HAND INJURIES AND PROBLEMS

Orthopaedic Associates of Central Texas (OACT) offers board certified physicians and orthopaedic surgeons to treat the hand and upper extremities. We offer both general and specialized hand care, starting with a complete evaluation and treatment options to include non-surgical approaches, advanced surgical options, and rehabilitation. Our surgeons are also experts in diagnosing and caring for shoulder and elbow problems and use the latest advancements in technology to diagnosis, and perform the correct treatment plan to maximize your recovery.

The Hand

Human hands serve many purposes and important functions from helping us: eat, dress, write, work, create art, and do many other activities. Performing these tasks requires our hands to have sensation and movement, both in the joints and muscles. However, problems can occur in the hand, wrist, elbow, and/or shoulder from both trauma and overuse injuries. Therefore a comprehensive evaluation and treatment plan must be constructed to address the different types of tissues that make all the functions of the upper extremity possible.
Common types of injuries seen at Orthopaedic Associates of Central Texas (OACT)

- Arthritis of the hand, thumb, wrist, and shoulder
- Fractures of the fingers, hand, wrist, and elbow
- Nerve injuries
  - Carpal tunnel syndrome
  - Ulnar tunnel syndrome
- Tennis elbow
- Golfers elbow
- Wrist pain
- Ganglions (Cysts) of the wrist
- Tendon injuries and over use syndromes
- Boutonnière deformity
- DeQuervain's tendonitis
- Cuts on the fingers and hand (replantation)
- Sports injuries to the hand and wrist
- Restoring hand function after spinal cord injury

Advanced Treatments Available at Orthopaedic Associates of Central Texas (OACT)

- **Grafting** or the transfer of tissues such as: skin, bone, nerves, or tendons from a healthy part of the body to repair the injured parts.
- **Flap surgery** or moving skin, along with its underlying structures of muscles and blood vessels from a healthy part of the body to the injured site.
- **Replantation or transplantation** of fingers or structures of the hand using a precise and delicate surgery performed under magnification, know as microsurgery. Some procedures may require several operations over a period of time.
The Most Common Types of Hand Problems

**Ganglion Cysts**

Ganglion cysts are the most common mass or lump in the hand and are commonly found on the back of the wrist. These are generally non-cancerous, fluid-filled cysts and arise from irritation from the ligaments, joint linings, or tendon sheaths within the hand and wrist. Ganglion cysts are an inflammatory process and can change in size or disappear on their own.

Many ganglion cysts do not require treatment other than removing the repetitive irritation. However, if the cyst is chronically painful and interferes with your daily function our orthopaedic surgeon can recommend the different methods of intervention, to include surgical removal of the cyst. This may not permanently eliminate the cyst as they have been known to reoccur.

**Carpal Tunnel Syndrome**

Carpal tunnel syndrome is characterized by numbness and tingling in the hand, especially at night or pain and numbness with prolonged gripping and/or upright positioning of the hand. In some cases the pain can go all the way up to the shoulder, or be caused by a nerve being pinched in the shoulder or elbow, this is why it is important to be correctly diagnosed by a trained physician.

The symptoms of carpal tunnel syndrome are caused by pressure on the median nerve as it passes through a tunnel in the wrist and into the hand. The tendons of your hand and thumb also travel in this tunnel, creating a small area for the structures to fit through.

Care for carpal tunnel syndrome can range from: rehabilitation, wearing a splint or brace to rest the wrist, steroid injections into the carpal canal to decrease swelling, and when non-surgical treatment is unsuccessful surgery may be required. Generally a combination of treatments are attempted prior to surgery as the outcomes of any procedure depend on how long the
condition has existed and how much damage has been done to the nerve. For that reason, it's a good idea to see a doctor early if you think you may have carpal tunnel syndrome.

**Arthritis of the Hand**

Rheumatoid arthritis is an inflammation of the joints that can become a progressive and disabling disease. It can affect any joint of the body, but in the hand it often deforms the finger joints and forces the fingers into an awkward position that hinders normal movements and causes pain.

Management of rheumatoid arthritis can often be managed without surgery by: wearing splints, physical therapy to strengthen weakened areas, anti-inflammatory medication, steroid injections into the joint, and other conservative methods. In some cases, surgeons can repair or reconstruct many areas of the fingers, hand, or wrist by removing tissue from inflamed joints, repositioning tendons, or implanting artificial joints. It is difficult to regain full function of the fingers, hand, and wrist but one can generally expect a significant improvement in function, pain, and appearance. Like Cysts, removal or repair of the arthritic areas does not remove the cause of the disease and it can return, requiring additional treatments and surgeries.

**Lateral Epicondylitis**

Lateral Epicondylitis is commonly known as “Tennis Elbow” and is a condition that develops when the tendons of the forearm pull from their attachment on the elbow; gradually pulling the tendons away from the bone. A majority of patients that develop this condition are over the age of 40 and generally do not play tennis.

Management of lateral epicondylitis “Tennis Elbow” can often be managed by: wearing splints, physical therapy to strengthen weakened areas, anti-inflammatory medication, steroid injections into the joint, and other conservative methods.

**Hand Rehabilitation**
In most cases, therapy and specifically hand therapy, provided by a physical therapist, occupational therapist or a specialized certified hand therapist can enhance and in some cases speed your recovery to maximize the use of your fingers, hand, and wrist. Therapy is performed under the direction of your physician and the course of rehabilitation is carried out to accomplish many different goals of increasing range of motion, strength, function, and minimize scar tissue development and swelling. Your therapy may include hand exercises, heat and massage therapy, electrical nerve stimulation, splinting, traction, and special wrappings. Patients should know that surgery is one component of a full and successful recovery process, therapy is a second major factor, and following your physician’s orders in regards to modified activity, medications, and adhering to restrictions are the key factors is achieving your maximizing benefits.

FAQ About Hand Surgery

Q) What is the difference between an orthopedic surgeon and a hand surgeon?

A) An orthopedic surgeon is a physician who specializes in treating the bones, joints, ligaments, muscles, and tendons of the musculoskeletal system. A hand fellowship trained surgeon has additional training in the treatment of the hand, elbow and shoulder. At Orthopaedic Associates of Central Texas all the surgeons are orthopaedic surgeons, and some have additional fellowship training or course training in the treatment specific to the hand.

Q) Can I have surgery on both hands at the same time?

A) There are few cases, endoscopic carpal tunnel releases and traumatic injuries to both hands that require urgent treatment, where bilateral surgery is recommended. However, in the situation where there is a choice and time is not critical, it is best to stage the procedures weeks apart to allow the patient to have one hand free without a dressing and with good strength as
the operated hand recovers. This decision is a conversation between the physician and patient with all the benefits, risks and factors covered.

**Q) Once I decide to have the surgery, how soon can it actually take place?**

A) Once your insurance is approved and medical clearance is granted, the surgery can then be scheduled.

**Q) What type of anesthesia is used for these hand procedures?**

A) The patient is sedated and comfortable throughout all procedures. In some cases a local or regional nerve block with a mild sedation is given for the procedure and other times intravenous medications for general anesthetic is used to make the patient comfortable. Your surgical anesthesia will be discussed in detail with the physicians at Round Rock Orthopaedics and Rehab.

**Q) What are the possible complications?**

A) Although uncommon, complications do occur occasionally during or following hand surgery. Infections are the most common complication and these can be prevented with pre-operative and post-operative antibiotics and gentle exercises. Other complications can include: phlebitis (blood clots of a vein), excessive swelling or bleeding, damage to blood vessels or nerves, and instrument breakage are the most common complications, but occur in far less than 1 percent of all arthroscopic procedures.

**Q) Is bleeding around the incisions after surgery normal?**

A) It is not unusual to have some mild bleeding through the small incision areas, and the area should be kept dry and covered. Should this happen and you are at home, you should reinforce the dressing with more sterile gauze. However, if bleeding persists, contact the office.

**Q) Can I go home immediately after surgery?**

A) Generally speaking, many patients can go home the same day as their procedure. It is important to have a healthy spouse or close family member
for driving and at home to help them during the initial days after surgery. For those unable to depend on family or close friends, staying at the hospital for one to two days is occasionally an alternative.

Q) **What is the recovery time for most procedures?**

A) Hand surgery can entail as simple a procedure as a carpal tunnel release or foreign body removal which would allow immediate near full use of the hand, or as complicated as a wrist laceration involving all tendons and nerves which can take up to a year for an adequate functional recovery. The wounds can take several days to week to heal. Although the wounds are small and pain in the joint may be minimal, it takes several weeks or longer for the joint to maximally recover. You should follow the specific activity and rehabilitation program suggested by your physician to speed your recovery and protect future joint function.

**Expectations for Hand Surgery (Before and After Surgery)**

**Pre-operative:** It will take approximately 45 to 60 minutes to get signatures for surgical consents and to review the instructions regarding your surgery. Be sure to bring a list of current medications, including the drug name, dosage, and the days and times you typically take them.

**Pre-admission Appointment:** Prior to this appointment—which takes place at the hospital—you should have had your pre-operative tests performed by your family doctor. This appointment will take approximately one to two hours for lab tests, including blood work, EKG, and chest X-ray. If you have a heart or lung condition, or if you are an insulin-dependent diabetic, you must see your family doctor prior to surgery and get medical clearance. Before you leave, you will also meet with someone from the anesthesia department.

**Before Surgery**

**Admission:** You will be admitted to the hospital the morning of your surgery.
Medications: Stop anti-inflammatory medications and/or aspirin; if you take anticoagulants such as Coumadin, aspirin or Lovenox, your surgeon will tell you how long you should cease taking them prior to surgery.

Food and drink: Do not eat or drink anything for eight hours prior to surgery, except for prescribed medications. On the day of surgery, if you do have a prescribed medication to take, swallow it with a small sip of water.

Length of Surgery: The length of surgery is typically **one to two hours** followed by another one to two hours in the recovery room.

After Surgery

Length of Hospitalization: Average stay for hand surgery is **six to eight hours**. Hand surgery is general performed in the outpatient setting, that you will arrive in the morning and **generally go home the same day**. This may vary on your specific procedure, family/home support, and other factors as outlined by your physician.

Anesthesia: Patients will undergo general anesthesia, and may benefit from regional nerve blocks for post-operative pain control.

Physical Therapy: It is important after surgery to regain full range of motion but to do it with the instruction of trained physical therapists and/or certified hand therapist. You will work with a physical therapist each day after surgery to help you retain a full and active range of motion. After you go home from the hospital, you will need physical therapy from three to six times a week for three to six weeks. **Before surgery, please consult with our staff to arrange outpatient physical therapy with Orthopaedic Associates of Central Texas.**

IMPORTANT: Prior to surgery, VERIFY INSURANCE BENEFITS FOR YOUR CONTINUOUS PASSIVE MOTION (CPM) AND PHYSICAL THERAPY. THESE ITEMS ARE NOT ALWAYS COVERED BY ALL COMPANIES. IT IS VERY IMPORTANT THAT YOU CONFIRM THE NUMBER OF PHYSICAL THERAPY VISITS APPROVED BY YOUR INSURANCE COMPANY FOLLOWING SURGERY.
INFORM YOUR PHYSICAL THERAPY PROVIDER ABOUT WHAT HAS BEEN APPROVED BEFORE YOU BEGIN THERAPY.

**Wound Care:** The surgical dressing is usually removed after two or three days. You may keep the incision open to air as long as there is no bleeding or drainage. We will remove your sutures in the office approximately two weeks after your surgery.

**Pain management:** For the first one to two days after surgery, pain is very well controlled with a PCA (patient controlled anesthesia). It is important to maintain a schedule for the pain medications provided and prescribed. It is best to address the pain before it intensifies. Pain is manageable with medications and will lessen as your surgery heals. Pain medicine can cause itching, nausea, and/or constipation. These are all common side-effects of narcotic-based medications and do not necessarily indicate a drug allergy.

**Driving:** Most patients are able to safely drive a car approximately **three days to two weeks** after surgery. We recommend that patients do not drive cars with a manual transmission while they are healing because of the sudden and jerky movements that can accompany shifting gears and using the clutch.

**Home Care:** You will need help with meal preparation for several weeks following discharge from the hospital. We recommend that you have someone stay with you after you leave the hospital for at least a week (and longer if possible). If this is not possible, please let the nurse know you will need assistance after surgery.

**Things to Report:** Call the office at (512) 244-0766 if you develop any of the following:

- Redness around the incision
- Drainage or bleeding from the incision
- Fever over 101 degrees
- Increased swelling

**Return to Work:** Following hand surgery, depending on the joint, structures involved, and procedure, you will be able to return to sedentary work within
one to four weeks after surgery. We recommend restricting certain work activities.