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OPEN SURGERY INSTRUCTIONS

Dr. Horinek's After Surgery Instructions & Expectations

My goal is to help you achieve the best functional result and experience after surgery possible. I believe part of that is having clear expectations about your postoperative course. I don't want you to be surprised after surgery! This information is meant to give you an overview of common questions that arise. If you have any questions before or after surgery, a member of my team or I is available.

What you can expect from me

You will get my best effort to make you better. I stay up to date on the latest research through national and international conferences and regular journal reading. You will get the best that is currently available in care of the shoulder. You can also expect clear communication and that a member of my team or I will be available to answer questions.

What I expect from you

READ THIS FORM. Follow my rehabilitation protocols – they are based on what I believe is the best available research. If you have an issue or comment, please let us know first. We can only make your experience and others better if we hear from you!

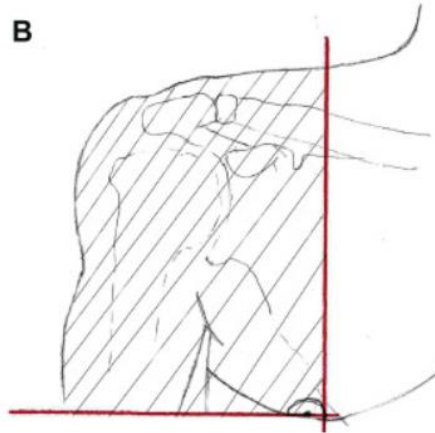
PRIOR TO SURGERY

Surgery centers require a clinic visit within 30 days of surgical intervention. Because of this you may have an additional preoperative visit 1 to 2 weeks prior to surgery. This is to go over the surgery again, be fit for a sling (which you must bring to surgery), provide prescriptions for medications after surgery, and have a pre-rehab visit. Patients who have a shoulder replacement may also have a pre-surgery visit at the hospital.

If you take Aspirin, Ginkgo Biloba, and/or Fish Oil, please stop these medications 1 week prior to surgery. These medications can cause bleeding during surgery.

Infection prevention is a big part of surgery. While the risk of infection after shoulder surgery is low, we take every measure possible to prevent it. At least one study suggests that the risk may be reduced by applying 5% to 10% Benzoyl Peroxide to the shoulder for 3 days prior to

the day of surgery. This is an inexpensive gel that you can buy at a pharmacy. One product is **Clearasil “Daily Clear Acne Cream”** with 10% benzoyl peroxide. After showering, apply the gel to the shoulder area for the 3 days before surgery. Apply in the morning and the evening for a total of 6 applications. Below is a picture indicating where gel should be applied.



Please do not eat or drink anything after midnight the evening prior to surgery – if you do, your surgery may be cancelled. The exception is essential medications which can be taken with a sip of water the morning of surgery. If you take any blood pressure medications these should be taken on the day of surgery. The one exception is ACE inhibitors (such as Lisinopril), which should not be taken. Diabetes medications should not be taken since you won't be eating. All nonessential medications (allergy medications, cholesterol meds, antidepressants, vitamins, etc.) do not need to be taken.

THE DAY OF SURGERY

Arrive at the hospital at your scheduled arrival time. If your arrival time changes, you will be notified by the facility or my staff.

Hospital Stay

The need for staying in the hospital is based on your age, health, and support at home. Some patients may qualify to go home the same day of surgery. Medicare, for instance, considers shoulder replacement and surgical fixation of fractures to be outpatient procedures. A hospital stay may be needed if there are substantial health concerns or lack of help at home, or if you are travelling a substantial distance. Outpatient surgery is very safe.

The data actually shows that it is *at least* as safe as inpatient surgery. In addition to providing information to help you recover and be informed about what to expect, we are always available to help if you have any questions.

If you stay in the hospital I, or one of my partners, will see you the day after surgery. You will be allowed to go home by around noon the day after surgery. Rarely, a 2nd night needed. You should anticipate the need for help at home for the first few weeks after surgery and make arrangements for a ride home prior to surgery. If you take any unique medications or require a CPAP machine for sleeping at night, please bring them to the hospital.

AFTER SURGERY

Prevention of Deep Vein Thrombosis (DVT)

The risk of leg clots or DVT is low after shoulder surgery, but we make every effort to prevent them. We take the following measures:

- 1) All my patients who have shoulder surgery will have pumps during surgery that are meant to lower the risk of leg clots.
- 2) It is advised that you take frequent walks after surgery since immobility is a risk factor for leg clots.
- 3) Take Aspirin 81 mg daily for a minimum of 2 weeks and maximum of 6 weeks after surgery.

If you have a previous history of blood clots **you should inform us** so we can also provide you with a prescription medication to lower the risk of DVT.

Care of Surgical Incisions

After surgery a bandage will cover your incision. In most cases the incision is closed with an absorbable suture and covered with surgical glue. This bandage can be changed 2-3 days after surgery. You will be sent home with an Aquacel dressing that will be worn until the follow-up appointment.

It is okay to shower without the sling 2 days after surgery. Water can pass over the wound, but please do not soak in a pool or hot tub until 2 weeks after surgery. To wash under your armpit, lean over and dangle the arm at the side. After your shower a new bandage may be applied.

A wound infection after open shoulder surgery is uncommon but can occur. The wound should be dry by 5 days after surgery. If your wound is draining a lot beyond this, and especially if there is a lot of redness, or you have a fever, this is a sign of wound infection, and you should call us. However, bruising is very common after shoulder surgery. It is common for the front of the shoulder (chest and biceps) to turn black and blue at about 3 to 5 days after surgery. This is temporary and resolves within a couple of weeks.

Medications

In general, resume all your regular medications immediately after surgery. Three other medications should be considered:

- 1) Vitamin D. Vitamin D is important to bone health and studies also suggest that Vitamin D deficiency can be associated with poor healing after rotator cuff repair. A large number of Americans are Vitamin D deficient. Therefore, I do recommend that you take Vitamin D (800 IU) for a month prior and for at least 12 weeks following shoulder surgery. Also, it turns out that daily Vitamin D lowers the risk of hip fracture so there are other good reasons to take it.
- 2) Vitamin C. At least one study has shown that Vitamin C can lower pain after surgery. There is also evidence that it can improve tendon healing. Therefore, I think it is reasonable to take 500 mg of Vitamin C twice daily for 6 weeks after surgery.
- 3) NSAIDs. Non-steroid anti-inflammatories (Ibuprofen, Motrin, Naproxen, Mobic, Celebrex, Aleve, etc.) can modulate rotator cuff healing. The timing is important. It appears that if given early they can decrease tendon healing. Therefore, I advise taking NSAIDs for 5 days post-op, but then avoiding their use until 6 weeks post-op. After this early phase NSAIDs may actually help remodeling. Therefore from 6 weeks to 12 weeks after surgery NSAIDs may actually be advantageous and I advise taking them during this period as long as they are tolerated (no problems with upset stomach). Options are ibuprofen 600 mg three times daily or Aleve 2 tabs (440mg) twice daily from 6 to 12 weeks after surgery.
- 4) Magnesium. Clinical studies have shown that Magnesium reduces pain after surgery. Additionally, lab studies suggest that Magnesium can improve tendon healing. Magnesium is also important for Calcium and Vitamin D absorption. Interestingly, about 50% of the US population does not get enough Magnesium in their diet. Therefore, I believe it is reasonable for most people to start taking Magnesium the month prior to surgery and for 12 weeks following surgery. Dose recommendations are anywhere from 400 mg a day to 500 mg twice daily. One option is to take a Calcium, Vitamin D, Magnesium complex. One such supplement is available here:
<https://www.amazon.com/Country-Life-Target-Mins-Vegetarian/dp/B00117ZTNY>
This complex provides 400 IU of Vitamin D, 1000 mg of Calcium, and 500 mg of Magnesium per dose. Therefore, one could take this supplement twice a day to satisfy the recommended amount of Vitamin D and also get Magnesium.

Bruising, Swelling, Rashes, Warning signs, etc.

Bruising

Bruising after shoulder surgery is normal. Don't be alarmed if your arm turns black and blue. Blood follows gravity, so it is normal for this to happen in your arm around your biceps (front of your shoulder) or chest. This usually occurs 3-7 days after the surgery.

Swelling

Some degree of swelling is also normal. Often swelling occurs around your sling. We encourage hand and elbow exercises to help this. Also, if you have your arm at your side and seated, such as when watching TV, it is okay to remove the sling to relieve pressure on your arm which may be causing the swelling to pool. Swelling that is very painful, especially on the inside of your arm with extension of the swelling down the entire hand is not normal and you should call in if this happens.

Rashes

A red rash under the armpit is typically fungal and can occur from the arm being close to the chest. It is okay to take the sling off when sitting down and provide some room between your inner arm and chest wall. Make sure you wash the area and dry the armpit completely as fungal rashes thrive in moist environments. You can consider an antifungal cream over the counter.

A rash over the incision is typically due to adhesives. This will resolve with time and avoidance of bandages. Consider Benadryl and/or an over-the-counter steroid cream (Hydrocortisone 1%).

A rash over entire upper extremity extending to the hand is usually from an allergic reaction to the skin prep (Chloraprep). This is uncommon but can occur. If it occurs, it is important to take note so you can avoid this skin prep in the future (Chloraprep is the most common skin prep). Take Benadryl and we can provide a prescription topical cream (Triamcinolone). This may take 10 days to 2 weeks to resolve.

Another rare but important thing to look for is shortness of breath with chest pain. While mild shortness of breath can occur after a nerve block (because of numbing the phrenic nerve to the diaphragm) please notify us of severe shortness of breath or chest pain. Shortness of breath due to the nerve block should resolve when the nerve block wears off (18 hours on average). If you have a fever over 101 degrees let us know. On the other hand, a lower grade fever within the first few days after surgery is not uncommon.

Pain Control & Prescriptions

Our goal is to control and ease your pain, but surgery is not a pain free process. The good news is that 1/3 of our patients do not require any narcotics after post-op discharge.

Nerve Block

You will also receive an injection of a numbing medication (like at the dentist) which will provide good pain control for roughly 12-18 hours after surgery. It is your choice if I place this “locally” into the skin and nerves around the shoulder during the surgery or if you have a “nerve block” (interscalene block) by the anesthesiologist. The nerve block is placed in the neck prior to the surgery. Studies show that there is no difference between the 2 options 24 hours after surgery. The nerve block provides more complete pain relief immediately after surgery. This leads to less need for pain medication immediately after surgery and therefore a decreased risk of nausea (because narcotic pain medication can cause nausea). However, there is a slight risk with the nerve block. The block is injected into the nerves at the level of the neck. Because of this, the block will temporarily paralyze the entire arm and hand (This is normal!! Please do not be alarmed) and there is a small risk of temporary or even permanent nerve injury. A couple percent of patients will have residual symptoms for a few months after surgery. A permanent injury is very rare (< 1%). The local injection has virtually no risk of nerve injury. Reasons to lean toward the nerve block are if you already take narcotics and thus have high tolerance to medications, get nauseated easily, or have a long trip home after surgery (several hour drive). You should discuss the risk and benefits with the anesthesiologist.

Ice

ICE after surgery is **strongly** encouraged!!! This can be one of the cheapest and most effective ways to limit pain. In fact, studies show regular icing leads to decreased pain weeks after surgery. While you are awake, ice your shoulder for about 20 mins every 1 to 2 hours. Even if you aren’t having a lot of pain, this is a good idea for the first few days after the operation. Options for icing the shoulder include a bag of ice, a bag of peas, or a dedicated ice machine. Many people find that the machine is the easiest and most effective to apply and the most comfortable but may come with an out-of-pocket expense.

In general, you will be given prescriptions for:

- 1) Oxycodone 5mg, 30 pills. 1-2 pills every 4 hours as needed for pain. Narcotics like oxycodone are used for pain but are addictive. Some studies say this can occur within 3 days. Do not take them with alcohol. You should aim to be off this within a few days or by the 2-week visit at the latest. Again, 1/3 of our patients do not require any narcotics after surgery. In the rare case a refill is needed, the number will be taken to 15 at the time of the refill. No more than 1 refill will be provided.

- 2) Neurontin (Gabapentin), 3 pills. 300mg. 1 pill every evening before bed 3 days after surgery. Begin the day AFTER surgery (if surgery is on Monday, take your first dose on Tuesday). This medication is used to reduce “neuropathic pain” but can be sedating which is why I only advise taking it at night. This medication is optional, and I recommend avoiding it if you have sleep apnea with a CPAP setting >10.
- 3) Tylenol 500mg, over the counter. 2 pills every 8 hours, scheduled. Take this consistently and use the oxycodone for breakthrough pain. That way you can wean off of the oxycodone more quickly. It is important to take Tylenol and not ignore it as it works together with oxycodone.
- 4) Ibuprofen 600mg, over the counter. three times per day for ONLY 5 days after surgery, beginning the night of surgery.
- 5) Zofran, 20 tabs. 4 mg. 1-2 pills every 4-6 hours as needed for nausea.
- 6) Senna-S, 20 tabs. 2 tabs pills per day while you are taking narcotic pain medication. This is a stool softener to help prevent constipation that occurs with narcotics. Take this before you develop constipation. In other words, start taking it right away. I recommend beginning to take this 2-3 days before surgery in fact. This medication can be obtained over the counter (does not require a prescription).

If you aren't on any narcotic medications prior to surgery, in general you will need these for pain control for about the first few days to 2 weeks at the most. When you no longer need narcotics, you can use Tylenol alone. No narcotic prescriptions will be provided 4 weeks after surgery. REFILLS WILL NOT BE PROVIDED ON THE WEEKENDS. If you need a refill, please anticipate this and let us know early in the week.

In general, for the first 6 weeks after surgery please avoid NSAIDs such as Ibuprofen, Motrin, Naproxen, Mobic, Celebrex, Aleve, etc., other than the first 5 days. These medications have anti-inflammatory properties that inhibit the same processes that are required for healing. Occasional use is okay, but please don't overdo it. After 6 weeks they can be resumed.

Nausea

Preventing nausea is through a combination of limiting the use of narcotics and with medications you are given just prior to surgery through an IV. Most of the time these efforts and the use of Zofran as needed are effective. However, if you are prone to become nauseated OR get seasick/motion sick easily, we should also provide you with a prescription for a Scopolamine patch to put on the evening prior to surgery. Finally, if you have a history of very severe nausea after anesthesia, let us know as there are other medications we can consider.

Sleep

Sleep is one of the most difficult things after shoulder surgery. Expect this to be a bit difficult for the first few weeks, especially because you will be wearing a sling. Some people find it easiest to sleep in a reclining chair while others sleep in their normal bed. A pillow wedge can be useful for sleeping in bed and these can be found on Amazon if interested. I don't have a rule other than that you need to keep the sling on until the removal date specified on your rehab plan.

If you are still having difficulty sleeping at the first postoperative visit, we can provide you with a sleeping medication (Ambien) to help. However, my recommendation is to avoid this as much as possible. If you do require Ambien, be sure to avoid consuming alcohol with this medication.

Driving

You cannot drive while taking narcotic pain medication. Since studies show that wearing a sling impairs driving, I recommend that you delay driving until you are out of your sling.

Sling Care

You will get fit for a sling for protection of your shoulder after surgery. You will get fit for a sling at your preop appointment; this visit occurs within 30 days prior to surgery. At that appointment you will be provided with a sling and then it is your job to bring it with you on the day of surgery.

The sling is one of the biggest annoyances following shoulder surgery but is important for your recovery. In most cases the sling is simply to prevent shoulder movement. Therefore, it is okay to take it off when you are sitting with your arm at your side. You can take the arm out of the sling and place it on a pillow, mimicking the position that it would be in with the sling. When you are up moving around and when you are sleeping the sling **MUST** be on.

After Surgery Clinic Visits

A typical after surgery course is detailed, although this may be changed in the unlikely event of any unforeseen issues. Also, the timeline is not exact; if you need to change a visit by a week in the first 3 months or by a couple of weeks after 3 months, this is okay. You will see me or a member of my team for these visits.

Here are the typical return visits to the clinic:

- 1) 2 weeks after surgery: This is a quick visit. We will go over the findings of the surgery. We will also go over rehabilitation again, provide a therapy prescription if needed, handle work notes, and provide any refills of pain medication if needed.
- 2) 3 months after surgery: Rehab will progress, usually strengthening at this phase.
- 3) 6 months after surgery: Release to recreational activities is normal and physical therapy is no longer required.

- 4) 1 years, 2 Years, 5 years, 7 years, and 10 years after surgery for surveillance of shoulder replacements

Rehabilitation & Return to Activity

Rehabilitation following shoulder surgery is very important. Your rehab will be tailored to you to match your particular shoulder problem and after surgery you will be provided with a rehab plan with important timelines/dates such as sling removal. Make sure you keep this form.

Formal therapy with a physical therapist does not begin in most cases until you are out of the sling. A prescription for formal physical therapy is usually provided at the first visit after surgery (2 weeks). However, you may do exercises on your own immediately after surgery based on your rehabilitation plan.

Until you are out of the sling, lifting is limited to approximately 2 pounds on the side of the surgery. Return to full activity varies based on the type of shoulder surgery. A typical timeline for full activity after shoulder replacement is 4 to 6 months. Running is okay after the sling removal date. While in the sling, aerobic exercise can be obtained by walking or using a stationary bike or treadmill.

A typical golf progression is:

- 1) 3-4 months okay to putt, 2) 4 months for chipping, 3) 6 months for full golf swing.

Dressing and Self-Care

Dressing

How do I dress myself?

- 1) Pull the shirt up the arm of the surgery side. Pull up to the armpit.
- 2) Roll up the shirt and pull over your head.
- 3) Then introduce the opposite arm.

Use loose-fitting clothing. Front button shirts which make this easier.

Bra Wear

Many women ask if they can wear a bra after surgery. Yes! If the strap of the bra crosses the surgical incision just make sure that portion is covered with a Band-Aid or dressing until fully healed (2 weeks). Strapless bras are an option as well. The biggest difficulty is clasping the bra. A front clasp is easiest so one can follow the shirt instructions (pull up the surgical side first, then the opposite side, then clasp in the front).

Self-care

You can brush your teeth if needed with the operative side. Just avoid raising the elbow. In the shower it is often helpful to have a scrub brush for reaching with the opposite arm. For going to the bathroom use the opposite hand to wipe or one can buy a wiping assist handle for reaching behind.

Work

Return to work will be dictated by your type of work and your desire to return. In general, I advise taking 1 to 2 weeks off of work. Light duty with no use of the affected arm is usually allowed at 2 weeks. At 6 to 12 weeks, you can return to full duty for light work such as desk work. Heavy labor may be delayed until 4 to 6 months. Work notes can be provided for being completely off work for up to 6 weeks after surgery. After that time, I will write notes for what you are physically capable of doing. These notes will have restrictions which are gradually removed. While your employer may feel that you cannot work based on the restrictions, I cannot legally take you completely off work for several months.

Dental Procedures following Shoulder Surgery

For years it has been common after orthopedic surgery, and joint replacement in particular, to delay elective dental procedures for a period of time following the orthopedic surgery. It has also been a common practice for patients with a joint replacement to take antibiotics prior to dental procedures. This has been done with the goal of preventing infection of the joint replacement.

In late 2012, the American Dental Association (ADA) and the American Academy of Orthopaedic Surgeons (AAOS) issued a practice guideline to “consider discontinuing the practice of routinely prescribing prophylactic antibiotics for patients with prosthetic joint implants undergoing dental procedures.” The recommendation was based on a lack of evidence that dental procedures contribute to joint infection or that the risk of joint infection is lowered with antibiotics. At the same time there are problems with giving antibiotics such as promoting drug resistance.

Infection after shoulder procedures is rare. For shoulder arthroscopy the risk is approximately 1 in 5000. For shoulder replacement the risk is 1%, although our personal infection rate is lower. The most common causes of shoulder infection are P. Acnes, which lives in the skin around the shoulder, Staph Aureus, and Staph Epidermis. Given the low risk of shoulder infection, the fact the causative organisms do not frequent the mouth, and given the joint statement above, **my policy at this time is to NOT routinely prescribe antibiotics prior to dental procedures or limit elective dental procedures for a period of time following shoulder**

surgery. However, if a dental physician or a patient would like to prescribe an antibiotic prior to a dental procedure I do not object.

How can we be reached?

It is best to call us during the week. Your first line of contact is the office at (785) 823-2215 Monday through Thursday, 8am to 5pm and Friday 8am to 12pm. The same number may be called after hours, and a partner or member of my team will be available for assistance.

After you have recovered

After you have recovered, I would love it if you would submit a testimonial for us on Facebook, Google, or Instagram at the Salina Ortho pages. The joy of my job is seeing people get back in motion. If you are willing, please share a picture with us or send us a video of you doing something you love.