Distal Radius Fracture

Patient Education Handbook
AdventHealth Orlando

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Important Phone Numbers

**Orthopaedic Traumatology Office** - (407) 895-8890
*Phone calls are answered Monday through Friday from 8:00AM to 5:00PM*

**AdventHealth Orthopedic Institute** - (407) 609-3049
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Introduction

This booklet was developed to help you better understand the treatment, risks and recovery you can expect due to a broken wrist. There are many types of distal radius (wrist) fractures. Treatment will depend on the where the bone is broken and how much the bone has moved. Most distal radius fractures need surgery to treat pain, restore movement and return function. The Orthopedic Team makes sure patients with distal radius fractures are seen as high priority and receive care as quickly as possible.

Distal radius fractures are certainly serious and have a recovery phase that often requires time and patience. For most patients, surgery is successful and people resume normal activities shortly after.
What to Expect After a Wrist Fracture

Plan of Care
Several factors will be considered when deciding on a patient’s direct treatment plan. The medical doctor (hospitalist) will prepare the patient medically for surgery. Once the patient is medically stable, or has “medical clearance”, from the medical physician, the surgeon will make a decision on the surgical treatment plan. Every plan is specific to each patient. Be sure to discuss your specific plan with your orthopedic surgeon.

Treatment Options
A wrist fracture that has caused the bones to shift will need treatment to line the bones up correctly. This can be done in several ways. The type and location of the fracture will decide your treatment.

Along with the wrist fracture, there may be injuries to the ligaments, tendons, muscles and nerves. These injuries will need to be treated with the wrist fracture. Nerves may be stretched or pinched at the time of injury causing pain, numbness and tingling in the hand and fingers. Nerves are very sensitive to pressure, and when the nerve is squeezed or stretched the muscles it connects to in the hand may become weak as well. This may require further treatment in addition to the fracture repair. Your Orthopedic Physician Assistant (PA) and Surgeon will advise you on your specific treatment plan.
Initial Treatment Option:
A Closed Reduction

A closed reduction is a method used to move the bone back into its proper place by hand. This is done to realign the broken bone, to protect the bone and lessen the risk of further injury. A splint or cast will be worn to keep the bone stable while you heal. Keeping the fracture stable may help to decrease the pain associated with a broken bone and improves drainage, which helps reduce swelling.

Surgical Treatment Option:
Open Reduction and Internal Fixation

Surgery will be recommended when the bone is unlikely to stay together with a cast or the fracture is complex. Open reduction and internal fixation is the best option to hold the fracture in place. This method will help to increase recovery of your hand function, decrease stiffness and allow for immediate movement of the wrist. Open reduction and internal fixation is a type of surgery where a plate and screws are used to secure the bone where it is broken. The surgery allows the surgeon to see and then secure the fracture.

It is important before surgery to continue to move your fingers, even though there may be some pain. Finger movement increases your ability to return to normal after surgery.

You will be taken to the operating room and given anesthesia so you will not be awake or feel your surgery. The surgeon will repair your fracture by creating a small skin opening that allows the surgeon to see the fracture. A special plate is then picked out to match the size and length of the fracture. This plate is positioned and locked together with surgical screws to hold the bone together. The fracture site is checked and the wound is washed and closed surgically. A numbing medication is injected into the surgical site. A sterile dressing is applied to the cut in the skin and covered by a removable brace.
Open Reduction and Internal Fixation

Either before or after your surgery, an Occupational Therapist will show you how to do the therapy exercises you will need to continue at home. These exercises are very important to improve movement and strength of your wrist and fingers. Stiffness can be a problem with this type of injury, so your therapy program will make a difference in your outcome.

**You will need to perform your exercises at home three times a day, every day.**

See the Therapy/Exercise section in the back of this book for examples of how to perform your exercises at home.
Discharge

- You will be discharged (released from the hospital) the same day of surgery.
- You will be discharged to your home where you will continue your therapy.
- Continue to do your therapy/exercises 3 times a day until your 2 week follow up appointment with your surgeon. *(Exercise instructions can be found on Pages 19-21.)*

Quick Tips for Pain:

- Ice
- Elevation
- Pain Medication
- Curtis Sling/Elevator Sling
- Wrist Brace
- Dressing check

Call your doctor immediately if you develop or observe any of the following:

- Severe or increasing pain that is not relieved with pain medication
- New onset of numbness and/or tingling of the hand
- Constant fever over 101.4, as this may be a sign of infection
- A significant increase in redness, swelling, bleeding or increasing drainage from the surgical site

If you have any of the above problems or questions, please contact your surgeon’s office at: 407-895-8890.

*Phone calls are answered Monday through Friday from 8:00 AM to 5:00 PM*
Important: Going Home With a Nerve Block

To help you control your pain after surgery, you received a ‘nerve block.’

Nerve blocks:

- Help reduce both long term and immediate pain after surgery. The pain relief will last for 8 to 24 hours after your surgery. Sometimes, your nerve block will wear off sooner or last longer. The typical length is 18 hours from the time of block placement. That will allow you to anticipate when the nerve block will wear off.
- Often make it difficult to feel or move your arm on the side of your body the block was given.
- Effects are often described as making the arm feel heavy, numb, or ‘floppy’ on the side of your body the block was given; these are all normal descriptions.

If you had block to your shoulder or arm:

- You need to wear a sling at all times until the block has worn off to keep your arm safe. You may also have to wear it afterwards, if you are told to by your doctor.
- Do not put anything too hot or too cold directly on your skin, since you will not be able to feel it.
- Move your arm around often to keep from putting too much pressure on one area for long time.
- You may feel more comfortable sleeping in a recliner with pillows under your arm.
- Check the color of your fingers every few hours if you have a cast or bandage around your arm. Call your surgeon if your fingers are bluish or purple in color.

When you notice a tingling feeling or a new discomfort in your arm, that may mean your block is starting to wear off. It is recommended to start taking the pain medicine you were prescribed when this happens. Your pain medicine usually starts to work in about 15 minutes, but has its best effect after about an hour.

* If you have not had any pain before going to bed, you may want to take your pain medication before laying down to sleep. You may also set an alarm to check and see if you are having any tingling or new discomfort. If there are signs of the nerve block wearing off you can take your pain medication before the block fully wears off. (See the “Taking Pain Medication at Home” section of this book.)

* If you feel the effects of the block for longer than 48 hours, please call JLR Catheter Service 407-992-6566.
Understanding Why Different Treatments Are Necessary

To understand the type of treatment you received, you need to understand your wrist.

Understanding the Wrist & Distal Radius Fractures

The radius is the largest bone in the forearm located on the thumb side of your arm. Next to the radius is a smaller bone called the ulna. These two together make up your forearm. They come together at the wrist joint.

What is a Distal Radius Fracture?

The radius is the larger of the two bones of the forearm. The end toward the wrist is called the distal end. A fracture of the distal (the area located farthest from the center of the body) radius (the wrist) happens when the area of the radius near the wrist breaks.

How Do Distal Radius Fractures Occur?

The distal radius fracture usually occurs following a fall on an outstretched hand, or in an accident where a strong force on the hand causes the wrist to break.
Types of Distal Radius Fractures

A fracture of the radius alone; where the bone remains stable and in the correct position is called a *simple fracture*.

A fracture is considered unstable when the bone pieces are *displaced* or no longer in the correct position. This is the type of break that may cause the wrist to look crooked or deformed.

A *comminuted* fracture is considered to be an unstable fracture, as the bone breaks into multiple pieces of bone.

If your break extends into the wrist joint, it is called an *intra-articular fracture*. A wrist fracture that does not extend into the joint is called an *extra-articular fracture*.
Healing & Recovery After Wrist Surgery

The recovery time can vary quite a bit depending on how bad your break is and the factors that affected your plan of care, (i.e. your age, activity level and general medical health). Existing arthritis or Osteoporosis will affect the healing process as well. Your commitment to care for and exercising your wrist will be the key to the return of joint function. It is not unusual for recovery to take several months. Most people return to normal daily activities when the fracture is healed.

Pain Management

Elevation: It is important to raise your arm above heart level to help with swelling and pain. Exercise will also help with blood flow and movement, and at the same time decrease swelling. Keeping your arm elevated above your heart allows gravity to help move the fluids away from your arm. Rest with your arm on 2-3 pillows. Do not let your arm to hang down at your side for long periods of time as this position will increase the swelling and pain.

If you received one from the hospital, the Elevator Sling (or Curtis Sling) can also be used to keep your wrist above heart level and help with pain and swelling. This sling can be helpful while sleeping as well.

Ice: Ice controls swelling and pain by slowing down the blood flow in your wrist. Place crushed ice in a plastic bag (or a bag of frozen peas) over your hand 4-6 times every day for no more than 20 minutes at a time. Ice can be used while the original post-op dressing and splint are on. Once the original dressing has been removed, place a thin towel between your skin and the ice.
Healing & Recovery After Wrist Surgery

**Pain Medication:** Most patients will need some pain medication for a few days after leaving the hospital. Pain medication will be prescribed for you. It is important that you understand your medication. Follow the instruction sheet called: “Taking Pain Medications at Home” on page 14 in this book.

**Exercise:** Gently move your fingers and wrist to avoid wrist and finger stiffness. Keeping the range of motion in your elbow and shoulder is also important while you heal. Gently move your elbow and shoulder often. This activity will prevent pain and stiffness in these joints.

You may begin exercising by moving your fingers, hand and forearm right after surgery. *(Refer to page 19-21 for more exercises.)*

**Be sure to wear your brace.** It provides comfort and protects the wrist as it heals. You may use your hand for simple tasks such as brushing your teeth or combing your hair. Remove the brace to perform your exercises. Continue to perform your exercises as you were shown, to avoid stiffness.

**Therapy:** Occupational therapy can begin right away and will assist you with returning to activities of daily living sooner. This therapy greatly improves function and motion of the wrist and hand, and provides an excellent outcome for most patients.

You may be provided a list of outpatient therapy options when you leave the hospital. If not, you can contact **Florida Hospital Sports Medicine and Rehabilitation by calling:** 407-303-8080 or visiting: www.fhsportsmed.com to find a location near you. *(Be sure to have your prescription available when you make your appointment.)*

**Sleeping:** Sleeping in a bed, on your back, with your surgical wrist raised up may be the most comfortable position after surgery.

**Showering:** You may shower when there is no drainage on the bandage when you change it. When showering, make sure to use a clean towel and pat the incision dry. No tub baths or swimming until you see your surgeon on your first follow up visit.
Taking Pain Medications at Home

It is important for you and your family to understand the correct way to take your pain medications at home. The prescription will provide enough medication to last until your first follow up visit with your surgeon. Upon discharge from the hospital, you received printed information about the medications. Please read this information prior to taking your medications. You should understand the side effects and benefits of your medication.

- Respect the power and effects of your pain medication. If you do not understand something about your prescription, ask questions.
- Take your medications as advised; at the correct dose and at the correct time.
- Do not take additional pain medications unless directed to do so by your physician.
- Do not increase how often or how much of your pain medication you take.
- Pain is easier to relieve when the pain level is a 3 on a scale of 1-10. Taking your pain medication when you start to feel uncomfortable will help avoid the problem of "chasing" your pain later.
- Since pain medication will cause constipation, make sure you take a laxative regularly for as long as you are taking your pain medication.
- Try relaxing, listening to your favorite music, watching a movie or any other method of relaxation that works for you. This will improve how well the pain medication works.
- Call your surgeon if your pain gets worse, if you can’t control your pain at home or if you have bad side effects from the pain medication.
- If you have any questions about the medication you are taking, contact your surgeon.
Dressing Changes at Home—Gauze and Spandage

Dressing changes are done to clean your surgery site and prevent infection. The dressing protects your incision. Each day the dressing will need to be changed until you return to see your surgeon. Taking care of your wound will help it heal. If your dressing becomes wet or dirty, replace it. Cover your incision with plastic when taking a shower.

**Supplies:** You will be given some supplies when you leave the hospital. Additional dressing supplies can be obtained at local pharmacies.

- Clean gauze dressings
- 2 x 2 and 4 x 4 pads
- Normal saline
- Disposable cup for saline
- Paper tape
- Spandage (sleeve like net dressing) if needed
- Plastic bag to discard old dressings into

**Steps to follow:**

1. Always wash your hands with soap and water before changing your surgical dressing. Hand washing is the single most important thing you can do to prevent infection.
   - *Never* touch your surgical site with your hands, as bacteria can easily be passed from your hands to your wound.

2. Pour a small amount of normal saline into a disposable cup.

3. Gently remove your old dressing. If the dressing is sticking to your skin, wet it with the normal saline and wait a few minutes. Then remove the dressing.

4. Discard dressing into plastic bag.

5. Clean incision area with normal saline using gauze pads. Pat the incision dry with a clean dry gauze pad.

6. Open the dressing package carefully touching only the edges of the dressing. Lay the center of the dressing over the incision line.

7. Secure the dressing with tape or spandage (the sleeve-like gauze).

8. Seal the bag with the old dressing and put it in the trash.

9. Put your supplies away and wash your hands.
Constipation

Constipation is when you have a hard, dry bowel movement (stool), have fewer or smaller stools or you have a difficult time having a bowel movement or passing a stool.

Additional signs of constipation may include:

- Fullness in your abdomen, a bloating feeling
- Painful abdominal cramping and or gas pains
- Poor appetite
- Straining with bowel movements

What causes constipation?

- Prescription pain medications are a common cause of constipation
- Being less active than usual
- Not drinking enough fluids
- Not eating enough fiber
- Not going to the bathroom when you initially feel the urge to move your bowels.

What is the best thing to do to prevent constipation?

- Increase fluid intake, especially warm drinks like tea, coffee or warm water with a squeeze of lemon
- Drink 8, 10 oz. glasses of fluids daily
- Include mild exercise and walking in your daily activity. Follow all directions regarding weight bearing and exercising that were given to you by your physician and physical therapist.
Constipation

⇒ Increase foods with fiber in your diet. The following foods should be included:

1. Whole grain breads and cereals
2. Dried fruits, raisins, prunes and dates
3. Fresh fruit, apples, pears, bananas and cantaloupe
4. Vegetables, carrots, potatoes, peas and beans

Constipation is the most common side effect of taking pain medication. This side effect usually will not lesson or go away as long as you continue on pain medication.

Treatment for constipation should always be included when you are taking prescribed pain medication.

Call your doctor immediately if you are constipated and are experiencing:

- A fever, vomiting or cramping
- Abdominal pain or bloating
- Inability to pass gas

If you have any of the above problems or questions, please contact 407-895-8890.
Home Safety

Before you go home, it is important to make sure your home is set up right for you to recover safely:

**Tips:**

- Heavy housework such as vacuuming and lifting should be avoided
- Keep commonly used items at the countertop level to avoid excess reaching and bending
- Avoid scatter or throw rugs, rugs with fringes or any other floor covering that could cause tripping
- Make sure all areas have good lighting
- Use non-skid stickers or bath mats in the shower stall or tub
- Place cell phones within reach
- Keep areas such as stairs, hallways, entrances and bathrooms as clear as possible of items that may cause tripping
- Wear shoes with a back strap that provide support. Avoid slippers or flip flops
- Use the equipment as recommended by the occupational therapist to make sure you are safe

**Stairs (Inside and Outside):**

- Are the step surfaces non-slip and in good repair?
- Are step edges visually marked to avoid tripping (i.e. colored adhesive tape)?
- Are stairways adequately lit?
- Are the handrails present? Are they present on both sides? Are handrails securely fastened to the walls?

**Outside of the Home:**

- Are walkways in good repair, non-slip and free of objects that could be tripped over?
- Is there enough outdoor lighting to provide safe walking at night?
Therapy/Exercise Program

The following instructions and restrictions are to be followed until your first follow-up visit with your surgeon.

- No weight bearing on your surgical arm
- No lifting over 2 pounds with your surgical arm
- First, use your own muscle power to perform the exercises, and then use your other hand to assist or help stretch after moving as far as you could with or without help.
- Remove your splint when you exercise 3x per day. Put your splint back on when not exercising.
- Wear your splint during sleep the first 2 weeks
- Elevate your hand above your heart when it is swollen
Personal Exercise Program

The following exercises taught by your occupational therapist as directed by your surgeon are to be maintained until your follow up visit with your surgeon.

**TABLE TOP**
1. Bend at knuckles to form a flat “table top” with fingers.
2. Then straighten your fingers.
3. Repeat 10 times, 3 times a day.

**MAKE A FIST**
1. Make a fist.
2. Then straighten fingers.
3. Repeat 10 times, 3 times a day.

**PALM UP and DOWN**
1. Bend your elbow and rest elbow by your side.
2. Without moving your elbow away from your side, rotate your forearm so that your palm is facing up then down.
3. Repeat 10 times, 3 times a day.

**WRIST FLEXION (UP AND DOWN)**
1. Place the wrist of your affected hand beyond the edge of a table with the palm facing down.
2. Place the other hand on the back of your affected hand.
3. Gently and slowly, bend the hand at the wrist towards the floor, keeping your forearm flat on the table.
4. Repeat 10 times, 3 times a day.
Personal Exercise Program

WRIST EXTENSION
1. Place wrist of your affected hand beyond the edge of the table with the palm down.
2. Place the other hand on the palm of the affected hand.
3. Gently and slowly bend the hand at the wrist towards the ceiling, keeping the forearm flat on the table.
4. Repeat 10 times, 3 times per day

ELBOW BEND & STRAIGHTEN
1. Grasp the wrist of the arm you want to exercise.
2. Bend your elbow and assist the movement with your other hand.
3. Then, straighten your elbow
4. Repeat 10 times, 3 times per day

SHOULDER FLEXION
1. Hold hand with yourself.
2. Lift arms up as far as you can.
3. Repeat 10 times, 3 times per day

SHOULDER ABDUCTION
1. Lift your arm up sideways with the thumb leading the way.
2. Repeat 10 times, 3 times per day
References


FLORIDA HOSPITAL ANESTHESIOLOGY. (2017, APRIL). POST NERVE BLOCK DISCHARGE INSTRUCTIONS. ORLANDO, FL, US.
feel whole™