

Your follow up office appointment is:

\_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

**702-739 - HAND (4263)**

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# Preoperative & Postoperative Instructions

*For the Hand Surgery Patient*

The Minimally Invasive

*Hand*™  
Institute



The Minimally Invasive Hand Institute

*Dedicated EXCLUSIVELY to the care  
of the upper extremity*

*Dr J. Sorelle, M.D., Dr K. Hanna, M.D.  
(Hand Fellowship Trained)*

**Your surgery is scheduled for:**

Date: \_\_\_\_\_

Mon  Tues  Wed  Thurs  Fri

Arrival Time: \_\_\_\_\_

**Your nerve test will be done:**

Date: \_\_\_\_\_

Mon  Tues  Wed  Thurs  Fri

Arrival Time: \_\_\_\_\_

**Your pre-op orders/labs, consent  
and insurance verification**

**is scheduled for:**

Date: \_\_\_\_\_

Mon  Tues  Wed  Thurs  Fri

Arrival Time: \_\_\_\_\_

\* Please remember **NO** eating or drinking  
anything after midnight the day prior to Surgery.

On behalf of the entire staff at

**The Minimally Invasive Hand  
Institute**

**THANK YOU!**

become swollen. These structures are elastic and must stretch to allow the joints to bend fully. When they become swollen with fluid, they are less elastic and simply cannot stretch to allow the joints to bend fully.

This joint stiffness is overcome by multiple repetitions (hundreds of times a day) or passive stretching. Active stretching occurs when you attempt to bend the fingers under their own power. Passive stretching occurs when you take the opposite and bend each joint down as far as it will go and hold firm, steady pressure for a minute at a time. Repeat this process for 15 to 20 minutes several times a day.

This will be uncomfortable because as you bend the finger you are stretching out the tight joint capsule and ligaments, thereby resulting in some discomfort. If you are not experiencing some discomfort when you do this, you are probably not pushing hard enough to do any good. As you perform this passive stretching exercise, you are pushing fluid out of the joint and ligaments, and they are becoming more elastic.

Ten minutes or so after you stop, some of that fluid goes back into the joints, and the finger stiffens up again. A little less fluid returns to the tight joint each time, however, and that is why multiple repetitions over days, weeks or months is necessary to allow the joint to become flexible. The more effort the patient puts into this, the better the final range of motion will be and the sooner it will be reached. The length of time required to reach a maximal result (end point) depends on the severity of the original problem, the nature of the surgery and the patient's own tendency to form scar tissue.

Some patients, despite intensive therapy and a high degree of motivation, simply form a lot of scar tissue and it takes them much longer to reach an end point. Such patients who have a tendency to form scar tissue may not be able to overcome joint tightness. These patients and patients who simply do not perform their exercises may need a secondary operative procedure to surgically release the joints and free tendons.

## WHY SEE A HAND SURGEON?

You would not want an auto mechanic to work on an airplane engine. The end result could be disastrous.

Most patients expect the best possible care and justifiably so. If you have an eye problem, see an ophthalmologist. If you have a heart problem, see a cardiologist. If you have a hand problem see a hand surgeon, initially if possible as it is much easier to correct the problem the first time around. This is the fundamental concept of medical specialization. The hand is a complex array of bones, joints, nerves, tendons, soft tissue and skin. As hand surgeons, we are specialists in the treatment of all these structures of the hand. They must all be treated appropriately so they will function together in the best possible manner. If you have a hand problem, see a **HAND SURGEON**.

## REALISTIC EXPECTATIONS

Our goal as hand surgeons is to take a hand that has been injured by trauma or disease and restore that hand to its *maximal functional potential*. It is specialized training, skill and experience that allows us to do everything necessary to achieve this goal. If such steps are taken, we can restore the hand to as close as perfect as possible. It is very important for the patient to understand that it simply may not be possible to achieve a perfect result and have a hand that appears and functions as though there was never a problem. We do not have the power to turn back the hands of time as if the injury never happened, but we do have the skills to provide you with the best hand surgical care available anywhere. Simply put, years of training, experience and thousands of hand surgical cases have taught us what to do and how to do it.

Failure to seek out the appropriate specialist to perform the operation or failure to follow postoperative instructions, in effect, ensures the hand will not function as well as if the appropriate treatment is received and instructions are followed.

Most hand operations require the patient to take an active role, following surgery, in the rehabilitation of the hand. If the patient does not understand this and does not understand the concept of a realistic expectation, then frustration and dissatisfaction is inevitable. This is not to say that the patient should not have high expectations. In fact, an ideal patient has a good understanding of the severity of the problem, high expectations and a high degree of motivation. These patients receive the best postoperative result and are appreciative of the surgeon and, indeed, the surgeon is appreciative of such patients.

## General Information

Please read this entire pamphlet thoroughly. It has been provided so you can have a full understanding of what to expect on the postoperative course and to answer most of the common questions. As surgeons, we are often asked whether this will be a "simple" (minor) or "complicated" (major) operation. Our response is always the same. It depends on who is doing the operating. Even the most straightforward surgical procedures can be most difficult and complicated if the surgeon is not skillful or experienced. You are seeking the skills of a highly trained, experienced hand surgeon, who is capable of performing the most demanding and detailed procedures (including total joint replacement, reattachment of amputated fingers or hands) with relative ease, precision, and rapidity because the surgeon has done it many times before.

## Problems/Phone Calls

If you are having a problem or a question that is **unanswered by this pamphlet**, please feel free to call the office. Try to do this between 9:00 a.m. and 5:00 p.m. While there is never a charge for after hours phone calls for TRUE EMERGENCIES there will be a telephone consultation fee for after hours calls of a non-emergent nature.

## After Surgery

Following the operation, the surgeon or the surgeon's assistant will speak with family members in the waiting room. It is imperative that family members wait in the waiting room (without leaving for coffee, lunch, etc.); otherwise, they may miss the surgeon or assistant, who will likely need to return to the operating room for subsequent operations.

## The Dressing

**Please do not remove your dressing or change it.** The dressing protects your hand until you return to the office, and removing this dressing could disrupt repaired structures, causing a poor result. Keep the dressing **clean and dry**. Keep the hand elevated, either on two pillows while lying down or in the sling provided. Commercially made waterproof covers are available in the office. Do not let your hand hang by your side as this will cause swelling and increase pain.

## Pain and Pain Medication

A long acting anesthetic is usually placed in the wound at the conclusion of the operation in order to decrease postoperative discomfort, **causing some tingling and numbness until the anesthetic wears off in 24 to 48 hours**. Do not be alarmed by this. An adjacent finger may be tingly as well.

## Nerve Repairs

When a nerve is cut, the distal end degenerates, leaving essentially hollow tubes. The nerve is sewn back together under the microscope using suture nearly invisible to the naked eye. The nerve repair must be protected (by keeping the finger or hand bent) for three weeks. Moving the finger too early or too much can disrupt the repair. Sensation does not return until the nerve grows into the end organ (receptors in the skin). The nerve does not grow at all for one month, then grows at a rate of one inch per month. Although normal sensation is often achieved in children, something less than normal sensation is usually achieved in adults. "Protective" sensation is desired being able to distinguish hot from cold and sharp from dull.

## PATIENT HOME THERAPY AND WOUND CARE INSTRUCTIONS

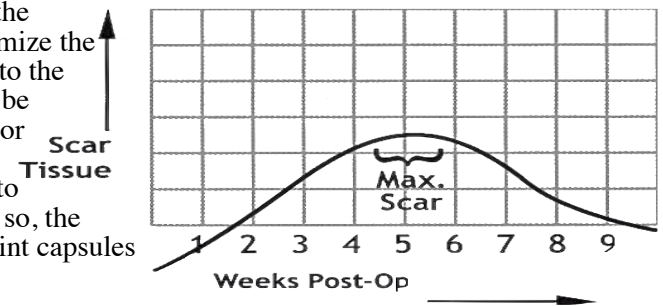
Follow these instructions only when the surgeon tells you it is O.K. to do so.

You can maximize your hand's motion and minimize the scar by following these instructions in addition to any instructions the hand therapist may give you.

Fill the sink with warm water three times daily. You need not add anything to the water. Soak the hand for 15 minutes and squeeze a dish sponge in the water. Afterwards, massage all the wounds very firmly with hand lotion. The type of hand lotion is not important rather, the pressure from the massage remodels scar tissue. This intermittently applied pressure can actually flatten out scar tissue for several months after surgery, similar to the way compression garments minimize burn scars.

Scar tissue reaches its peak between the fourth and sixth post-operative weeks and, typically, this is the time period in which the wound looks it worst. During this time, it is most red, firm and tender. This is the natural healing process, and attention to the massage three times daily for at least two months will desensitize the

wound and minimize the scar. Any injury to the hand, whether it be traumatic injury or surgical trauma, causes the hand to swell. As it does so, the ligaments and joint capsules



## Dupuytren's Contracture Release

Dupuytren's contracture release requires extensive dissection and is usually followed by a marked inflammatory response and swelling. A small tube to remove fluid is usually placed at the time of surgery and removed the first postoperative day. A course of supervised hand therapy and appropriate splinting is essential to achieve the maximal functional result. The length of recovery following this procedure ranges from three weeks to six months or longer, depending on the severity of the contracture, the person's tendency to form scar tissue, and patient compliance with the post-operative therapy. Despite all these factors, some patients with Dupuytren's contracture have a tendency to form scar tissue, and it may take several months before reaching a point of maximal improvement following surgery.

## Fractures

The period of recovery following fractures is dependent on the particular type of fracture, as well as the type of fixation used to stabilize the fracture. Ideally, if the fracture permits, we perform rigid internal fixation techniques with mini-plates and mini-screws in order to stabilize the broken bone without the need for external splint or cast stabilization. This procedure allows the hand to be moved three or four days after surgery and prevents the joint stiffness and loss of motion often seen with the nonrigid fixation techniques sometimes used by "non-hand surgeons". Plates and screws occasionally need to be removed and joint releases will need to be performed secondarily, but this is much less common with the rigid internal fixation techniques as compared to other techniques. Often, the patient is able to return to reasonably normal activities within four weeks following rigid internal fixation of some fractures.

## Joint Replacement

Joint replacement procedures (arthroplasties) are performed for rheumatoid or degenerative disease that has destroyed joint surfaces, causing limitation of motion or debilitating pain. The goal of such surgery is to alleviate this debilitating pain and allow a function range of motion, if not completely normal range of motion. In order to achieve a maximum range of motion following joint replacement, a high degree of patient involvement and cooperation is essential. This may require several months of post-operative therapy.

Fill your prescription and take as prescribed. ***It is not necessary to take the pain medication if you do not have pain.*** The medication should not be continued for any longer than is absolutely necessary. It is acceptable to stop the pain medication and take Tylenol or aspirin if this is sufficient. Rarely will pain medication need to be refilled. ***For refills, you must contact the office between the hours of 9:00 a.m. and 5:00 p.m. Monday through Friday*** and supply the name, location and phone number of your pharmacy. ***Pain medication will not be refilled after 5:00 p.m. Monday through Friday or on the weekends.*** We do not refill routine medication prescribed by other physicians. You must contact the prescribing physician for such refills.

## Activity/Driving

Please do not engage in any strenuous activity, such as yard work or jogging. In order to avoid injury to yourself or others, you are instructed not to drive an automobile or operate machinery until you are completely recovered from your operation.

## Achieving Maximal Functional Results

### (Hand Therapy, Length of Recovery)

The goal of hand surgery is to achieve a maximal functional result after treatment of an injury or treatment of a diseased hand. An absolutely perfect hand is not always a realistic expectation as it may not be possible to obtain such a result. The hand surgeon and hand therapist work together ***with the patient*** to take all the necessary steps to achieve a maximal functional result and make the hand as perfect as is possible. In order to obtain this maximal functional result, ***the patient's cooperation is absolutely mandatory and instructions of the surgeon and therapist must be followed precisely.***

The time required to reach a point of maximal improvement (length of recovery) depends on the particular procedure performed and also varies from patient to patient. The normal physiologic response to surgery is ***inflammatory response that peaks between the fourth and sixth week after surgery. At this time scar tissue and wound tenderness usually at its peak.*** Some patients have a more vigorous inflammatory response than others; these patients tend to form more scar tissue, have more joint stiffness, require intensive therapy, and take longer to recover fully. It is important for the patient to understand this prior to surgery so the patient will not have the unrealistic expectation of having a fully recovered, perfect hand shortly after surgery. As long as the recovery process is continuing, the hand will not function normally and one cannot engage in normal day-to-day activities. Again, the best possible result is achieved when the surgeon, hand therapist and patient all work together to do everything appropriately to make the hand function perfectly or as close to perfect as is reasonably possible.

## REALISTIC EXPECTATIONS FOR SPECIFIC OPERATIONS

### Carpal Tunnel Release (Endoscopic)

The old technique of performing a carpal tunnel release by cutting through the palm resulted in a painful tender wound that persisted for weeks, months or even years, prohibiting the patient from using the hand normally. With the new endoscopic approach, however, this painful incision has been eliminated.

Approximately 50 percent of our patients who have endoscopic carpal tunnel release performed have no tingling, numbness, pain or other complaints at ten days after surgery when the post operative splint, dressing and sutures are removed. The remaining 50 percent take some time longer to fully recover, and this time will depend upon the severity of compression of the nerve. Usually, the more tightly the nerve has been compressed, the longer it will take for the nerve to return to its normal size and function properly. If there has been permanent damage to the nerve, scar tissue forms within the nerve and it may be six months before the nerve stops improving and ***the end point may not be complete resolution of the tingling and numbness.*** This condition is best treated early and has predictably good results when there has been no permanent injury to the nerve. Two percent of patients will have anatomy unsuitable for endoscopic surgery and, in this case, the procedure will be converted to an open carpal tunnel release. Two percent of patients will have persistent symptoms and will require a subsequent open carpal tunnel release.

### DeQuervain's Release, Trigger Finger Release

Locking and snapping of the tendons are relieved with the surgical release, though there may be some intermittent swelling from time to time afterwards. Some tingling in the thumb and/or wound tenderness may occur that requires desensitization following DeQuervain's release.

### Ganglion Cysts, Mucous Cysts

Following removal of these lesions, the hand is immobilized for two weeks until the sutures are removed. At that time, there is usually rapid return of function without the need for hand therapy. There may be some mild wound discomfort that resolves as the inflammatory process resolves.

### Extensor Tendon Repairs

Extensor tendon repairs usually require approximately five weeks of immobilization with specially designed splints, as well as a period of post-operative hand therapy. The hand therapy continues until the maximal range of motion is achieved, and if this is not an acceptable range of motion, a second operation to free the scar tissue from around the extensor tendons will be necessary. Full range of motion may or may not be achieved, depending on the level of the extensor tendon injury, the patient's tendency to form scar tissue, and the patient's compliance with postoperative instructions.

### Flexor Tendon Repairs

Flexor tendon injuries are ***very serious*** and usually require ***prolonged*** postoperative hand therapy to reach maximal functional result. The length of hand therapy required will be very much dependent on the level of the flexor tendon injury. At some levels of injury of the flexor tendon, full range of motion is usually achieved. If sufficient scar tissue forms, a secondary operation to free the tendon from the scar tissue will be necessary and possibly a staged tendon reconstruction, whereby the tendon is removed and a plastic tendon spacer is placed for three months to allow formation of a new smooth surface canal. The next stage of staged tendon reconstruction requires this plastic tendon be removed and replaced with a tendon graft. Good results following flexor tendon injury are only achieved if the patient cooperates 100 percent with the surgeon and the hand therapist, following instructions implicitly. These are very serious injuries and perfectly normal range of motion is the exception and not the rule. Treatment by an inexperienced surgeon or poor patient compliance almost guarantees a poor result.