ORTHOPAEDIC SPECIALTY INSTITUTE
MEDICAL GROUP OF ORANGE COUNTY

Dr. Fischer's Shoulder Arthritis and Arthroplasty Surgery Handout

Introduction:

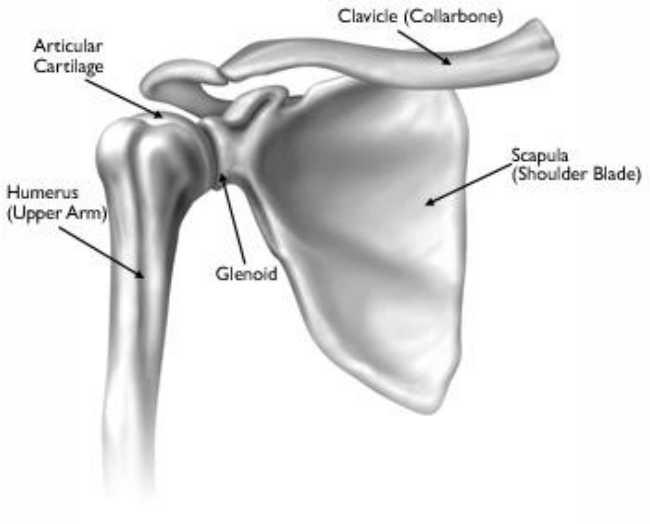
Many patients with painful shoulder arthritis have questions regarding what produces their shoulder pain, what the treatment should be, and what will occur prior to, during, and after their hospitalization (should they decide to proceed with surgical treatment). This handout should answer many of your questions. If after reviewing this information you have additional questions about your personal shoulder problem or its treatment, please address them to me or my staff and we will do our best to provide you with any additional information required. Please be aware that your individual recovery from the treatment proposed may vary somewhat from what I have written here due to individual patient differences in the severity of arthritis, weakness, stiffness or general health. If you decide to proceed with a shoulder arthroplasty surgery, please use this handout as a general guide to help you make appropriate arrangements with your family, friends and work to facilitate your recovery.

To understand how arthritis has damaged your shoulder joint, it is helpful to first review what a normal shoulder looks like and how it functions.

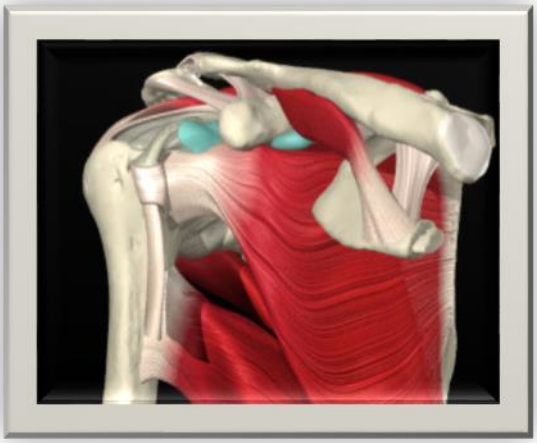
Understand Your Condition:

Shoulder Anatomy:

The shoulder is a “ball-and-socket” type of joint that enables you to raise and rotate your arm. In a normal shoulder, the rounded end of the upper arm bone (head of the humerus) glides against the small dish-like socket (glenoid) which is attached to the shoulder blade (scapula). The joint surfaces of the ball and socket are normally covered with a smooth, soft and slippery material known as articular cartilage. This cartilage allows the joint surfaces to slide and glide on each other with little or no rubbing, catching or friction.



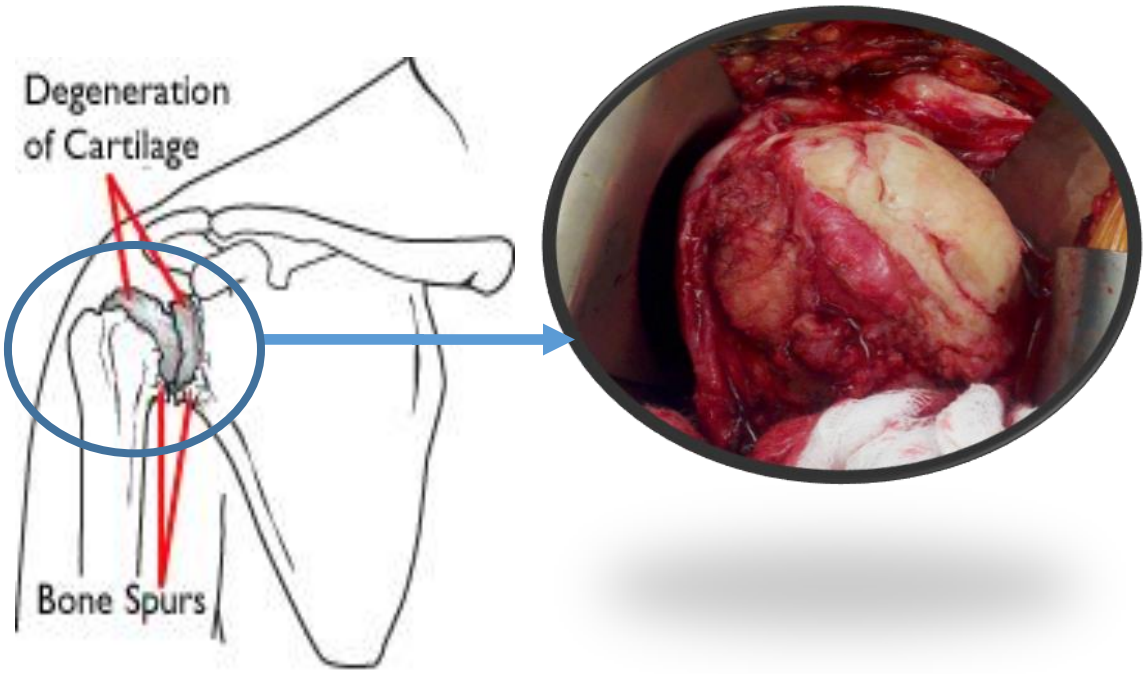
The surrounding muscles and tendons provide stability and support to the joint and they provide the forces required to elevate and rotate the shoulder joint through a wide range of motion.



When arthritis develops in a shoulder joint, the smooth articular cartilage covering the humeral head and the glenoid socket wears out, exposing the rough underlying bone. This deterioration and erosion of the shoulder joint surfaces results in a painful and stiff shoulder that at often grinds, catches and pops with movement.

Arthritic deterioration of a shoulder joint results in the following problems:

- Loss of the normal cartilage.
- Flattening of the ball shaped humeral head and roughness of the surface of the glenoid socket.
- Bone spurs.
- Development of loose pieces of bone and cartilage floating inside the joint.
- In severe cases, bone-on-bone arthritis may lead to erosion, or wearing away of the bone.



Because of these arthritic changes, patients commonly notice loss of strength, decreased range of motion and impaired function.

Arthritic Conditions:

Osteoarthritis is one of the most common reasons for people to have a shoulder replacement surgery. Osteoarthritis is sometimes called "wear-and-tear" arthritis or degenerative joint disease (“DJD”). It can be hereditary or it may be related to excessive stress on the joint surfaces during the active years of one’s life. Occasionally it can result from abnormal joint

development in childhood, or because of prior surgery. Over time, the articular cartilage slowly wears away inside the shoulder joint until the bones rub directly on each other (so called “bone on bone arthritis”). When this occurs, the shoulder becomes stiff and painful. Most often it affects individuals over the age of 50, but it can occur at a younger age. Unfortunately, in most cases, there is no way to prevent the development of osteoarthritis.

Rheumatoid arthritis and other types of “Inflammatory arthritis” result when the patient’s immune system attacks the joint tissues, resulting in inflammation and pain. If this autoimmune inflammatory disease process cannot be controlled with medications, it will cause destruction of the normal articular cartilage and produce an arthritic, bone on bone joint.

Patients with a massive, long-standing rotator cuff tear may develop rotator cuff tear arthritis (also known as rotator cuff tear arthropathy). In this condition, changes develop in the shoulder joint (due to the loss of normal rotator cuff function) which result in the destruction of the joint cartilage and the development of arthritis.

In some patients, an unstable or dislocating shoulder may also become arthritic. This is thought to be due to traumatic crushing or scraping of the joint surfaces on each other as the shoulder dislocates. This traumatized articular cartilage may then slowly deteriorate over many years, resulting in arthritis.

Arthritis may also result from a severe fracture of the shoulder. When the head of the humerus or the glenoid socket are fractured, the bone pieces can be damaged and poor healing may result in rough joint surfaces which lead to arthritic changes. Chronic steroid use, deep sea diving, sickle cell disease and heavy alcohol consumption are also risk factors for developing arthritis due to a condition known as avascular necrosis.

Symptoms:

Patients with arthritis typically experience a deep ache within the shoulder joint when resting and usually feel more severe pain with movement and activity. As their arthritis worsens, the pain becomes more severe and they progressively lose range of motion in their shoulder. This often produces pain at night which interferes with their sleep. The patient's shoulder may make grinding or grating noises when moved. The shoulder may also catch, grab, clunk or lock up. Over time, the patient may notice not only loss of motion, but also weakness in the affected shoulder. Simple daily activities such as reaching into a cupboard, dressing, toileting and washing the opposite armpit may become difficult.

Non-Surgical Treatment Options:

Treatment of an arthritic shoulder starts with rest, gentle exercise and taking arthritis medications. Massaging the shoulder and applying heat can ease mild stiffness. After strenuous activities, an ice pack may be effective at decreasing pain and swelling.

Physical therapy may be helpful when arthritis is in its early stages. Therapy treatments can help maintain joint motion and strengthen the shoulder muscles. Physical therapy is less effective when the arthritis has advanced to the point where there is bone rubbing on bone. When this is the case, physical therapy may make the shoulder hurt more.

Arthritis medications, called nonsteroidal anti-inflammatories (NSAIDs), can decrease arthritic pain. Certain NSAIDs may be purchased over-the-counter, while others require a prescription. Dietary supplements such as Glucosamine Sulfate can diminish arthritic pain as well. Occasional cortisone injections into the shoulder joint can provide temporary pain relief although repeated cortisone shots can have adverse effects on joint health. Injections of Platelet Rich Plasma (PRP) and Visco-supplementation agents may also provide relief of arthritic pain for some individuals. If non-operative treatments fail, shoulder replacement surgery may be needed.

Surgical Treatment:

Understand the Procedure:

When nonsurgical treatments like medications, physical therapy, injections and activity modification are no longer helpful for relieving arthritic shoulder pain, shoulder arthroplasty surgery is a safe and effective procedure to enable individuals to live more active and comfortable lives. It is primarily performed to relieve pain and the mechanical symptoms of grinding and catching. The procedure often improves range of motion and function for activities of daily living.

There are two basic types of shoulder replacement surgery – an Anatomic Total Shoulder Arthroplasty (TSA) (replacement of the ball and the socket with new artificial surfaces), or a Reverse Total Shoulder Arthroplasty (RTSA) (replacement of the ball portion of the shoulder joint with a socket, and replacement of the socket portion of the joint with a ball). The choice of which of these procedures is best for you and your shoulder is based upon the type of arthritis you have and its severity.

The more common type of total shoulder replacement involves replacing the arthritic joint surfaces with a highly polished metal ball, and a plastic socket, known as an “Anatomic Total Shoulder Arthroplasty” (TSA).

The artificial shoulder joint prosthetic implants come in various sizes and are assembled intra-operatively to match the size and shape of your original, healthy joint as closely as possible. In most shoulder replacements, the humeral head prosthesis has a “stem” attached to the ball which is inserted into the hollow canal of the humerus bone. This titanium stem has a coating on its surface which allows your bone to grow directly onto it over time, providing secure fixation of the ball to your arm bone (humerus). If the bone is soft, the humeral component may need to be implanted with bone cement to ensure that it is securely fixated to the humerus bone. The new plastic (polyethylene) surface is applied to the glenoid socket with bone cement. Patients who have bone-on-bone osteoarthritis with minimal bone erosion and who have intact rotator cuff tendons are generally good candidates for this type of total shoulder replacement.

The second type of shoulder replacement is called “Reverse Total Shoulder Arthroplasty” (RTSA). It was approved by the Food and Drug Administration (FDA) for use in the United States in 2004.

Reverse total shoulder replacement is used for people who have:

- Arthritis resulting from chronic severely torn rotator cuff tendons (cuff tear arthropathy).
- Arthritis with a severely worn and eroded glenoid socket requiring a bone graft.
- Some severe shoulder fractures.
- A previous shoulder replacement that has failed.

When these conditions are present, a conventional or anatomic total shoulder replacement may leave patients with persisting pain and poor function such that they are unable to lift their arm away from their side. When a reverse total shoulder arthroplasty is performed, the positions of the socket and ball are reversed within the joint. More specifically, a metal ball is attached to the original bony socket (the glenoid) and a plastic socket is attached to the upper arm bone (the humerus) where the ball was previously located. This repositioning of the ball and the socket within the joint changes the biomechanics of the shoulder in a way that allows the patient's the deltoid muscle to partially make up for their lost rotator cuff tendon function and strength. This often improves the patient's ability to lift the arm away from the side.

<u>Both types of shoulder replacement surgery are highly technical procedures.</u> To ensure better patient outcomes, these procedures should be provided by an experienced surgical team. Every patient's arthritic condition is unique and requires an individualized approach to treatment. I evaluate the various specific aspects of each patient's arthritic problem carefully prior to making any decisions regarding which type of arthroplasty their shoulder requires.

If you decide that you are a good candidate for one of these procedures, you will benefit both physically and psychologically from planning ahead and following the recommendations that follow in this handout. The more you know about the procedure, the better equipped you will be to face the challenges that occur during your recovery period. Don't ever hesitate to ask questions, voice concerns or speak up when you do not understand the information we provide to you. My staff and I will instruct you in what you can expect before, during and after your surgery. We will provide you with information about the process of being admitted to the hospital, the type of anesthesia you will need, the type of implant that will be used, the length

of stay in the hospital, your post-operative rehabilitation, and your post-operative pain management. A nurse from Hoag Orthopedic Institute Hospital will also contact you to assist you with all aspects of your hospitalization including pre-operative shoulder surgery information classes, your admission process and your discharge back to your home.

Important Pre-Operative Information:

Picking a Surgery Date:

My team and I will do all we can to accommodate your scheduling needs. I perform shoulder arthroplasty surgeries on Tuesdays at the Hoag Orthopaedic Institute Hospital (HOI) in Irvine, CA.

Get in Shape for your Surgery:

Smoking - This is very important – Cigarette smoking significantly increases your risk of complications during and after surgery. Rotator cuff tendon healing, bone healing, and surgical wound healing are significantly reduced in smokers compared to non-smokers. Smokers have a greater likelihood of chest colds, pneumonia, strokes and heart problems after surgery compared to non-smokers. For all these reasons, I respectfully require that if you are a smoker, you need to stop smoking at least 2 weeks prior to your surgery and refrain from resuming this habit for at least a month afterward. Also, please understand that it is the nicotine in your system that interferes with the healing process so do not use a "nicotine patch" or nicotine gum to during your recovery from your surgery as this would have the same negative effect upon your healing as smoking.

Exercise before surgery - If it is not too uncomfortable, simple exercising such as walking or bicycle riding (prior to your surgery) will help you to recover more completely after your surgery. Exercising that irritates your shoulder pain should be avoided.

Diet – Eat a healthy diet of lean meats, whole grains, and a variety of vegetables and fruits. Take a multivitamin daily and supplement this with extra vitamin C and vitamin D3 as well as an iron supplement.

Dental Work and other Medical Procedures - If you anticipate needing to have dental work, colonoscopies, or other minor surgical procedures, please schedule them more than one month prior to, or three months after your shoulder replacement surgery.

Controlled substances - If you use any "controlled substances" for any reason (prescription or non-prescription, including marijuana or other THC containing products) tell me far in advance of your surgery as they may complicate your recovery.

Things to Do Several Weeks Prior to Your Surgery:

Assemble your personal and medical information:

During the weeks before your surgery, many people will be asking about your insurance coverage, medical history and legal arrangements regarding advanced healthcare directives ("living wills"). You may feel that you are answering the same questions repeatedly, but this redundancy is necessary to meet quality assurance and medical insurance guidelines. If you have everything written down, you can reduce your frustration and speed the process. Be sure to organize the following information:

- A designated family member or friend as your primary contact to receive post-operative information from the doctor and disseminate it to other family members and friends.
- A list of all the doctors you currently see and your reasons for seeing them. Please provide names, addresses and phone numbers.
- A list of medical conditions and all previous operations, including those that are not bone-and-joint operations.
- A list of all the medications you currently take on a regular basis. Copy the name of the medication, the dosage and the frequency (daily, twice a day, etc.) from the prescription bottle. Don't forget to include vitamins and minerals, herbal supplements and other over-the-counter medications you take regularly. We may advise you to stop taking certain medications or supplements a week or two before your surgery.
- A list of any allergies or adverse reactions you've had to drugs or anesthesia in the past. Provide the name of the drug, and a description of your reaction and when this happened.
- Any dietary restrictions or other health problems you have, such as diabetes, asthma, HIV or hepatitis.
- A list of your insurance coverages, including the name of the insurance company, the plan or group number and contact information. Be sure to bring your insurance cards to the hospital with you.
- Information about any legal arrangements you've made, such as a living will or durable power of attorney. Bring a copy of the documents with you to the hospital.

Pre-Operative General Medical Clearance:

To take appropriate safety precautions with your health, I request that you have a complete general medical evaluation prior to your surgery. This will include several blood tests, a chest x-ray and an EKG (heart test). This is to ensure that you are in the best health possible pre-operatively, and will promote a safer and more rapid recovery from your surgery. This evaluation can be performed by your personal medical physician if they are willing to provide us and the hospital with a thorough and transcribed (not hand written) Physical Exam report. If he or she are unwilling or unable to provide this service, please discuss this with my staff and we can arrange for you to see a physician of our choice who is familiar with the hospital's requirements.

Pre-Operative Orthopedic Appointment:

One or two weeks before your surgery, you will meet with my team in our office to review the risks and possible complications associated with your procedure. We will answer any questions you may have, and make all final arrangements necessary for your hospital care. Please be sure to provide me with a list of all medications you take on a daily basis (including their dosages) at this visit. We will provide you with a prescription for your post-operative pain medication. Please get this filled prior to your surgery so you have it waiting for you when you return home. Although you may have ongoing pain in your shoulder prior to your surgery, do not use the prescription pain medicine until after your surgery. Do not bring this medication to the hospital; you will not need it there. At the conclusion of this appointment, you will also schedule an appointment with my office staff for a wound check in our office approximately 1 ½ weeks after your discharge from the hospital.

Medication Instructions:

Certain medications can have side effects during surgery and must be discontinued prior to your procedure, while other medications have no such problems. The following are general pre-operative guidelines on several medications patients commonly take. It is important to clarify with your personal physicians what their recommendations are for the specific medicines you take.

- **Anti-Inflammatory drugs**
    - Aspirin, Non-Steroidal Anti-Inflammatories (NSAIDS) [Advil (Ibuprofen), Aleve (Naproxen), Voltaren (Diclofenac), Mobic (Meloxicam)] – discontinue 1 week prior to surgery.
    - Celebrex – no need to stop using this medication.
- **Blood Thinners**

- Coumadin (Warfarin), Plavix - discontinue 5 days prior to surgery. You may need to take Lovenox as a "bridge" medication until the day of surgery.
- Pradaxa, Eliquis – discontinue 2 days prior to surgery. You may need to take Lovenox as a "bridge" medication until the day of surgery.

- **Cardiac and Blood Pressure drugs**
  - ACE Inhibitors – [benazepril (Lotensin), captopril (Capoten), enalapril (Vasotec, Epaned), fosinopril (Monopril), lisinopril (Prinivil, Zestril), moexipril (Univasc), perindopril (Aceon), quinapril (Accupril), ramipril (Altace), trandolapril (Mavik)] – do not take these the morning of surgery.
  - Diuretics (water pills) [Lasix, Hydrochlorothiazide (HCTZ)] – do not take these on the morning of surgery.
  - Most other Cardiac and Blood Pressure drugs (Beta blockers, Calcium channel blockers) - OK to take these the morning of surgery.
- **Diabetic medications**
  - Oral medications – do not take these on the morning of surgery.
  - Insulin - do not take this on the morning of surgery.
- **Mood Enhancing drugs**
  - Lithium – discontinue this medication 3 days prior to surgery.
  - Others – OK to take up to the morning of surgery.
- **Herbal Supplements** – (Dong quai, Ephedra, Echinacea, Feverfew, Fish oil, Garlic, Gingko biloba, Ginseng, Goldenseal, Kava, Licorice, St. John's wort, Valerian root, and others) – because it is difficult to know exactly what is contained in many of the over-the-counter supplements, we advise discontinuing them for at least 2 weeks prior to surgery.

Plan Ahead for your Homecoming:

Returning home - Arrange for someone to drive you home from the hospital and for someone to assist you for the first several days upon your return home. Consider adapting your bathroom to your temporary but special needs during your recovery. A shower chair, a grip bar and an elevated toilet seat can be very helpful while you are recuperating. A long handled shoe horn and a grabbing tool or "reacher" can also be helpful.

If you live alone or have special physical needs and have3 no one to assist you once you return home, consider hiring a personal attendant to assist you in your own home, or consider staying in a skilled nursing facility for a week or two after your surgery to ease the transition from hospital to home. Hoag Orthopedic Institute's "placement" personnel can suggest appropriate providers and will assist you with these arrangements during your hospitalization. Although you

may not be able to make a reservation at a specific nursing care facility, you may want to visit several before your surgery, take a tour of each and meet some of the staff.

Meals - If you normally cook for yourself at home, consider making double batches of the food you prepare for a week or two prior to your surgery and freeze half of what you've prepared. This will provide you with a week or two of ready-made meals when you return home from the hospital.

Frequently used items - Place commonly used items at counter-top or waist level before you go to the hospital so they are easily accessible, and do not require that you to reach overhead or squat down low to use them when you return home from the hospital. Set up a "recovery center" where you will spend most of your time when you first return home. Place items such as a telephone, television remote control, radio, facial tissues, wastebasket, water bottle or pitcher of water and drinking glass, reading materials and medications within easy reach.

Cold Therapy – We will arrange for you to use a cold therapy unit for the first week after your surgery. This is a device which circulates cold water through a special sterile pad applied to your shoulder after your surgery. This is used to decrease swelling and pain and to improve your recovery. If your insurance will not pay for this, you will have the choice of paying for this device yourself or using ice packs to cool the shoulder.

Night before Surgery:

Take a shower or bath with antibacterial soap the night before surgery to help reduce the risk of infection. We will also provide you with antibacterial cloths to wipe over your surgical shoulder the night before and the morning of your surgery to reduce the risk of infection. These will also decrease the risk of infection. Do not shave around the area of the shoulder undergoing surgery as this will increase the risk of infection.

Do not eat or drink anything after midnight the night before surgery unless you have been informed otherwise by me or the hospital. Feel free to pack a small bag with personal effects for use at the hospital such as a hair brush, denture case, eyeglass case or contact lens case. Please leave your cash, credit cards, and jewelry at home. Do bring your insurance card, personal identification (driver's license or similar item), advance medical directive (if you have one), and reading materials.

Hospitalization Information:

Day of Surgery – Wear very loose-fitting clothes that zip or button up the front on your upper body as these will be much easier to put on over your sling after surgery when you leave the hospital. You will be asked to arrive at the hospital several hours before your scheduled surgery to allow the hospital staff ample time to get you prepared for your procedure. I will visit you in the pre-surgical unit approximately 15-20 minutes before your surgery. You will meet your anesthesiologist at this time as well and he/ she will review with you what to expect from the anesthesia administered for your surgery.

Your Surgery

Shoulder replacement surgery is rather time consuming because the shoulder joint area in which we do our work is a somewhat "tight" area to work in. It is not uncommon for a total shoulder replacement to require 2 hours of time. There is often an additional 1/2 to 3/4 hour spent in the operating room area to administer the nerve block, place you under general anesthesia, properly position you for the procedure, prepare your skin with surgical disinfectant solution, drape your shoulder for the surgery and "set up" the necessary equipment for the procedure. At the conclusion of the surgery, an additional 15-20 minutes are needed to bandage your shoulder, apply a cold therapy device if one is being used and convey you to the post-anesthesia recovery unit. Once you are in the recovery area, I will speak with your family or friends to let them know that you are finished with the procedure and to inform them how your procedure went. Most patients spend approximately two hours in the recovery unit and then are transported to their private room.

Your Hospitalization

Your medical team will give you several doses of antibiotics during your hospitalization to prevent infection. Most patients can eat solid food and get out of bed the evening of surgery. You will most likely be discharged to return home on the first day after surgery.

The night of your surgery you will be quite tired and you can expect that you will not feel up to having visitors other than close family. Your pain will be treated with opiod/ narcotic pain medicine. We prefer to treat your pain with oral medications as they are less nauseating and provide pain relief of longer duration than injections. If your pain relief is not adequate with the pain pills alone, the nurses will supplement them with IV pain medicine as needed. Be aware that although opioids help relieve pain after surgery, they are a narcotic and can be addictive. Opioid dependency and overdose has become a critical public health issue in the U.S. It is important to use opioids only as directed. As your pain begins to improve, you will need to decrease and eventually stop taking the opioids.

Blood work will be drawn early the first morning after surgery to monitor your health. Physical Therapy will be provided to assist you with getting up, ambulating and to teach you how to safely move your arm. It is helpful for a family member or friend to be present for some of these PT sessions to learn how to help you with any mobility issues you may have once you are home.

I or one of my associates will visit you in the hospital each day you are there to monitor your recovery. You will also be cared for by a "Hospitalist" physician during your stay. Hospitalists are Internal Medicine physicians who specialize in the treatment of medical problems patients have while in the hospital (such as high blood pressure, diabetes, and other medical conditions). Most patients undergoing a shoulder replacement are medically stable and are safe to leave the hospital on the first day after their procedure.

Blood Donations and Transfusions:

All patients lose some blood during a shoulder replacement surgery, but the amount of blood loss is seldom sufficient to require a blood transfusion. If a transfusion were to be necessary, the local blood bank is very safe (due to stringent blood donor screening and testing). If you desire to avoid the possibility of receiving blood bank blood, you can donate your own blood in advance. If you choose to do this, my office will help facilitate scheduling this at the blood bank. This begins approximately 30 days prior to your surgery.

Discharge From the Hospital

If you have a family member or friend to assist you with getting out of bed, dressing, cooking, eating, bathing, doing your laundry and grocery shopping (etc.) you will most likely return to your home upon your discharge from the hospital. If you do not have someone at home to assist you with these matters, or if you require special care, it may be appropriate to transfer you to a skilled nursing care facility for a week or two after your hospital discharge until you are more independent in these matters.

Complications:

As is the case with most complex procedures, complications may occur after a TSA procedure. Some complications are related to the surgery itself, while others can occur over time after your surgery. When complications occur, most are successfully treatable. Possible complications include the following.

- ***Infection*** **-** Infection is a potential complication of any surgery. In shoulder joint replacement, infection may occur superficially in the incision or deep around the prosthesis. It may happen while in the hospital or after you go home. It may even occur

years later. Minor infections in the wound area are generally treated with antibiotics. Major or deep infections may require more surgery and even removal of the prosthesis. An infection located elsewhere in your body can spread to your joint replacement if it is not treated properly. To prevent infections, you are given antibiotics at the time of your surgery, and it is recommended that you take antibiotics after your surgery whenever you have other types of surgery or dental procedures. The published overall risk of infection (combining both superficial and deep infections) for an anatomic TSA is 0.5% and for a Reverse TSA is 2.9%. (My patient's experience has been much less.)

- ***Blood Clots (DVT) and Pulmonary Embolism (PE)*** – DVT (deep venous thrombosis) is rare after shoulder surgery but can occur. Occasionally a DVT can result in a Pulmonary Embolism (a condition where a piece of the blood clot breaks loose within a vein and travels to the lungs). This is a serious and potentially life threatening problem. If these problems occur, hospitalization may be necessary. Treatment requires the use of blood thinners for several months or longer. To prevent the development of a DVT you will be given aspirin to take for two weeks after your surgery. The published risk of developing a DVT after an Anatomic TSA is 0.03%, and for a Reverse TSA it is 0.05%.
- ***Nerve Injury*** **-** Although this type of problem is infrequent, nerves near the joint replacement may be damaged during surgery. Over time, these nerve injuries often improve and may completely recover, but they can be permanent. The published risk of a nerve injury after an Anatomic TSA is 0.6%, and for a Reverse TSA it is 1.2%.
- ***Prosthesis Problems*** **-** Although prosthesis designs and materials continue to advance, any prosthesis may wear down or the components may loosen. The components of a shoulder replacement may also dislocate. Excessive wear, loosening, or dislocation may require additional revision surgery. The published risk of loosening for an Anatomic TSA is 4.0% and for a Reverse TSA is 1.8%. The published risk of dislocation for an Anatomic TSA is 1.0%, and for a Reverse TSA it is 5.0%. (My patient's experience for both of these has been much less.)

Post-Operative Information:

Wound Care

When you leave the hospital, there will be a water-resistant bandage in place over your incision. There is no reason to change this dressing on your own. My staff will do this for you at your first port-operative office visit approximately one and one-half weeks after your discharge from the hospital. If the bandage becomes soiled or loose, please apply a clean gauze bandage with tape or several large Band-Aids to keep the incision clean. There is no need to apply antibiotic ointments or to cleanse the incision unless I instruct you to do so.

Use of Your Sling

When you leave the hospital, your arm will be in a sling to limit stress and strain to your shoulder. It is necessary that you open or remove the sling three times daily to do the range of motion exercises that the physical therapists have taught you. During the daytime, it is ok to leave your arm out of the sling (if it is comfortable for you to do so). When leaving your home, you should wear the sling at all times to prevent injury to your shoulder repair. You should wear the sling at night for sleep until I instruct you otherwise.

Post-Operative Exercises

Prior to your discharge from the hospital, the physical therapists will teach you a series of exercises to improve your recovery. Please do these as instructed three times a day. Do not add additional exercises unless asked to do so by me or your therapist. Do not use the surgical arm to lift or carry objects weighing more than a few ounces until I instruct you that it is safe to do so.

Physical Therapy:

A careful, well-planned rehabilitation program is critical to the success of a shoulder replacement. You usually start gentle physical therapy a few weeks after the operation. You will wear an arm sling during the day for several weeks after surgery. You will wear the sling at night while sleeping for 4 to 6 weeks. Most patients can perform simple activities (such as eating, dressing and grooming) independently soon after surgery. Driving a car is not allowed until you are have discontinued the use of pain medications during the daytime and you have regained adequate muscle control of your arms to safely control your motor vehicle (usually 2-4 weeks after surgery).

Here are some "do's and don'ts" for when you return home:

- Don't use the arm to push yourself up in bed or out of a chair because this requires forceful contraction of muscles we have repaired as part of your procedure.
- Do follow the program of home exercises prescribed for you. You may need to do the exercises 3 times a day for 6 months or more.
- Don't overdo it! If your shoulder pain was severe before the surgery, the experience of pain-free motion may lull you into thinking that you can do more than is prescribed. Early overuse of the shoulder may result in later limitations in motion.
- Don't lift anything heavier than a glass of water for the first 6 weeks after surgery.
- Do ask for assistance. We can recommend a home health agency or facility if you do not have home support.

- Don't participate in contact sports or do any repetitive heavy lifting after your shoulder replacement.
- Do avoid placing your arm in any extreme position, such as straight out to the side or behind your body for the first 6 weeks after surgery.

Bathing

I prefer that you keep the incision dry for approximately one week after your surgery. During that time, you may either "sponge bathe" or shower. If you choose to get in a shower to bathe, do not scrub around the incision and bandage, simply let the water run over the shoulder and then blot the bandage dry with a clean towel once you are finished. Do not submerse the incision under water until I give permission to do so.

Medications

Please resume all your regular prescription medications upon your discharge from the hospital unless I or the Hospitalist have instructed you otherwise.

You will have received post-operative antibiotic medication while you are in the hospital. Unless I specifically say otherwise, there will be no need for additional antibiotics once you go home.

You will receive a prescription for pain medication at your pre-operative appointment. Use this medicine once you return home as directed on the bottle.

Diet

A healthy diet with an assortment of lean meats, fresh vegetables and fruits is important for good health and healing. After a surgery, your body will need additional nourishment as it heals your incision and rebuilds your strength. Dietary supplementation with a good multi-vitamin with additional vitamin C and vitamin D3 and iron may be a good idea for several months after your surgery. A high fiber diet can be valuable to promote good bowel habits after surgery as the pain medications tend to constipate many individuals. Should constipation develop, two tablespoons of Milk of Magnesia once or twice can be of benefit to help relieve this problem.

Sleeping

It is often difficult to sleep in bed after a major shoulder surgery. For several weeks after your shoulder replacement, the muscles around your shoulder will be swollen and tender resulting in soreness and pain. At night, the discomfort from your surgery becomes more apparent and is aggravated when pressure is applied to these muscles either from lying partially on that side or simply from moving about in bed. Most patients find that they rest better if they sleep in a

recliner chair, on a couch or arrange their pillows in bed to position their trunk and shoulders to remove pressure from their shoulder.

Driving an Automobile

It is not appropriate to consider operating a motor vehicle if you are taking pain medication as this will cause a dangerous decrease in your alertness and slow your reaction time to traffic changes. You are not to drive until I have given permission for you to do so. Once you are no longer using narcotic pain medications during the daytime, it may be possible for you to drive using your non-surgical hand to steer the driver's wheel and using your surgical hand to steady the driver's wheel in your lap. Please discuss this with me prior to attempting to do so as there may be other considerations requiring that you not drive.

Post-Operative Office Appointments

At your first post-operative appointment, I or one of my team members will examine your incision, check your range of motion and review your home exercise program. In some circumstances, we will begin outpatient physical therapy immediately after this appointment, but most often this will not occur until 3-6 weeks after your surgery. We will recommend an appropriate Physical Therapy facility for this purpose and provide you with a prescription for the therapist to begin treatment at the time we have recommended. Your therapy visits will occur two or three times weekly and will last approximately 1 – 1 ½ hours each. Before you leave the office, you will schedule another appointment to return to my office approximately 4-6 weeks later. If you require additional pain medication, please discuss this with us at this appointment; do not wait until you are out of medicine and then call for refills as there may be delays in either our office or at the pharmacy resulting in inconvenience to you as well as increased discomfort.

Subsequent Office Visits

Your second post-operative appointment will be approximately 6 weeks after your surgery. By this time (if not sooner) you should have had sufficient improvement in your discomfort that you no longer require pain medication. You will have already begun outpatient physical therapy by this time. I will ask that you return for office visits approximately every six weeks to monitor your recovery and to individualize your rehabilitation program as necessary to ensure your optimal recovery. Most patients require formal physical therapy visits for 3 - 4 months after surgery. Thereafter, patients continue a home exercise program for an additional 6-9 months to promote maximal recovery and improvement in shoulder function.

Renewal of Pain Medication Prescriptions

In most cases, it is not possible to renew prescriptions for pain medication during a weekend. Prior to the beginning of a weekend, please check to ensure that you have enough pain medication to last you until the following Monday. If it appears you may not have enough pain pills to last you through a weekend, you should call for a refill during office hours on Thursday, or at the latest, on Friday morning. Please do not wait until the last minute to call late on a Friday afternoon when the staff are getting ready to leave the office, and please respect my partners weekend time with their families by not calling the "on call physician" for pain medicine prescriptions on the weekend.

Subsequent Surgeries and Invasive Procedures

With an artificial joint present in your shoulder, you are a bit more susceptible to developing an infection within that shoulder if bacteria enter your bloodstream for any reason. This can occur with any surgery, colonoscopy, endoscopy, and some dental procedures; or if you develop an infection in another body location such as a skin abscess, a severe bladder infection, diverticulitis, etc. (common sore throats are not generally a problem). To lower this risk, you should have preventive (prophylactic) antibiotics before any elective surgery including oral surgery (some teeth cleaning may not require this, please check with your dentist first) and you should never neglect signs of a developing infection from cuts or injuries. Please ask us for our handout on prophylactic antibiotics prior to any of the above procedures.

Airport Security Issues

The prosthetic device placed within your shoulder at the time of joint replacement is either partially or wholly comprised of metallic materials which may set off airport security screening devices. The security agents may screen you with a wand if the walk-through monitors are activated by your shoulder implants. Under some circumstances of heightened security measures, airport security agents may still require that you show them your scar to confirm that you have indeed undergone this surgery, so you may want to wear a loose-fitting shirt or blouse that opens at the neck for this reason.

General Comments on Post-Operative Return of Shoulder Function

An artificial shoulder replacement is performed when an individual's shoulder function has significantly deteriorated due to arthritis. Although deterioration of the joint surfaces and bony structures within the shoulder are the most obvious problem in an arthritic shoulder, there is also a significant amount of muscle weakness and atrophy which accompanies this disorder. Often patients have significant restrictions in shoulder joint mobility prior to surgery. It takes time and rehabilitation to recover from this weakness and stiffness which often develops for years prior to the joint replacement surgery. A shoulder replacement is expected to provide you with a significant reduction in pain after healing has occurred and for many patients there will

also be an improvement in the mobility of the joint. However, I feel it necessary to point out the obvious; this surgery cannot provide you with a normal shoulder joint. You may notice occasional mild sensations of clicking or catching and stiffness - these are not abnormal. In general, pain and soreness persist for 2-6 weeks after surgery, with stiffness persisting for 3-6 months after surgery. Although many patients are happy with their recovery at 3-4 months after their surgery, all patients seem to have additional improvement which continues for up to a year.

Finally, I want to thank you for reviewing this information and for entrusting the care of your shoulder condition to me and my staff. If we can do anything to improve your understanding of this process or if you have additional questions or concerns not addressed within this document, please inform us and we will do our best to assist you.

Sincerely,

Scott P, Fischer, M.D. and staff
(949) 255-9738
You can review additional information at ***www.scottfischermd.com***

(Some of the information in this handout was initially prepared by the American Academy of Orthopaedic Surgeons, and has been subsequently updated and modified by Dr. Fischer.)

Acknowledgement of Understanding:

I believe it is very important that ***you***, the patient, be as well informed (as is reasonably possible) about your procedure prior to your surgery, as it will improve your results after the surgery is performed (should you desire to proceed). Therefore, we hold you responsible for the information contained within this handout that we have issued to you, and I ask that you sign the statement below and return it to my staff prior to your surgery. If you have additional questions beyond the information provided to you, my team members and I are available to answer them as best we can.

I have read the information contained in Dr. Fischer's Shoulder Arthritis and Arthroplasty Surgery Handout and understand its contents as well as the potential risks and benefits associated with my upcoming surgery. All of my questions have been answered.

Patient Signature: _____ Date:_____

Print Patient Name: _____

OSI Team Member Signature: _____