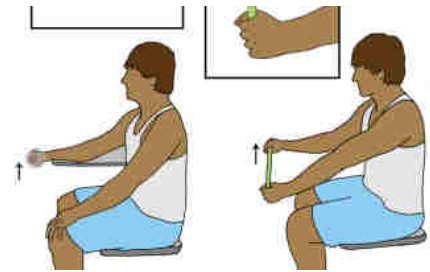
### STRENGTH – Wrist Extensors

- Sit with your \_\_\_\_\_ forearm palm-down and fully



supported. Your elbow should be resting below the height of your shoulder. Allow your wrist to extend over the edge of the surface.

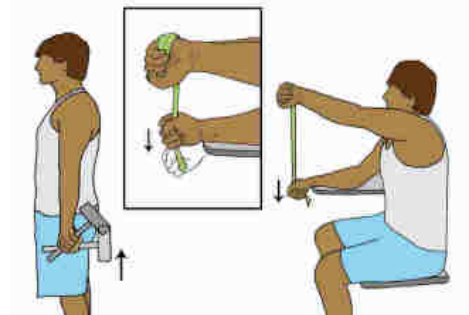
- Loosely holding a \_\_\_\_\_ weight or a piece of rubber exercise band/tubing, slowly curl your hand up toward your forearm.
- Hold this position for \_\_\_\_\_ seconds. Slowly lower the wrist back to the starting position in a controlled manner.



Repeat \_\_\_\_\_ times. Complete this exercise \_\_\_\_\_ times per day.

### STRENGTH - Ulnar Deviators

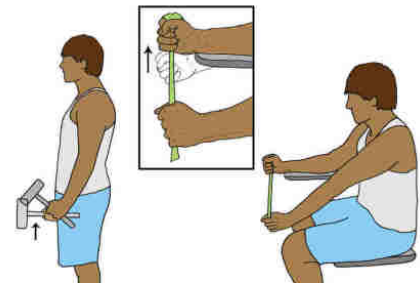
- Stand with a \_\_\_\_\_ weight in your \_\_\_\_\_ hand, or sit holding on to the rubber exercise band/tubing with your opposite arm supported.
- Move your wrist so that your pinkie travels toward your forearm and your thumb moves away from your forearm.
- Hold this position for \_\_\_\_\_ seconds and then slowly lower the wrist back to the starting position.



Repeat \_\_\_\_\_ times. Complete this exercise \_\_\_\_\_ times per day.

### STRENGTH - Radial Deviators

- Stand with a \_\_\_\_\_ weight in your \_\_\_\_\_ hand, or sit holding on to the rubber exercise band/tubing with your arm supported.
- Raise your hand upward in front of you or pull up on the rubber tubing.
- Hold this position for \_\_\_\_\_ seconds and then slowly lower the wrist back to the starting position.



Repeat \_\_\_\_\_ times. Complete this exercise \_\_\_\_\_ times per day.

### STRENGTH – Forearm Supinators

- Sit with your \_\_\_\_\_ forearm supported on a table, keeping your elbow below shoulder height. Rest your hand over the edge, palm down.
- Gently grip a hammer or a soup ladle.
- Without moving your elbow, slowly turn your palm and hand upward to a “thumbs-up” position.
- Hold this position for \_\_\_\_\_ seconds. Slowly return to the starting position.

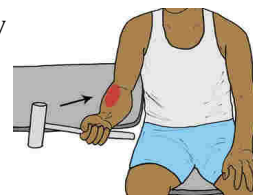


Repeat \_\_\_\_\_ times. Complete this exercise \_\_\_\_\_ times per day.

### STRENGTH – Forearm Pronators



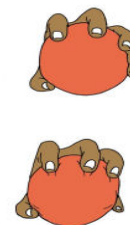
- Sit with your \_\_\_\_\_ forearm supported on a table, keeping your elbow below shoulder height. Rest your hand over the edge, palm up.
- Gently grip a hammer or a soup ladle.
- Without moving your elbow, slowly turn your palm and hand upward to a “thumbs-up” position.
- Hold this position for \_\_\_\_\_ seconds. Slowly return to the starting position.



Repeat \_\_\_\_\_ times. Complete this exercise \_\_\_\_\_ times per day.

### STRENGTH - Grip

- Grasp a tennis ball, a dense sponge or a large, rolled sock in your hand.
- Squeeze as hard as you can without increasing any pain.
- Hold this position for \_\_\_\_\_ seconds. Release your grip slowly.



Repeat \_\_\_\_\_ times. Complete this exercise \_\_\_\_\_ times per day.

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