Guide To Your Rotator Cuff

"Rotator Cuff 7 Day Reconstruction Program"

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Introduction

Just about everyone at some point in their life will experience shoulder pain. Our shoulders have developed to be extremely mobile and flexible so that we can use them in our day-to-day lives. Yet, as humans, we tend to put a lot of stress on them during these day to day activities. We especially put excessive stress on our shoulder joints during heavy labor type work, sporting and competitive activities. In competitive sports, where physical mobility is extremely important, the rotator cuff and shoulder joints experience some really heavy wear and tear. And in order for anyone to achieve the proper mobility and flexibility in their shoulder joints, it is absolutely crucial that the muscles and tendons in the rotator cuff function properly. All of the muscle groups in the rotator cuff joint work to ensure the consistent ability to move your arms in all the directions you need them to go.

To really appreciate what your rotator cuff muscle group does for your mobility and how it helps you immensely in your day to day life…just take a look around. Find the first object that you see.

Now pick it up in one hand.

Now hold it over your head (if it's not too heavy)

Now hand it over to your other hand.

Most of the movements you just made were thanks to your Rotator cuff. While some of the finer, more specific movement was certainly controlled by your elbow joints, or your wrist, fingers and hand, it was your shoulder (or rotator cuff) that allowed all the other joints to move to the location you needed them to be!

When one suffers from a rotator cuff injury they typically experience a dull ache in their shoulder or upper arm. At times it can even become a sharp pain that can really dissuade you from wanting to use your shoulder at all. Many people experience this pain when they sleep awkwardly on their shoulder, others will feel the pain when they attempt to lift their arms over their head. The pain associated with these movements is typical for someone suffering from a Rotator Cuff injury.

As you can imagine, rotator cuff injuries such as tears in the muscle or bursitis are frequently caused by overuse of the muscles or trauma during some sort of physical feat. Other times it can happen with accidents where you fall awkwardly on your shoulders and natural

deterioration also can lead to these injuries.

Symptoms

There are typically about 5 solid ways to know if you have a tear in the muscle in your rotator cup. These symptoms are:

Pain: usually on the top and in the front of your shoulder and sometimes the pain can be in the side of your shoulder. This dull, aching pain or sometimes a sharp pain is especially worse when you are performing any activity where you reach above your head.

Stiffness in the shoulder. This stiffness occurs because it either hurts to move or you simply cannot move it because you are too weak. Immobility of the shoulder over time makes things much worse.

Weakness: with the pain that comes with rotator cuff tears also leads to the degeneration of the muscle which, in turn, leads to weakness of the muscles. This is particularly prevalent, again, with any type of activity where you reach above your head. It could be as simple as lifting your arm up to reach for something

on a shelf, or putting a shirt on, and you find you are too weak to perform the task.

Popping: if you experience a mild popping or cracking sensation in the shoulder this can be a definite sign of rotator cuff tear. The actual tear in the muscle can rub and cause this feeling.

Unable to sleep on your shoulder. Most people who suffer from tears find that sleeping on one side of their body is extremely difficult because of the pain and discomfort associated with that action. Don't be confused with the pain you may occasionally feel when waking up from a night where you slept awkwardly on you shoulder and it feels painful. It is if this pain persists that you should be concerned.

Now before you can determine the best method of healing your injury and strengthening the deteriorated or damaged muscles, it is important for you to understand exactly how your rotator cuff works. When you understand how the muscles all work together to move your bones, it is easy to deduce the best process for healing.

The term “Rotator Cuff” is actually used to describe a small group of muscles and their tendons in the shoulder that helps control the movement of the joints. The suspraspinatus is the top of the shoulder, the subscapularis is the front, and the infaspinatus and teres minor are behind. These muscles insert or attach to the humeral head by the way of their tendons. The tendons fuse together and thus generate the term “cuff”. Each muscle acting alone can produce an isolated rotational movement of the shoulder, the role they play together is to help keep the humeral head (ball) centered within the socket as the powerful deltoid and other larger muscles act to lift the arm overhead.

As you can see the rotator cuff consists of four primary muscles that effectively cover your shoulder and allow the movement of the arm upwards.

Muscle Groups

Let’s look at the functions of each of these muscles specifically

Supraspinatus – this tendon muscle runs along the top of the shoulder blade and inserts via the tendon at the top of the arm (humerus bone). This muscle is responsible for lifting the arm

up sideways and is also important in throwing sports as it is the muscle that holds the arm in the shoulder when you release what you are throwing. This is the most commonly affected tendon for tendonitis and tears due to the position of the muscle and its poor blood supply. Also a heavy fall onto the shoulder can result in injuries to this muscle

Infraspinatus – this tendon muscle lies on the outside of the lower 2/3 of the shoulder blade. It functions primarily to rotate your arm outwards and to pull your arm pack, such as when swinging a bat, golf club or hockey stick. This muscle also helps with the deceleration of the arm during follow through from an overhead motion, such as throwing.

Teres Minor – this muscle's primary function is the lateral rotation of the arm and stability of the shoulder joint.

Subscapularis – this muscle's function is for internal rotation, or pulling the arm towards the body while at the side. This muscle assists in follow through during throwing. Since this muscle performs the same action as the pectoralis major,

latissimus dorsi and teres major, it is sometimes difficult to detect weakness in this muscle.

Along with the four muscle groups that were mentioned above, there is another group of muscles that are called the scapular stabilizers. As the name suggests, these muscles have attachments to the scapula (medical term for the shoulder blade) and is responsible for shoulder motion by controlling the movement of the shoulder blade. Well, I don't mean necessarily that these are the controlling mechanisms of the shoulder blade. Just they provide the stability of motion. When there is weakness or damage to this muscle group, it can change the control of movement that we enjoy normally.

It is especially important to understand what each of these muscles does, as we learned from the 4 major muscles in the rotator cup, because strengthening and working these muscles makes a huge difference in recovery from injury, or degeneration.

But lets introduce the scapular stabilizer muscles:

Serratus anterior: this muscle rounds the shoulder blade

Upper trapezius – the muscle that affects shrugging or upward

rotation of the shoulder blade.

Middle trapezius – this muscle retracts the scapular inward

Lower trapezius – downward rotation of the scapular

Rhomboids – this muscle retracts the scapular inward as well

Background of Rotator Cuff Disease

There are many factors that may predispose one person to rotator cuff problems. The most common is the shape and thickness of the acromion (the bone forming the roof of the shoulder). Unfortunately some people's acromion develop differently which, in turn, creates less room for the soft tissue to glide and move during regular arm motion. With time activities, which involve forward elevation of the arm, may put an individual at higher risk for rotator cuff injury. Sometimes the muscles of the shoulder may become imbalanced by injury or atrophy, and imbalance can cause the shoulder to move forward with certain activities which again may cause damage or a tear.

In young, athletic individuals, injury to the rotator cuff can occur with repetitive throwing, overhead racquet sports, or swimming. This type of injury results from repetitive stretching of the rotator cuff during the

follow-through phase of the activity. The tear that occurs is not caused by impingement, but more by a joint imbalance. This may be associated with looseness in the front of the shoulder caused by a weakness in the supporting ligaments.

Most people who suffer from a tear in their rotator cuff usually begin to feel shoulder pain. Repetitive activities increase the damage and wear on the muscles and cause inflammation of the tendons that further increases the pain. This type of pain is typically known as Tendonitis or Bursitis, and is simply put, the inflammation of the tendons around the rotator cuff.

Professional athletes in sports such as basketball, baseball, hockey and football suffer from tendonitis and bursitis frequently due to the extreme use of their rotator cuff. As you may have seen before, many of these athletes at the end of games put ice packs on their shoulders. The reason they do this is to help reduce inflammation immediately following games.

In general, tendonitis responds very well to ice, rest, certain medications and specific strength training. When one suffers from

tendonitis it typically takes 1-3 months to recover, depending on a variety of factors. These factors include: age, level of initial damage and whether the person follows through with the treatment.

How is it Diagnosed

The diagnosis of rotator cuff tendon disease includes a careful history taken and reviewed by the physician, an x-ray to visualize the anatomy of the bones of the shoulder, specifically looking for acromial spur, and a physical examination. Atrophy may be present, along with weakness, if the rotator cuff tendons are injured, and special impingement tests can suggest that impingement syndrome is involved. An MRI (magnetic resonance imaging) scan frequently gives the final proof of the status of the rotator cuff tendon. Although none of these tests is guaranteed accurate, most rotator cuff injuries can be diagnosed using this combination of exams.

What happens if the rotator cuff is not repaired?

In some situations, the bursa overlying the rotator cuff may form a patch to close the defect in the tendon. Although this is not true tendon healing, it may decrease the pain to an acceptable level. If the

tendon edges become fragmented and severely worn, and the muscle contracts and atrophies, repair at that point may not be possible. Sometimes in this situation, the only beneficial surgical procedure would be an arthroscopic operation to remove bone spurs and fragments of torn tissue that catch when the arm is rotated. This certainly will not restore normal power or strength to the shoulder, but often will relieve pain.

Injury Prevention

As you may have picked up from earlier section in this ebook, there are several ways that you can treat injury to your rotator cuff. In order to best determine the proper treatment for your rotator cuff injury, I would seek the attention and direction of a licensed medical professional prior to engaging in any rehabilitation or prevention, since the level of treatment depends entirely on the level of injury.

For some people the damage is so great that orthroscopic surgery is the only solution that makes sense, and although the thought of surgery is sometimes scary, if you are in that situation I very adamantly suggest that you seek actual medical attention.

For those with less severe injuries, or for those who are concerned with preventing future tears, I have prepared an exercise routine that will help to strengthen each of the muscles associated with your shoulder region.

The best way to deal with most physical injuries to muscle tissue is through calculated training. When there is any degeneration, wear and tear and basic trauma to a muscle group, any physiotherapist will work with you to strengthen the muscle groups that are affected through targeted strength training.

In the next section you will be introduced to all of the exercises that are designed to specifically targeted to strengthen the muscle group within the rotator cuff.

If strength-training exercise is something completely new to you, then I would strongly suggest that you register for a fitness center where they have professional attendants who can help you out during your workouts. It is very beneficial for anyone starting out on recovery or preventative exercise to seek out the attention and advice of professionals prior to engaging in the activity.

Therefore I must again remind you to seek the advice of a doctor or professional prior to engaging in any type of exercise routine designed to strengthen damaged or even to prevent damage to any muscle group. I provide this report and exercise regiment for informational purposes only.

Through proper conditioning well ahead of rigorous physical activities (such as pretty much any type of sporting) you can prepare your rotator cuff to handle the stresses that would be expected of it from such activities.

If you play sports, I would recommend starting these exercises 1-2 months prior to the beginning of the season. Otherwise, to do these exercises on an ongoing and steady schedule is the best way to prevent injury.

When you first begin, your muscles will likely not be used to the lifting and resistance that it experiences and this will very likely result in potentially inflaming and soreness. This is to be expected even with light lifting. That is why I would suggest starting out with low weights, or even no weights at all and practice the movement associated with

each of these exercises.

If you are recovering from injury and experiencing pain during any of the exercises I would suggest lowering the resistance, even to the point where you are just doing stretching motions without weights at all. If pain persists then it is strongly advised you seek the attention of your doctor or of a physiotherapist.

Since most of the muscle groups you are working are rarely utilized or strengthened it is advised that you use a lighter weight load and higher frequency of repetitions. That way the muscles will best handle the resistance. Therefore I would suggest 5-10 pound weights.

As you can probably tell the workouts that I am going to describe are specifically designed to target each of the muscle groups I introduced to your earlier in this book.

You can follow them in any order you are most comfortable with, although I have put them in order of the sequence that, in my opinion, works best.

Rotator Cuff & Shoulder Rehabilitation Exercises

Disclaimer

Please consult your doctor or health care provider before doing any rehabilitation exercises. The exercise suggestions provided will help strengthen the muscle groups that we mentioned above, but I strongly recommend consulting your doctor prior to engaging in any form of fitness rehabilitation program.

First Part (Isometrics)

Please Note: In order to perform these exercises you simple need a sturdy doorway and about fifteen minutes of time. If you begin to feel significant pain of any sort I would suggest consulting a medical professional, these exercises are provided for informational purposes only.

Even if you are doing preventative training, these stretches below are a good warm up as they provide a full range of motion for your shoulder region in general.

As these become easier I would suggest adding resistance to any of the free stretch movements with dumbbells.

External Rotation

Standing in a doorway with your elbow bent 90° and the back of your hand pressing against the door frame, try to press your hand outward into the door frame. Hold it for 5-10 seconds. Do three sets of ten.

Internal Rotation

Again standing in a doorway with your elbow bent 90° and the front of your hand pressing against the door frame, press your palm into the door frame. Hold it for 5-10 seconds and again do three sets of ten.

Adduction

Place a pillow between your chest and arms then squeeze the pillow with your arms and hold this for 5-10 seconds. Do three sets of ten.

Flexion

Standing and facing a wall with your elbow bent at a right angle and held close to your body, press your fist forward against the wall. Hold this for 5-10 seconds, then rest. Do this as well for three sets of ten.

Extension

Standing facing away from the wall with your elbow touching the wall, press the back of your elbow into the wall and hold for 5 seconds. Do three sets of ten.

Abduction

Standing with your injured side towards the wall and your elbow bent at a 90-degree angle, press the side of your arm into the wall as if attempting to lift it. Hold this for 5 seconds then rest. Do this in three sets of ten.

Shoulder Flexion:

Stand with your arms hanging down at your side. Keep your elbow straight and lift your arms up over your head as far as you can reach. Hold the end position for five seconds and do this ten times.

Shoulder Extension

Stand with your arms at your side. Move the arm on your sore or injured side back, keeping your elbow straight. Hold this position for five seconds. Repeat this movement ten times.

Shoulder abduction and adduction

Standing with your arms at your sides, bring your arms up, out to the side and towards the ceiling. Hold this for five seconds and repeat ten times.

Elbow range of motion:

Gently bring your palm up toward your shoulder and bend your elbow as far as you can. Then straighten your elbow as far as you can ten times.

Part II (Tubing Exercises)

Internal rotation:

Using tubing connected to a door knob or other object at waist level, keep your elbow in at your side and rotate your arm inward across your body. Make sure you keep your forearm parallel to the floor. Do 3 sets of 10.

External rotation:

Standing in a doorway with your elbow bent 90° and the back of your hand pressing against the door frame, attempt to press your hand outward into the door frame. Hold for 5 seconds. Do 3 sets of 10.

Adduction:

Stand sideways with your injured side toward the door and out approximately 8 to 10 inches. Slowly bring your arm next to your body holding onto the tubing for resistance. Do 3 sets of 10.

Flexion:

Facing away from the door with the tubing connected to the door knob, keep your elbow straight and pull your arm forward. Do 3 sets of 10.

Extension:

Using the tubing, pull your arm back. Be sure to keep your elbow straight. Do 3 sets of 10.

Latissimus dorsi strengthening:

Sit on a firm chair. Place your hands on the seat on either side of you. Lift your buttocks off the chair. Hold this position for 5 seconds and then relax. Repeat 10 times. Do 3 sets of 10.

Scaption:

Stand with your arms to your side and with your elbows straight. Slowly raise your arms to eye level. As you raise your arms, they should be spread apart so that they are and only slightly in front of your body (at about a 30 degree angle to the front of your body). Point your thumbs toward the ceiling. Hold for 2 seconds and lower your arms slowly. Do 3 sets of 10. Hold a soup can or light weight when doing the exercise and increase the weight as the exercise gets easier.

Push ups with a plus:

Begin on the floor on your hands and knees. Keep your arms a shoulder width apart and lift your feet off the floor. Arch your back as high as possible and round your shoulders (this is the "plus" part or the exercise). Bend your elbows and lower your body to the floor. Return to the starting position and arch your back again. Do 3 sets of 10.

Rotator Cuff & Shoulder Strengthening Exercises

Please note: These exercises are best performed at pretty much any fitness center. Much of the movements I describe will require a variety of fitness equipment to perform, however one need not have fitness equipment and can use free weights

DB Punches

1) Start this by lying on your back with your knees bent so that your feet are flat on the ground.
2) Press both dumbbells upwards toward the ceiling while keeping both of your elbows straight.
3) Your shoulder blades should move forward and lift slightly.
4) When you reach the top of the movement, hold it for five seconds.
5) Rest briefly between repetitions and do 3 sets of 10

Lower Trap Raise

1) For this exercise you will need to choose a weight that you are comfortable with, although I would suggest a light weight.
2) Stabilizing yourself on a bench or a stability ball raise both arms up in a forty-five degree angle as far as your shoulders will allow.
3) When you reach the maximum extension point pause and then lower.
4) Repeat for 3 sets of 10

Internal Rotation (Using Theraband or Tubing)

1) Anchor Theraband or tubing to a fixed object
2) Position your body straight with your knees relaxed
3) Hold the tubing and begin with your arm positioned at the side with light tension on the tubing or theraband.
4) Begin to pull the arm across the body to the stomach, while keeping the elbow at your side.

5) Be sure that your shoulder does not rotate forward as that would defeat the purpose of the motion.
6) Perform 3 sets of 10.

External Rotation using Tubing or Theraband

For external rotation, perform the same steps as above but using the other arm. The internal rotation pushes the tubing across your body, whereas the external rotation pulls the tubing across your body.

Internal Rotation Using a Dumbbell

1) Lie down on your side on a workout bench, you can rest your head on a pillow or headrest.
2) Hold a dumbbell in your hand on the side you are leaning on on the bench.
3) Now lift arm, pivoting at the elbow. Keep the elbow against your body at all times.
4) Range of motion may be limited if your shoulder is tight or weak.
5) Slowly lower dumbbell back towards the rest position.
6) Repeat 3 sets of 10 repetitions

External Rotation using a dumbbell

1) Lie down on your side on a workout bench or table.
2) Hold a dumbbell in the hand, using the arm that is facing the ceiling.
3) Lift the arm, pivoting at the elbow. Keep the elbow against your body at all times.
4) Range of motion may be limited if your shoulder is tight or sore.
5) Slowly lower the weight back to your side.
6) Complete 3 sets of 10 reps.

Prone Horizontal Abduction Raise

1) Lying face down on a bench or on a stability ball and holding dumbbells in both hands, raise your arms out away from the body until they are parallel to the floor.

2) Be sure to keep your palms down and be sure the shoulder blades touch together at the top of motion (or the maximum you can move the motion)
3) Lower slowly to the starting position. Rest and do 3 sets of 10

Horizontal Abduction (Theraband or Tubing)

1) Stand holding theraband or tubing with arms extended out in front of you, shoulder width apart.
2) Pull on the theraband, bringing the arms out to your sides.
3) Complete 3 sets of 10 reps

Prone Protraction

1) Lie on table or floor holding a dumbbell.
2) Extend your arm upwards towards the ceiling.
3) Push up towards the ceiling as your shoulder comes off the table or floor.
4) Hold this for 5 seconds and then return to starting position and rest for a few seconds.
5) Complete 3 sets of 10

Shoulder Shrugs (Dumbbell or Tubing)

1) Stand holding equal dumbbells in each hand (use a weight that is comfortable for you)
2) Shrug your shoulders up towards your ears and roll back on the way down.
3) Be sure to not rush the motion and it is imperative that you roll back on the way down.
4) Complete 3 sets of 10 reps.
    a. Alternatively you can use Tubing for the same exercise.

Standing Dumbbell Retraction

1) Lean forward using uninvolved hand to balance yourself.
2) Hold a dumbbell in involved hand.

3) Raise (shrug) shoulder towards ceiling and hold for 5 seconds.
4) Repeat 3 sets of 10 reps

Prone Extension Raise with External Rotations

1) Lie face down on a bench or stability ball and raise the arms along the side of the body until they are completely even with your body.
2) Be sure to keep your palms facing downward during this movement.
3) Pause at the top then slowly lower back to the initial position.
4) Perform 3 sets of 10 reps.

Empty Can Exercise

1) Stand holding a one to five pound dumbbell at your side with the thumb down.
2) Raise arm up at a 45 degree angle in front of your body. The dumbbell should be on an angle during this motion.
3) Repeat exercise for 3 sets of 10 reps.

7 Day Reconstruction Program

It is important to note that this reconstruction program is just for informational purposes; you can do the workout in any combination you are comfortable with. It's important to remember that if you encounter any pain or problems during the workout to immediately stop the workout and possibly see your doctor or health care provider's advice. Prior to any workout or exercise program be sure to stretch the muscle groups before hand.

Day 1 & 5

Prone Protraction: 3 Sets of 10 reps

Push Ups: Perform 3 Sets of 10 push ups (Just ordinary push ups)

Shoulder Shrugs: 3 sets of 10 reps

Standing Dumbbell Retraction: 3 sets of 10 reps

Prone Extension Raise With External Rotations - 3 sets of 10 reps

Empty Can Exercise: 3 sets of 10 reps

Day 2 & 6

DB Punches: 3 sets of 10 reps

Lower Trap Raise: 3 sets of 10 reps

Internal Rotation: 3 sets of 10 reps

External Rotation: 3 sets of 10 reps

Prone Horizontal Abduction Raise: 3 sets of 10 reps

Horizontal Abduction: 3 sets of 10 reps

Day 3 & 7

Internal Rotation: 3 sets of 10 reps

External Rotation: 3 sets of 10 reps

DB Punches: 3 sets of 10 reps

Push Ups: Perform 3 Sets of 10 push ups (Just ordinary push ups)

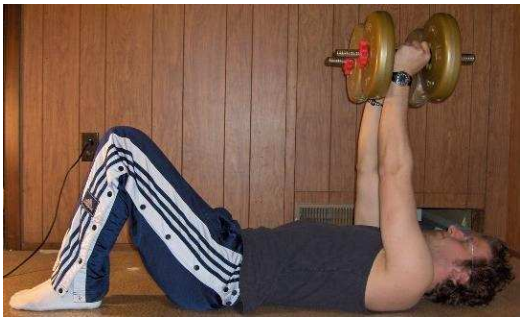
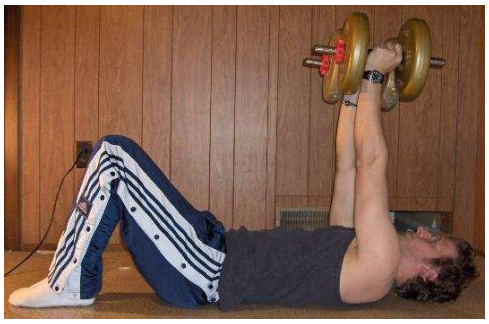
Shoulder Shrugs: 3 sets of 10 reps

Day 4

Rest day. Do not perform any of the routines. You can, however, work on push ups or cardio at this point.

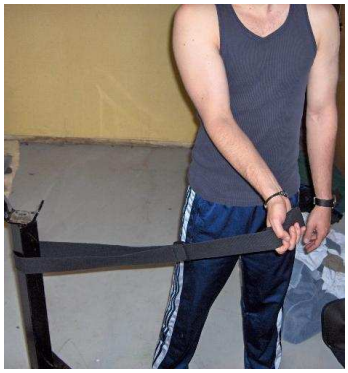
Demonstrations

DB Punches

Lower Trap Raise

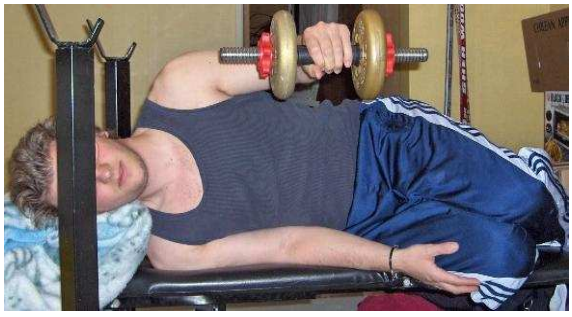

Internal Rotation (Using Theraband)


(External rotation same but with other arm)

Internal Rotation Using a Dumbbell


External Rotation Using a Dumbbell



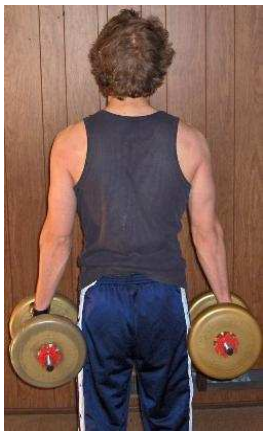

Prone Horizontal Abduction Raise


Horizontal Abduction Using Theraband


Prone Protraction



Shoulder Shrugs using Dumbbell




Standing Dumbbell Retraction

Prone Extension Raise with External Rotations

Exmpty Can Exercise