

HAND SURGERY



Treatment to Relieve Pain and
Restore Function

Having Hand Surgery

Your hands play a vital role in nearly everything you do. So when something goes wrong, it can disrupt your life. This booklet will help you learn more about how your hand works, problems that can occur, and how they can be treated with surgery.

Types of Hand Problems

Any one of the problems below can cause pain. Some make it difficult to use your hand properly. Either way, hand problems make it hard for you to carry on normal activities. In this booklet, we will discuss:

- **Tendon problems. Tenosynovitis** (swollen and inflamed tendons) or injury can make normal hand movement difficult and painful.
- **Masses** (abnormal growth of tissue or collection of fluid). Masses may or may not be painful or interfere with normal hand movement.
- **Contractures** (loss of some motion in a finger or thumb, possibly due to arthritis or injury). This prevents fingers from moving as they should.
- **Arthritis.** Inflammation and joint stiffness can cause or worsen hand pain and make it hard to use your hand.



When You Need Surgery

Your provider may have suggested nonsurgical treatments. NSAIDs (nonsteroidal anti-inflammatory drugs), splints, cortisone injections, and certain exercises are common forms of early care. But these methods may not relieve your problem. Surgery may be the best option to relieve pain and restore your hand movement and function.



Be Informed

The goal of hand surgery is reduced pain and improved function in your hand. Understand what surgery can and can't do for you. Discuss any other treatment options that might help relieve symptoms or improve movement in your hand. Follow your surgeon's advice to help ensure a smooth recovery. Be aware that all surgery carries some risk. You and your surgeon will discuss the risks and possible complications of hand surgery.

Risks and Possible Complications

Risks of hand surgery may include:

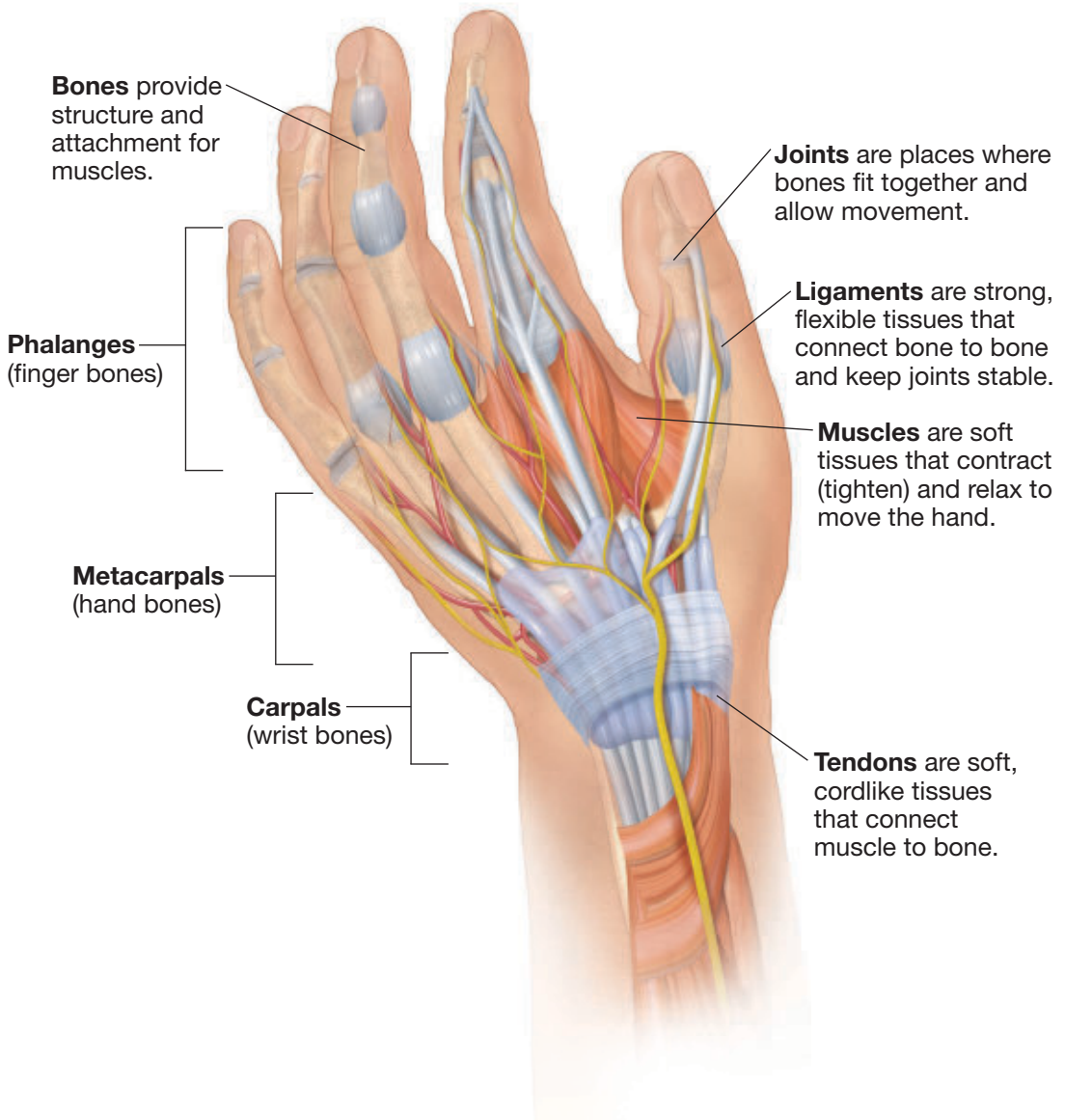
- Unrelieved pain
- Severe swelling
- Excessive bleeding
- Impaired circulation
- Tingling or numbness
- Impaired movement
- Infection
- Risks of anesthesia



An Inside Look at Your Hands

Your hands contain more bones and moving parts than almost any other part of your body. When hands are healthy, all of these parts work together. This allows hands to perform many tasks, from tiny movements to acts of strength.

Back View of Hand



Hands at Work

- **Moving:** Muscles, tendons, nerves, and bones all work together. They control tiny hand movements, like those used to play the piano or type.
- **Gripping:** Muscles and bones work with the palmar fascia to give you the strength to grip and lift heavy objects.
- **Touching:** Nerves in the hands are so sensitive that they can help you tell the difference between a nickel and a quarter without looking.



The palmar fascia is a firm layer of tough tissue under the skin on the palm of your hand.

Palm View of Hand

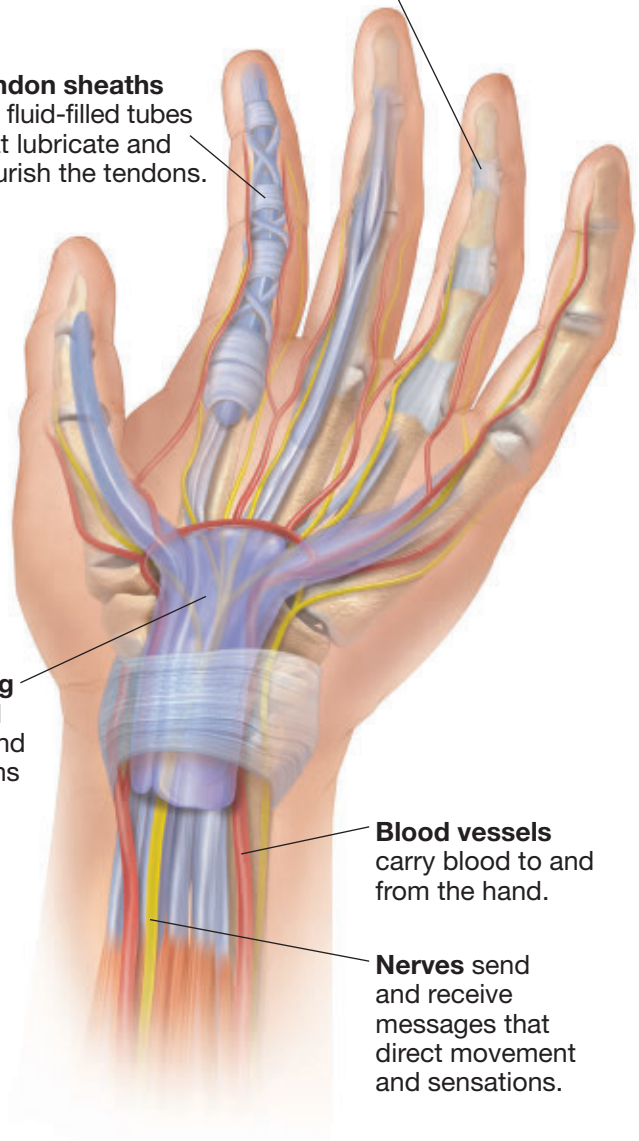
Volar plates are special ligaments that stabilize finger joints.

Tendon sheaths are fluid-filled tubes that lubricate and nourish the tendons.

Synovial lining produces fluid inside joints and around tendons that allows for smooth movement.

Blood vessels carry blood to and from the hand.

Nerves send and receive messages that direct movement and sensations.



Your Medical Evaluation

To make a diagnosis, your surgeon will talk with you and evaluate your hands. The results will help you and your surgeon decide whether surgery is your best option.

Medical History

Your surgeon may ask about your general health and about any recent hand injuries. You may be asked about the kinds of tasks you perform on the job and at home.



The Hand Exam

To pinpoint your problem, your surgeon will examine your hand closely. Your hands will be inspected for signs of infection and sensitive areas. Your surgeon will look for places where function and movement are impaired. Your hand's **range of motion** (how much the fingers and hand can bend and straighten) will also be tested.

Imaging Tests

To confirm a diagnosis, your surgeon may order tests to see what's happening inside your hand. These may include MRIs, x-rays, or other imaging tests.

Is Surgery an Option?

Together, you and your surgeon will decide whether your hand problem is best treated with surgery. Most hand surgeries are not urgent. This means you should be able to have surgery when it's most convenient for you.

Your Surgical Experience

The procedure may be done in your surgeon's office, a hospital, or a surgical center. You may go home the same day or stay overnight. This depends on the type of surgery you have. Plan ahead before surgery. This will improve your experience and aid in your recovery.

Planning Ahead

- Make and freeze meals that are easy to reheat.
- Take care of day-to-day business ahead of time, such as sending e-mails or paying bills.
- Arrange for an adult to drive you home after surgery.
- Ask your surgeon how long you may need to be away from work.

Before Surgery

- Tell your surgeon all of the medications you take. This includes herbs, supplements, and over-the-counter medications. You may be asked to stop taking some or all of them before surgery.
- If you smoke, it's best to stop. Ask your surgeon for instructions.
- Stop eating and drinking before surgery as instructed.

During Surgery

You may be asked your name and procedure more than once. This is for your safety. The hand to be operated on will be marked. Before the procedure begins, you will be given medication to keep you free from pain. This will be discussed with you. You may be very drowsy or asleep, or relaxed and awake. If you are awake, you may feel some discomfort from the cuff on your arm. The cuff stops blood flow to your hand during surgery so the surgeon can see and work on the tiny structures of the hand.



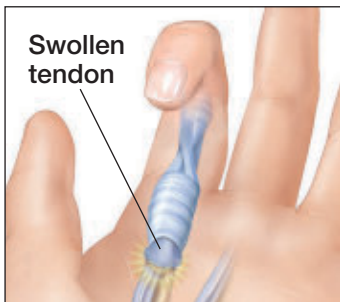
Shop before your surgery and make meals to eat during recovery.

Surgery for Tenosynovitis

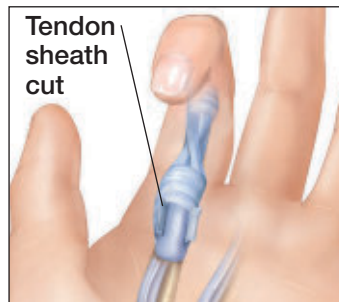
Tenosynovitis is swelling and inflammation around tendons. It limits the ability of a finger or thumb to move freely. A common cause is **repetitive motion**, in which an action is repeated over and over. This can irritate a tendon, causing it to become swollen and inflamed. The goal of surgery is to open up space around the swollen tendon. This prevents further swelling and relieves pain. The size and location of the scar will depend on the procedure. Types of tenosynovitis include **trigger finger**, **de Quervains tenosynovitis**, and **intersection syndrome**.

Trigger Finger

Trigger finger occurs in a finger or the thumb. It may be aggravated by grasping objects over and over. When a swollen tendon can't slide through its tendon sheath, the tendon "locks," often in the bent (trigger) position. When the finger is moved, you may feel a pop or catching sensation.



The swollen tendon can't move through its tendon sheath. The finger stays bent.



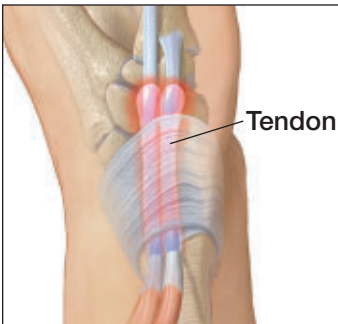
A small piece of the tendon sheath is cut. This enlarges the space and releases the swollen tendon.



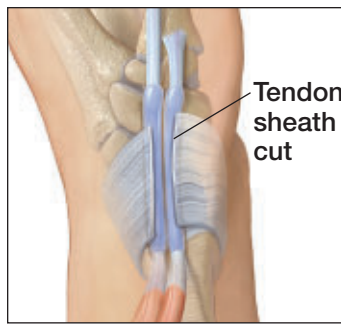
The tendon is free to move through its tendon sheath. This allows the finger to straighten better.

De Quervains Tenosynovitis

De Quervains tenosynovitis affects the thumb. It can be caused by repetitive motion, injury, or aging. The tendon becomes inflamed or its sheath becomes too tight to allow normal movement. You may notice a “knot” on your wrist near the thumb. You may also feel pain as you use the thumb.



The tendon is stuck in its tendon sheath.



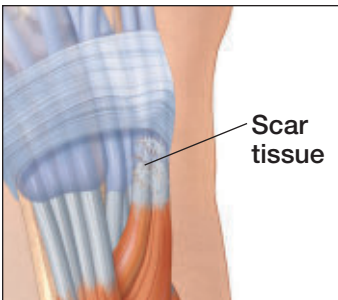
Cutting the affected tendon sheath gives the tendon room to move.



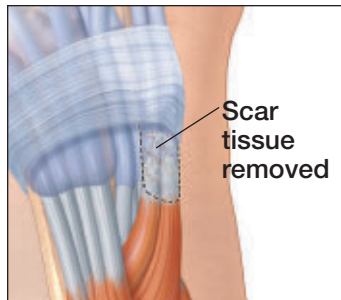
The tendon can now move freely and painlessly.

Intersection Syndrome

Intersection syndrome, or crossover tenosynovitis, occurs when tendons of the thumb rub over the wrist tendons and become swollen. This can be due to repetitive motion or injury.



When swollen tendons rub together, scar tissue forms.



Scar tissue is removed or released, creating space.



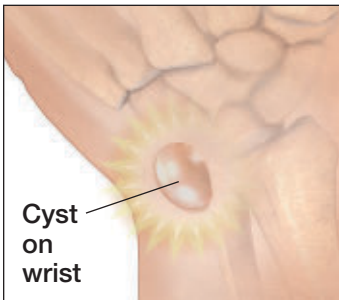
After surgery, tendons glide smoothly.

Surgery for Hand Masses

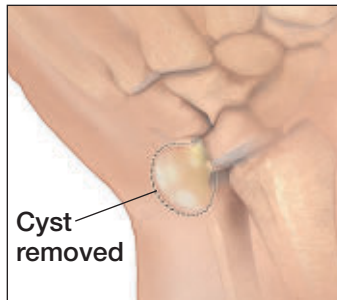
Some hand masses may be **cysts** (fluid-filled swellings). Others are **tumors** (groups of abnormal tissue). A mass may become large enough to interfere with the use of your hand. A mass may also cause pain. If needed, your surgeon will remove the mass to help restore function and relieve pain. The size and location of the scar will depend on the type of procedure. Types of hand masses include **ganglion cysts**, **mucous cysts**, and **giant cell tumors**.

Ganglion Cyst

Ganglion cysts are firm, fluid-filled swellings that tend to grow with time. They are often found on the back, and sometimes the front, of the hand. It is not entirely clear why they form. The cysts can be painful and may make some hand or wrist movements harder. A ganglion cyst can come back after it's been surgically removed.



The fluid-filled cyst causes pain or impairs movement.



The cyst is removed.



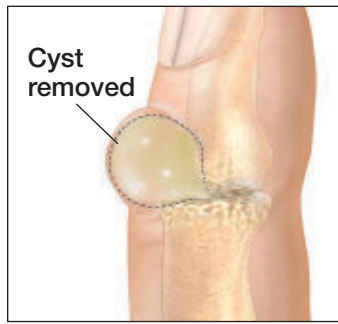
Once the cyst is gone, painless movement may be restored.

Mucous Cyst

A mucous cyst is a kind of ganglion cyst found on the end joint of a finger. It may be caused by arthritis or injury to the joint. The cyst is often firm and sometimes painful. The fingernail may grow unevenly because the cyst is near the nail growth cells. After it's been surgically removed, the cyst can sometimes grow back.



A mucous cyst may cause pain.



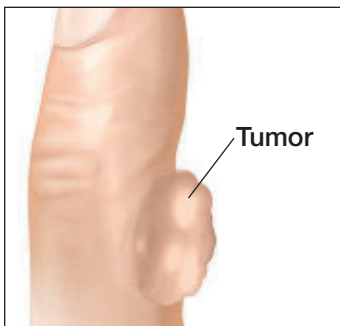
The cyst is removed.



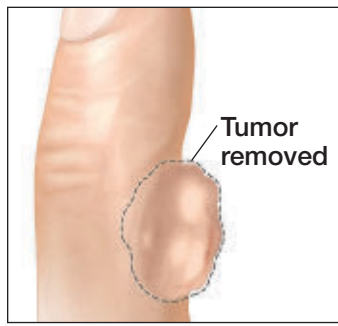
Once the cyst is gone, healthy skin and nail may grow back.

Giant Cell Tumor

A giant cell tumor often starts out as a small, hard, unevenly shaped mass on a finger or hand. It may stay the same size for years and then grow larger. The tumor may cause pain and limit movement. Your surgeon removes the tumor. Though these are rarely cancerous, the removed mass will be checked for cancer cells.



The unevenly shaped tumor may grow from one side of the finger to the other.



The tumor is removed.



Once the tumor is gone, pain is lessened and movement may return.

Surgery for Contractures

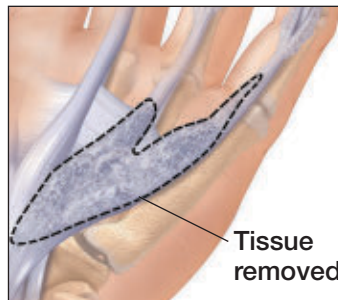
A contracture of the hand, finger, or thumb leads to decreased range of motion. If a finger won't bend or straighten properly, the hand can be harder to use. Your surgeon will remove, repair, or replace the tissue that's causing the contracture. The size and location of the scar will depend on the type of procedure. Contractures can result from **Dupuytren contracture, flexor and extensor tendon injuries, and basal joint arthritis.**

Dupuytren Contracture

Dupuytren contracture is a thickening of the palmar fascia most often affecting the ring and little fingers. This can be an inherited problem. It's painless, but often restricts movement so much that the fingers can't straighten. During surgery, the thickened bands of tissue are removed. This problem may also be treated by injecting an enzyme to help rupture (break apart) the thickened tissue.



Bands of the palmar fascia tighten so fingers can't straighten.



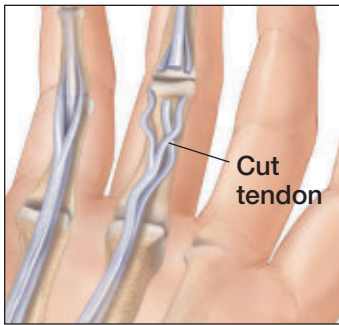
The thickened bands of the palmar fascia are removed.



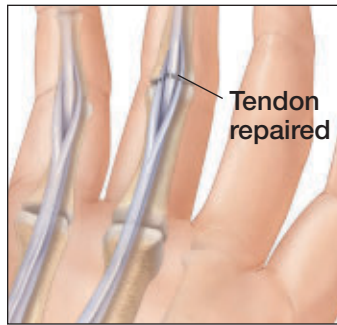
After surgery, therapy helps the fingers straighten more.

Flexor and Extensor Tendon Injuries

Tendons of the fingers and hand can be injured by cuts. They can also be torn or snapped when a finger is yanked or jerked. Your surgeon will rejoin the ends of the tendon and repair any damaged tissue. Sometimes, new tendon is grafted to replace the old one.



A cut tendon causes the finger to lose its function.



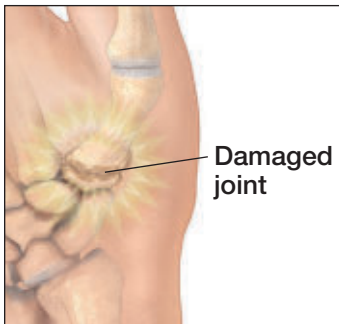
The ends of the tendon are reattached.



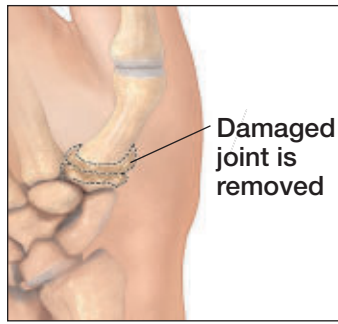
After surgery, therapy helps the finger function better.

Basal Joint Arthritis

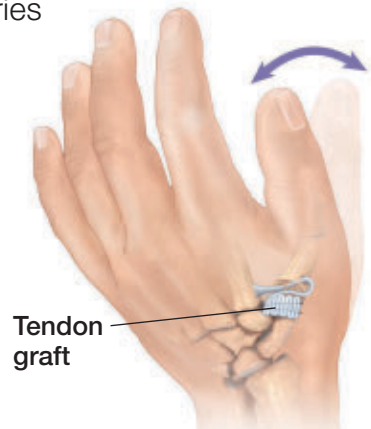
The basal joint, in the lower part of the thumb, is often affected by arthritis. The joint becomes inflamed and slowly wears out. Pinching and grasping become very painful. Common surgeries include excisional arthroplasty and joint fusion.



The joint is irritated and swollen. Grasping is painful.



With excisional arthroplasty, the damaged joint is removed and may be replaced with a spacer or tendon graft.



With the damaged joint removed, you'll have less pain and be able to use your thumb.

Help Your Hand Heal

After surgery, take an active role in your recovery. Follow all directions you are given by your surgeon. This will help ensure your recovery goes smoothly.

Caring for Your Hand

Try not to bump your hand. Ask your surgeon whether you can move or lift anything while you're still wearing bandages, a splint, or a cast.

- **Keep it up.** Keep your hand elevated above heart level for the first few days after surgery. This helps reduce swelling and pain.
- **Keep it dry.** Take care not to get your cast or bandages wet. This helps prevent infection and speeds healing. Tape one or more sturdy plastic bags over your cast or bandages when you bathe or shower.

Relieve the Pain

Your surgeon may prescribe medications to reduce pain and swelling. You might also be told to apply a cold source to your hand. You can use an ice pack or a bag of frozen vegetables. Leave the cold source on your hand for as long as it's comfortable. (It may take a few minutes before you can feel the cold through the cast or bandages.) Do this a few times a day for the first days after surgery.

▶▶ Use an ice pack or bag of frozen vegetables to help reduce pain and swelling.



Follow Up with Your Surgeon

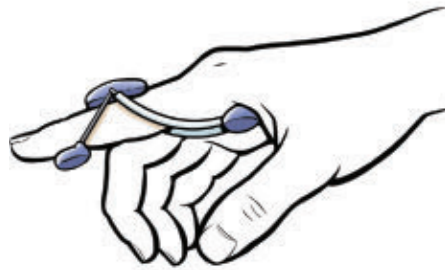
During a follow-up visit, your surgeon will check your progress. The stitches, bandages, splint, or cast may be removed. A new cast or splint may be placed. Once your hand has healed enough, your surgeon may prescribe exercises.

Hand Exercises

Surgery is only the first step in recovering your hand's strength and flexibility. Your surgeon will likely prescribe exercises after hand surgery. These may be done under the guidance of a physical, occupational, or hand therapist. Follow the exercise instructions given to you by your healthcare team. This will help ensure that your hand can return to proper function.



Squeezing a sponge helps restore your hand's flexibility.



A splint helps you regain the straightening motion in the finger joint.

When to Call Your Surgeon

Call your surgeon if you have:

- A fever of 100.4°F (38°C) or higher, or as directed
- Side effects from your medication, such as prolonged nausea
- A wet or loose dressing, or a too-tight dressing
- Excessive bleeding
- Increased, ongoing pain or numbness
- Signs of infection (such as warmth or redness) at the incision site





Talk with Your Surgeon

Hand surgery can help relieve pain and let you get back to daily activities in comfort. Talk with your surgeon about your goals and whether hand surgery is the best choice for you. Your surgeon and healthcare team are there to support you.

A Good Experience

The better prepared you are for surgery, the smoother recovery is likely to be. To help have a successful recovery:

- Follow pre-op instructions carefully.
- Arrange for support during recovery.
- Keep all follow-up appointments with your surgeon.
- Follow your exercise plan as directed.

Also available in Spanish

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