Q: WHAT IS ACCOMPLISHED DURING THE PROCEDURE?

- Shoulder arthroscopy is a procedure in which small incisions are made around the shoulder, and a camera in conjuncture with small tools are inserted in and around the shoulder joint to perform surgery.
- The shoulder joint is similar to a golf ball (head of humerus) sitting on a golf tee (glenoid). Attached to the golf ball are a group of 4 tendons which are collectively called the ‘rotator cuff’.
- In some patients a portion of the rotator cuff becomes torn, so rather than being attached to the bone the tendon is pulled back from its attachment on the ball. The area affected by the tear can range from very small to very large (including nearly the entire rotator cuff).
- In some cases, the rotator cuff is only torn part of the way through the tendon (this is called a partial tear). The majority of these tears can be successfully treated without surgery, but some may occasionally continue to cause pain and/or dysfunction of the shoulder, and surgery may be necessary.
- During surgery, small anchors are placed in the bone of the ‘golf ball’. These anchors have stitches attached to them which are carefully passed through the torn rotator cuff tendon and tied down in order to repair the rotator cuff back to the bone.
- The number of anchors used depends on the extent of the tearing of the rotator cuff. A typical repair ranges from 2-4 anchors. In some cases, more or fewer anchors are required.
- There are often additional procedures that are performed at the same time as a rotator cuff repair. These differ from patient to patient, but may include:
  - Subacromial decompression- This is a procedure that includes removal of a bone spur that can contribute to injury to the rotator cuff.
  - Debridement- This is a procedure where unhealthy tissue inside the shoulder is removed with the use of a shaver or other tools.
  - Biceps tenotomy- This is a procedure that is performed when there is damage to the biceps tendon. A tenotomy is when the tendon is cut near its attachment to the rim of the socket and allowed to pull back and heal/scar down to the front of the shoulder over time.
Biceps tenodesis- This is a similar procedure to a biceps tenotomy, but the tendon is attached to the arm bone at the front of the shoulder with an anchor(s). The decision regarding when to perform a tenotomy and when to perform tenodesis is complex and controversial. In general, Dr. Hess performs a tenodesis in younger, active patients and a tenotomy in older, less active patients. Most studies show very little functional difference between patients who have had a biceps tenotomy and those who have had a biceps tenodesis.

Q: WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF ARTHROSCOPIC SHOULDER ROTATOR CUFF REPAIR COMPARED TO NOT HAVING SURGERY?

- Arthroscopic shoulder rotator cuff repair has several advantages compared to non-surgical treatment of rotator cuff tears.
- In some cases, even with a rotator cuff that is torn, patients may not have much pain or weakness. Physical therapy may be all that is required to allow the shoulder to function well. Surgery is not always necessary.
- However, most full-thickness rotator cuff tears typically do not heal without surgery.
- Arthroscopic rotator cuff repair can allow the rotator cuff tendons to heal back to the bone, and therefore improve overall strength and function of the shoulder.
- Performing the procedure arthroscopically (compared to open) has been shown to result in similar rates of healing of the repair and has been shown to cause less post-operative pain and stiffness in many cases.

Q: HOW DOES THE SURGEON SEE AND PERFORM WORK IN THE SHOULDER?

- Surgeons use a small camera (called an arthroscope) and small tools to work inside the shoulder. The camera and tools are inserted through small incisions around the shoulder. Various tools are used to complete the operation.
- The location of incisions will vary depending on the specifics of the surgery.
- The arthroscope is used to perform work inside the shoulder including repairing the rotator cuff, examining the rest of the shoulder for any damage, and performing any additional repairs or procedures if needed.
- Sometimes, with certain injuries, additional incisions will be needed. On occasion, some parts of the surgery may be performed with the arthroscope while other parts may be performed ‘open’.

[Image of shoulder surgery process]
Q: WILL I NEED TO STAY OVERNIGHT AFTER SURGERY?

- No. Shoulder arthroscopy is typically performed as an outpatient surgery. You will arrive approximately 1.5 - 2 hours prior to your procedure. Typically, you will be able to return home about two hours after your surgery is over. Please ensure someone comes with you to surgery who will be available to drive you home. If you are a minor, your parent / legal guardian must be present the day of your surgery.

Q: HOW LONG DOES THE SURGERY TAKE?

- Approximately 60-90 minutes. Surgery time may vary slightly based on the complexity of your injury and procedures required. Dr. Hess will spend the required time to ensure any identified reasons for your symptoms are addressed. In addition to the rotator cuff repair, sometimes other procedures are needed including removal of small pieces of bone or cartilage, procedures to address damage to surrounding structures, or to correct damage to other areas of the shoulder. These additional procedures will add time to the surgery.

Q: ARE THERE RISKS INVOLVED WITH HAVING SURGERY?

- Yes. Every medical procedure has certain risks. Some risks are present with any surgery, including those associated with anesthesia (heart attack, stroke, respiratory distress or failure), and some are more specific to the procedure being performed. Risks of arthroscopic rotator cuff repair include, but may not be limited to: infection, damage to blood vessels or nerves (causing numbness, tingling, burning, or weakness), blood clots (deep vein thrombosis or pulmonary embolus), stiffness of the shoulder (which can require additional surgery in some cases), iatrogenic injury (injury to structures caused by surgery), scarring, and residual pain or discomfort.
- There is also the possibility that the repaired rotator cuff can re-tear. This risk varies depending on a number of different factors. It is possible that additional surgery may be recommended/needed if the rotator cuff does not heal correctly or re-tears.
- Some complications after surgery are uncommon and can't be predicted in advance.

Q: WILL I NEED TO USE A SLING AFTER SURGERY?

- Yes. A particular type of sling is typically recommended (and provided in clinic prior to surgery) for protection for approximately 4-6 weeks after surgery. Dr. Hess recommends that you wear the sling at all times after surgery. You are encouraged to come out of the sling several times per day and move the elbow/hand/wrist to prevent them from becoming stiff. You may remove the sling to shower according to the post-op instruction sheet given to you on the day of surgery.
- The sling is a good reminder for you to be careful with the shoulder after surgery. It is also a signal to those around you to be careful, so it is especially important to wear your sling at work/school and in crowds.
- You will not be allowed to lift any significant weight (nothing more than 2-5 pounds) with the surgical arm for approximately 4-6 weeks after surgery. You may use the arm to perform some basic activities of daily living such as eating, hygiene and working at a computer.
Q: HOW LONG IS THE RECOVERY AFTER SHOULDER ARTHROSCOPIC ROTATOR CUFF REPAIR?

- This depends on how we define ‘recovery’.
- Also, every individual patient’s recovery is different, and may require more or less time than expected.
- Most patients will need to wear their sling for approximately 4-6 weeks after surgery.
- Most patients can return to light duty or sedentary work around 1-2 weeks after surgery.
- More strenuous work may require more time to return, with the specific time to return depending on the duties of your job. With very strenuous jobs, it can take 4-6 months or more to return.
- Most patients return to sports activity around 6 months after surgery.
- Return to sports activities takes time. Muscles must gradually learn to adapt to different forces around the shoulder. This should not be rushed.

Q: WILL PHYSICAL THERAPY BE NEEDED AFTER SHOULDER ARTHROSCOPIC ROTATOR CUFF REPAIR?

- Physical therapy is HIGHLY recommended after shoulder arthroscopic rotator cuff repair, as there are many important things to monitor and consider during recovery.
- Dr. Hess has specific rehab protocols for rotator cuff repairs. These include:
  - Type 1: Most aggressive protocol. This is reserved for small tears with good quality tissue in young, healthy patients. Therapy begins 2 weeks after surgery.
  - Type 2: Most common protocol. This protocol is for moderate size tears with good quality tissue. Therapy begins 4 weeks after surgery.
  - Type 3: Most conservative protocol. This protocol is for large tears and/or tears with concerns about healing potential. Therapy begins 6 weeks after surgery.
- After surgery and prior to formal therapy beginning, you should make sure to spend some time working on elbow/wrist/hand range of motion each day to prevent stiffness when using the sling.
- The start of therapy is delayed a few weeks after surgery in order to allow the repaired tissue to begin to heal, prior to starting to ‘stretch out’ the shoulder with therapy.
- Therapy begins with simple stretching exercises and progresses to more aggressive stretching and strengthening exercises as the recovery progresses.
- The duration of physical therapy will be different for each patient, but will typically last several months with progressive activities and exercises prescribed as you recover. Initially, the visits are twice per week. This may change over the course of your recovery.
- It is important to remember that not everyone recovers from this surgery at the same rate. Some people recover their shoulder range of motion and strength quickly, while for others it takes longer. This is normal, as everyone heals differently. It is important not to get frustrated if therapy is progressing slower than you would like. It is also important to perform your prescribed exercises at home on days when you do not attend formal physical therapy.
- The assessment of the physical therapist is a very important component when deciding if it is okay to return to sports/work activities.
**Q: WHAT MEDICATIONS WILL BE PRESCRIBED AFTER SURGERY?**

- Pain relievers will be prescribed after surgery. These are typically only needed for less than 7-10 days after surgery. You should plan on not using narcotic pain relievers longer than 2-3 weeks after surgery.
- Tylenol and/or ibuprofen/naproxen can be used once narcotics are no longer required.
- The pain medication will not completely prevent any pain. It is normal and appropriate to have some pain after surgery. The goal of using medication should be to make pain tolerable, not to eliminate pain.
- The following is a complete list of medications prescribed after surgery, and the purpose of the medication. Other medications may be prescribed on occasion.
  - Oxycodone/Hydrocodone – These are narcotic pain medications. They should be taken as needed, no more than every 4 hours for pain.
  - Ondansetron – Taken as needed for nausea/vomiting.
  - Aspirin - Taken to decrease the risk of blood clot. This should be taken once per day for 2 weeks after surgery.

**Q: HOW MUCH PAIN AM I GOING TO HAVE AFTER SURGERY?**

- This is a common question, but one that is very difficult to answer. Every patient experiences pain differently. The same procedure may cause drastically different amounts of pain in different patients.
- Key components of controlling pain after surgery include icing the shoulder, taking appropriate pain medications, limiting activity appropriately, and following recommendations by the physical therapist and Dr. Hess.
- A nerve block is often placed by the anesthesia team during surgery. This block often works for several hours up to 2 days after surgery. As a result, your pain may be well controlled initially, but may increase after the block wears off. This is a normal part of the block wearing off, and shouldn’t be cause for concern in most cases. When you start to feel tingling in the arm, this is an indication that the block is beginning to wear off. This is a good time to begin taking pain medication.
- If there are concerns about pain control, please bring them up with Dr. Hess prior to surgery or call his patient care coordinator after surgery. Dr. Hess can return phone calls if needed.

**Q: WHEN WILL I HAVE FOLLOW UP APPOINTMENTS AFTER SURGERY?**

- Follow up appointments after surgery are important to monitor your progress, assess any limitations or setbacks, and plan your continued care. Typically, you will be seen at the following intervals:
  - 2 weeks, 6 weeks, 3 months, 6 months, 1 year.
  - Additional appointments may be recommended in certain situations.
Q: WHEN CAN I BEGIN DRIVING AFTER AN ARTHROSCOPIC SHOULDER ROTATOR CUFF REPAIR?

- Two important criteria exist to begin driving after shoulder arthroscopy:
  1) You must be off narcotic medications for a full 24 hours prior to driving.
  2) You must be able to operate the vehicle safely with your surgical arm immobilized in the sling.

Q: WILL ARTHROSCOPIC SHOULDER ROTATOR CUFF REPAIR ALLOW MY SHOULDERS FULL RANGE OF MOTION AND STRENGTH ONCE RECOVERED?

- In most cases, range of motion of the surgical shoulder recovers to near full motion. However as discussed above, stiffness and weakness are associated risks.
- Physical therapy is critical in preventing and treating stiffness of the shoulder after arthroscopic shoulder rotator cuff repair. Most cases of stiffness can be improved by therapy and home exercises.
- Recovery of strength is dependent on many factors. In large tears, or tears that have been present for a long time prior to surgery, recovering full strength may be more challenging.
- It is important that you also spend time every day outside of formal therapy during recovery doing the prescribed exercises to improve your range of motion and strength.

Q: WHAT DO I DO WITH THE DRESSINGS AFTER SURGERY?

- It is recommended that you leave the surgical dressings in place, undisturbed for 2-3 days after surgery.
- Following this, the tape and gauze dressings can be removed. Leave any steri-strips that are present in place. The incisions can be covered with waterproof band aids for showering. Do not submerge the wounds under water (including baths, lakes, pools or hot tubs) until they are completely healed (typically 2-3 days after removal of stitches).
- The band aids should be changed daily or as needed.
- Some minimal drainage is expected after surgery. If there is more significant drainage, please notify Dr. Hess or his care coordinator.

Q: WILL I BE ABLE TO RETURN TO THE SAME ACTIVITIES AFTER SURGERY THAT I WAS DOING BEFORE SURGERY?

- In most cases, yes. This can depend on the age and activity level of the patient and the specific sports they are trying to return to.
- Certainly, the goal of arthroscopic shoulder rotator cuff repair is to restore the function of your shoulder to a point that you are able to participate in any activities you would like. However, in some cases pain, stiffness, residual weakness, nervousness about reinjury or other factors can prevent return to some activities.
Q: WILL I GET ARTHRITIS IN MY SHOULDER?

• Maybe. The goal of the surgery is to correct the structures of the shoulder to allow it to function more normally. However, this does not change the fact that the shoulder has sustained some damage, and arthritis may occur as a result.

Help us improve our care: What other questions would you like to have answered?

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