What to expect when you have Rotator Cuff Repair

Patient Guide
Introduction:

The rotator cuff (RTC), is a group of 4 muscles that converge to form a “cuff” of tendons which surround the ball (head) of the humerus, or upper arm bone, and stabilize it within the shoulder socket. The specific muscles include supraspinatus, infraspinatus, subscapularis and teres minor. The rotator cuff provides stability to the shoulder joint, and is critical for raising and rotating your arm.

Problems of the rotator cuff include tendonitis, bursitis and partial or complete tendon tears. Each of these may occur as a result of wear and tear from daily use, but may also occur as a result of trauma. Traumatic rotator cuff tears can occur when lifting something heavy, or falling on an elbow or outstretched hand.
The signs and symptoms of a rotator cuff tear include:

- Recurrent or constant shoulder pain particularly with overhead functions
- Pain in the lateral (side) aspect of the shoulder/upper arm. This pain may radiate toward, but not beyond the elbow
- Pain that wakes you up at night
- Pain and/or weakness lifting the arm over head or lowering from and elevated position
- Increased or abnormal clicking and grinding of shoulder
- Decreased range of motion or painful range of motion

Many tears, particularly those that did not result from trauma, can undergo a trial of nonoperative treatment before considering surgery. These treatments include activity modification, oral or topical anti-inflammatory medication, corticosteroid (cortisone) injection, and physical therapy. For traumatic tears, or non-traumatic tears that fail a trial of nonoperative treatment, surgery may be recommended. There are a number of surgical options for rotator cuff repair that are dependent on: size of tear, location of tear, and chronicity of the tear. Other factors, such as activity demands, hand-dominance, and age are also considered when discussing surgical intervention.

Surgical treatment of rotator cuff tears is most often performed arthroscopically, where your surgeon will use multiple small incisions to place a fiberoptic camera and instruments into the shoulder joint to repair the damaged structures. During this time, other potential injuries can be addressed as well. Your surgeon will review with you any associated injuries identified on exam or by MRI and discuss whether this influences the overall treatment plan.
Pre-Operative Rehabilitation:
Many patients will undergo a course of physical therapy prior to surgery. After initial injury, you may have swelling, weakness, limited range of motion and pain.

Signs that you may benefit from pre-hab include:

- Inability to lift arm through normal range of motion either due to pain or strength
- Inability to perform sport or typical day to day activities without pain
- Increased swelling
- Inability to bear weight through the upper extremity

Your physical therapist (PT) will devise a tailored program to assist in decreasing your symptoms prior to surgery. Depending on your week to week progress a pre-hab program may last 2-4 weeks with sessions occurring 2-3 times each week and may include:
Modalities:
Treatments may include the use of ultrasound, neuromuscular stimulation devices, cryo- and/or thermo- therapy (ice or heat). These modalities will assist in reducing swelling and pain, and improve range of motion and muscle activation.

Range of Motion:
Your PT will teach and perform techniques that will help you regain motion of your shoulder. For several weeks you will be limited in how you are allowed to move your shoulder after surgery. For this reason, gaining as much tolerable range of motion prior to surgery may help improve losses afterwards.

Strength:
Following injury, strength and atrophy of shoulder musculature are rapid due to pain, swelling and limitations in use. A full grade of muscle loss can be lost in only 2 days with a typical time of 2 weeks to regain half of that back. Going into surgery as strong as possible will only benefit your recovery. Strengthening activities may include exercises called isometrics where muscles of the shoulder are able to contract within range of motion constraints. During this time it also very important to maintain or even gain strength of the scapular stabilizers, elbow flexors and extensors (biceps and triceps), as well as, the muscles involved with grip. Having a strong base of stabilization is paramount for maintaining the integrity of repair.

Precautions and Joint Protection Education:
Following surgery it will be imperative to follow proper joint protection protocols and precautions. You will be given a sling and possibly a sling pillow and/or shoulder stabilization brace following surgery to be worn for 4-6 weeks. Your PT will be knowledgeable on how to manage these for day to day life as well as how to proceed with your movement precautions through each phase of rehabilitation.
Tips to Prepare for your Rotator Cuff Surgery

Start practicing one to two weeks prior to the operation as though you only have one hand (the non-injured). Use this hand for every-day use such as eating, dressing, grooming — just about everything you do. You will not have full use of your operative arm since it will be immobile for 4-6 weeks.

The following is a list of suggestions that may make your life easier after surgery. If you are living with friends or family, please discuss with them their availability to help you during the first 4-6 weeks after surgery. If you live alone, these recommendations will be of greater importance to help you achieve independence:

1. Clothing:
   a. Shirts: You may want to cut approximately 4 short-sleeve shirts in half starting at the shirt tail seam and continuing up and through the sleeve on the side of the injured arm. This is necessary to accommodate the pillow strapped under your arm to abduct the shoulder (that is, move arm away from body). You will need the T-shirt to absorb any body sweat so that the pillow remains clean and dry. The half-cut shirt looks ragged, but gives you some appearance of being dressed. The general rule of thumb is “first on, last off” the affected extremity (that is, put the sleeve all the way on your surgically repaired arm, then slip your uninjured arm in your shirt). Women may begin wearing undergarments as soon as you are comfortable wearing them.

   b. Shoes: It can be difficult to tie shoelaces, so plan on wearing loafers, Velcro, or loosely-tied shoes that may be slipped on and off easily.

   c. Shorts/Pants: It will be difficult to zipper, button or snap pants closed at the waist. Elastic waist shorts/pants are easier to manage with one arm.
2. **Driving:** You will not be able to drive while you are wearing a sling. The duration of sling use will be determined and discussed at your first post-operative visit, but typically ranges from 4-6 weeks. Please anticipate any errands or other responsibilities that you may take care of before your surgery.

3. **Grooming:** Get your haircut, clip your nails before surgery. Practice simple hygiene tasks such as applying deodorant, shaving, brushing teeth, etc.

4. **Food:** Stock up on food that is easy to prepare. Buy soft foods that are easy to cut with one hand.

5. **Telephone:** Phones with a speaker phone or Bluetooth option will allow you to keep one hand free for writing and other use.

6. **Sleeping:** Patients with shoulder problems are often already aware of the problems they have finding a position of comfort at night. Many patients feel better sleeping in a semi-reclined position. If you are unable to sleep comfortably, options include propping pillows in your bed, using a wedge pillow, or sleeping in a reclining chair.

7. **Sling Immobilizer:** It is helpful to obtain your sling pre-operatively whenever possible. This will give time to ensure appropriate fit and positioning of the sling. It also gives you the opportunity to familiarize yourself with donning and doffing the sling.
Day of Surgery:

When you are planning your trip to the surgical center, be sure to wear a loose-fitted shirt, which will be easy to reapply post-operatively. A button-down shirt may be preferable. Typically, you will arrive 1-2 hours prior to surgery time to meet with a pre-operative nurse who will start preparations by placing an IV on your opposite arm and clean the operative shoulder. Your surgeon will also see you to address any questions or concerns.

The anesthesiologist will perform a nerve block preoperatively, which reduces pain immediately after the surgery greatly. You will have a general anesthetic as well for your surgery. The surgical procedure can take 1-2 hours, depending on the amount of work needed to repair the torn tendons. When you awake from surgery you will have an Ultrasling, and often a cold therapy pad (cryocuff) that will connect to a cooler and helps with icing the shoulder by circulating cool water through the cuff.

First 24 Hours Post-Operative:

You may feel drowsy for the first several hours after surgery, so try to get as much rest as possible. It is recommended that you stay ahead of your pain by following your pain medication prescription and by icing for 30-40 minutes every 1-2 hours. The pain after shoulder surgery can be moderate to severe when the nerve block wears off. We recommend you stay ahead of the pain as best as possible, using a combination of prescription and non-prescription medications as recommended by your surgeon. Cold therapy helps reduce pain significantly and should be used often, particularly in the first 24-48 hours after surgery. Pain medication can cause constipation and other side effects. Discuss these side effects with your doctor or pharmacist and have a plan in place if you experience any of the adverse effects. As mentioned above, sleeping in a semi-reclined position is often better tolerated than trying to sleep flat.
**Rehabilitation:**

Physical therapy and rehabilitation will progress in phases. Phase I of rehabilitation is much like your pre-hab was. The first goals are decreasing pain, increasing range of motion and initiating low levels of strength. Your surgeon and therapist will consider several variables, such as size of the tear, quality of the tendon tissue, as well as associated injury/procedures with your rotator cuff injury. It is important that during the whole rehabilitation process that you listen to your body and your therapist who is directing your care.
Recovery Phase 1: Passive Motion, 0-6 weeks post-operative
This is a maximum-protection phase. The first phase of recovery is passive motion only and your surgeon may choose to provide a home exercise program, rather than formal physical therapy during this time. This may last up to 6 weeks, depending on the size and type of rotator tear and strength of the repair. Passive motion means the rotator cuff muscles and tendons are not doing any work. When the rotator cuff muscles contract (active motion), you place tension on the repair that was performed and this can disrupt the repair. Passive motion means that the shoulder moves without placing tension on the repair. Your surgeon and therapist will review techniques of passive motion with you.

Recovery Phase 2: Active and Active-Assist Motion, 6-12 weeks post-operative
Your sling will be removed at the start of this phase. You can expect therapy 2-3 times per week during this phase. Active and Active-Assist motion begin once there is sufficient healing of the tendons to allow them to start moving the arm, but before extra-resistance is applied. There are techniques to provide assistance to active motion (active-assist), such as walking your hand up a wall, using a cane, or a pulley to help elevate your arm.

Recovery Phase 3: Strengthening
Significant weakness can occur due to pain limiting activity before surgery, as well as the 10-12 weeks of limited activity following surgery. Once the repair is adequately healed, a process that can take 12 weeks, it is important to begin strengthening the muscles to allow you to resume your normal activity. The rotator cuff muscles do not need heavy weights for effective strengthening. A skilled therapist can instruct you on techniques to isolate the proper muscles for strengthening such that only light resistance bands or weights can provide an excellent workout.

It’s during this phase when you may get some baseline testing done. This testing looks at how you are moving not just at your shoulder but also at other areas of your body such as your neck. The physical therapist may take some baseline strength measurements and compare them to your non-injured side. The timing of this testing is based off of your repair and original tear size.
Recovery Phase 4: Full Activity
Full recovery after rotator cuff surgery often takes 4-6 months, and in some cases longer. Maximum improvement may not be obtained until up to 9-12 months. Your surgeon and therapist will guide you in terms of returning to vocational and recreational activities. Once you are released to full activity, it is important to continue with many of the strengthening exercises you learned from your physical therapist. This helps maintain good shoulder health, using the muscles appropriately to stabilize your shoulder. As you are nearing discharge from your physical therapy program, discuss with your therapist a home exercise protocol you can continue on your own.

Things to expect:
• Return to sports will vary on the sport that you participate in and the level of that participation
• Return to sports will vary from starting the return at the 4 month or 6 month post-operative time frame
• There are published protocols established by Hartford HealthCare Rehabilitation Network for each individual sport and we will progress you as we see fit to your return to sport
• We have available a bridge program that will return you to your sport once you have completed your physical therapy that is allowed by insurance

Functional testing:
A series of specialized evaluations that are implemented at key points throughout your recovery. These evaluations will look at strength, range of motion, movement, balance, and your ability to generate power or forces throughout your body. These key measurements were designed to better you as a whole individual and help in reducing your body’s risk of injury and promote a safe and effective return to function and to sport.

A few of our tools that help us with functional testing include state of the art strength testing equipment, a 3D motion capture system that helps us look at your body performing a specific movement such as a golf swing, throwing a baseball, running or hopping; as well as force plates which allow us to see how much power or force your body can create. The Motion lab allows for all of this information to help the team decide the best treatment plan and to optimize your outcomes and your performance.
We are here to help.

The Bone & Joint Institute Sports Medicine Specialists are here to help you become not only as good, but better than you were before your injury.

Call for a referral to one of our:
• Orthopedic Surgeons  • Athletic Trainers
• Sports Psychologists  • Sports Nutritionists
• Physical Therapists  • Strength & Conditioning Specialists
• Sports Neurologists  • Sports Cardiologists
• Sports Dentists  • Biomechanists
• Integrative medicine providers

Functional testing available
• Golf swing, tennis analysis, throwing and vocational training

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