

**THERE IS A GROWING LIST OF AMERICAN SHOTGUNNERS WHO ARE SPORTING 4" SCARS ON THE TOP OUTSIDE PART OF THEIR SHOULDERS FROM ROTATOR CUFF SURGERY. THE LIST INCLUDES TWO GOOD SHOTGUN INSTRUCTORS WHO DO NOT SHRINK AWAY FROM VOICING THEIR OPINIONS – VANCE BARNES AND JEROME HOLDEN**

## **RECOVERING FROM ROTATOR CUFF SURGERY**

**BY SPENCER TOMB**

**THE SHOULDER AREA, WHERE THE MAJORITY OF THE RECOIL ENERGY IS DIRECTED, IS ONE OF THE LIKELY AREAS TO DEVELOP PROBLEMS...**



Vance Barnes of Hondo, Texas, is an NSCA Level III instructor and Veteran All American shooter. Nine years ago he was hunting elk in Colorado and tore his rotator cuff trying to load an elk onto a pickup truck. The tear was severe. It required eight screws and a plate to reattach the rotator cuff of his left (front) shoulder. He went through a full four-month course of physical therapy and started shooting light loads in small bore guns three months after surgery.

Barnes was recovering and doing well at about 15 weeks post op. Even though he had been shooting less than a month, he went to the Texas State shoot and entered the 200 target Main Event. He shot the first day with his over and under and the weight and recoil whipped him. For the second 100 targets on Sunday he used his Beretta 390. The lighter, softer shooting shotgun 'saved his bacon'. It was great to be back in competition – but it was too

much too soon. After the shoot, he said, "If I didn't have my Beretta 390, I could not have shot that last hundred."

Barnes knows that he came perilously close to overdoing it and was lucky that it did not set back his recovery. It took him another month off to regain most of his shooting form. He knows several shooters who have rotator cuff problems and are putting off the surgery – his advice is get it done as soon as you can, have a full course of physical therapy and take it very seriously.

Jerome Holden of Broken Arrow, Oklahoma is also an NSCA Level III instructor and a Veteran All American. Holden tore his rotator cuff earlier this year. He had a history of shoulder problems – he dislocated both shoulders years ago and had a slight residual weakness in his left arm (front). His right arm was strong and showed no

**X-RAY OF SPENCER TOMB'S LEFT SHOULDER SHOWING THAT FOUR SCREWS WERE USED TO ATTACH THE TENDONS TO THE HEAD OF THE ARM BONE. THESE SCREWS ARE NOT AS CLOSE AS THEY APPEAR ON THE X-RAY. NOTE THE SIZE RELATIONSHIP BETWEEN THE BALL OF THE HUMERUS AND THE SOCKET ON THE END OF THE SHOULDER BLADE.**

signs of a problem until he jammed his right shoulder in a fall on a quail hunt in late January.

By that evening, there was no doubt that he had a serious injury – it was particularly painful to raise his right arm. He got the diagnosis the next day and made an appointment to see an orthopedic surgeon. A month later he had surgery to repair a severe tear of the rotator cuff. Holden regained his range of motion quickly with the help of his physical therapist and hard work. Recovering strength in his right arm has been difficult and slow. Five months after surgery he still tires quickly with a light shotgun. He is pain free, and gradually making progress regaining his strength.

## NOT UNCOMMON

Most of the shooters who have had rotator cuff surgery are active men and women over 40. Some of them have gradually damaged their shoulders in their work, some cite old athletic or over use injuries that led to arthritis and later bone spurs, but the majority fell and jammed the shoulder as they hunted, played or worked outside. Only one shooter interviewed thought that shooting had been a causal factor in his rotator cuff injury. He shot almost a thousand targets in a three-day shooting clinic. His rotator cuff symptoms appeared the following day.

The rotator cuff is comprised of four tendons and muscles that originate on the shoulder blade (or scapula) and attach on the upper part of the arm bone (or humerus). The ball of the arm bone sits on the socket (of the shoulder blade) and since the ball is much larger than the socket it looks like a golf ball on a tee. The muscles of the rotator cuff work in concert to raise the arm and position and stabilize the ball of the arm bone on the socket.

The human shoulder is a very complex joint. This complexity allows us to move our arms and use our hands in an extensive variety of positions. The rotator cuff is a pivotal part of shoulder function and arm movement. If you tear the rotator cuff, it will not get better on its own.

The symptoms of rotator cuff injury are pain on raising your arm above the waist and pain and weakness in normal movements such as parting your hair, tucking in your shirt or threading a belt. These symptoms can arise gradually or acutely as a result of a known incident. If you continue to shoot with a torn rotator cuff it will be painful – regardless of which shoulder is injured.

With a slight tear, you may be able to solve the problem with physical therapy and resume shooting in a few weeks. Any doctor can tell you if you have damaged the rotator cuff, but assessing the severity of the damage is more difficult and requires an experienced orthopedic surgeon and some tests. X-rays will tell if the shoulder has arthritic changes that could be a source of the damage to the rotator cuff, but X-rays do not show the softer tissues like tendons and muscles. Most surgeons will want to see a MRI (Magnetic Resonance Imaging) of the shoulder to confirm the tear.

Small tears in the rotator cuff can be repaired by arthroscopic surgery. This sort of surgery is much less invasive and recovery is relatively fast. Larger tears and the complete detachment of the four tendons requires opening up the shoulder, cutting through one of the deltoid muscles to expose the head of the arm bone and reattaching the tendons. Recovery from this sort of procedure will require a full course of physical therapy over several months.



*SITTING ON THE PORCH OF GYPSUM VALLEY SPORTING CLAYS AND WARMING UP THE SHOULDER PRIOR TO SHOOTING WITH THE PULLEY AND ROPE SYSTEM THAT IS USED TO RAISE THE ARM ABOVE THE HEAD.*

## ...PERSONAL EXPERIENCE

**Spencer Tomb completely detached his rotator cuff when he fell during a goose hunt in early February of this year.**

“My surgery was three months later in early May. My surgeon, Dr. William Jones, put me on a slow track through the early stages of rehab due to my age (63) and the severity of the tear (I had completely detached the rotator cuff.).

“I had four full weeks of passive movement before I could start the next stage. I had been warned about the pain and it was severe at times during the first two weeks and in parts of the physical therapy. My recovery went well as I progressed through the physical therapy stages.

“My physical therapist, Scott Johnson, is a hunter and my neighbor. He knew me well enough to know that I would want to get back to shooting and hunting as soon as I could.

“In week six after the surgery and in the second week of the active assisted movement stage, Johnson let me add in a gun mounting and swinging movement to my assisted motion routine. I showed him what I wanted to do and he critiqued it, and allowed it as long as my injured arm was supported by a dowel and was just along for the ride. I would focus on the corner of a room, ‘mount’ the dowel and swing along the ceiling-wall junction to the other corner. I would then bring it down, adjust my feet to face the corner where I ended and mount, and swing back the other way. It was the same drill that many have used to groove their gun mount. Later I used a shotgun stock and subsequently added the receiver for a little weight. During the week I had worked up to lifting several pounds, I put the barrel back on the gun. Mounting and swinging the gun felt good and increased my confidence in the shoulder.

“Eleven weeks and five days after my surgery I was able to resume shooting with a borrowed, light 20 gauge Remington 1100. I ordered a Benelli Mark 2 20gauge for the start of the dove season in September (26" barrel 5.8 pound weight) and resumed using my 12 gauge guns during the blue wing teal season and on clay targets in mid-September. Was the surgery, time and pain worth it? Yes! There is no doubt in my mind that I had no alternative.”

The success of surgery often depends on what surgeons find as they open up and expose the head of the humerus. It is easier to repair a recently torn rotator cuff than one that has been torn several years. If the tendons have been frayed from the inside by a bone spur over a long period (and nothing was done when the symptoms were first apparent) then the repair is more difficult and may be less successful.

## PHYSICAL THERAPY

Another principal factor governing success of rotator cuff surgery is the effort and consistency with which patients approach their course of physical therapy. When planning to have rotator cuff surgery, it is important to schedule it when you will have time for the physical therapy and the home exercise routines that follow. Physical therapy after rotator cuff surgery is almost like adding a part time job. It will take about forty minutes several times a day in the active movement and strengthening stages of the physical therapy program. What you get out of it will be proportional to what you put in – and it will be painful. It is important not to rush things. Be very careful to follow your surgeon's protocol for shoulder rehab.

With joints other than the shoulder, orthopedic surgeons and physical therapists have become very successful using an aggressive therapy schedule. Shoulders do not respond well to a fast and aggressive course of physical therapy. The pace of recovery is painfully slow for the first two months and it cannot be rushed.

The course of therapy for a rotator cuff repair can be divided into several stages. The first week is mostly rest followed by three or

four weeks of passive motion sessions where the physical therapist moves the arm for you. The next stage is an active assisted range of motion for three or four weeks and there are things that you can do every day at home. This is when you will use a rope and pulley to pull your arm up over your head. You will also be taught to hold a wood dowel with both hands and move the arm with your good arm. This stage is an intermediate step toward actively moving your arm. You will actually start using some of your muscles in the repaired shoulder as you move it with the other arm or the pulley.

At about this point, you will start to work on gaining strength in the muscles that work in concert with the muscles of the rotator cuff. Most of these are the muscles that move the shoulder blades. This is when the 'fun' really begins! Your physical therapist will start moving the scapula and the arm to regain the mobility of the joint.

**THE COURSE OF THERAPY FOR A ROTATOR CUFF REPAIR CAN BE DIVIDED INTO SEVERAL STAGES. THE FIRST WEEK IS MOSTLY REST FOLLOWED BY THREE OR FOUR WEEKS OF PASSIVE MOTION SESSIONS WHERE THE PHYSICAL THERAPIST MOVES THE ARM FOR YOU. THE NEXT STAGE IS AN ACTIVE ASSISTED RANGE OF MOTION FOR THREE OR FOUR WEEKS AND THERE ARE THINGS THAT YOU CAN DO EVERY DAY AT HOME. THIS IS WHEN YOU WILL USE A ROPE AND PULLEY TO PULL YOUR ARM UP OVER YOUR HEAD. YOU WILL ALSO BE TAUGHT TO HOLD A WOOD DOWEL WITH BOTH HANDS AND MOVE THE ARM WITH YOUR GOOD ARM**

This will let the head of the arm bone glide over the socket of the scapula. This is when you have to concentrate on relaxing and learn to take the pain.

It is a big day when you get to raise the arm on your own as you start the active movement stage. You will continue the active assisted movements on your own as a warm up. It is an exciting time, as you will start to see real progress in a range of motion. Another exercise involves facing a wall, move the arm up above your head and move the hand in a circular 'dusting' movement. Moving the arm again will tell you that the work and pain have been worth the results that you are seeing.

It is a time to continue being careful not to use the arm to lift or do things you should not do. The repaired tendons are not very strong at eight weeks. (You may still be in a sling and that will help you remember that you cannot use the arm any way you want.) This is a good time to review the restrictions on using your arm with your surgeon and physical therapist.

**EXTENSIVE PHYSICAL THERAPY AFTER SURGERY OR SHOULDER INJURY IS CRITICAL TO REGAINING FULL MOVEMENT OF THE SHOULDER. IT'S A LONG AND PAINFUL PROCESS AND THE PACE OF RECOVERY CAN BE SLOW. EVEN AFTER THREE MONTHS, FULL MOBILITY MAY NOT HAVE RETURNED – AS ILLUSTRATED BELOW.**



## MUSCLE STRENGTH

Strengthening the muscles of the shoulder is the last stage and it is the longest. It will usually start somewhere around two-and-a-half or three months after surgery and will consist of adding a small amount of weight to the active movements and later some weight training. You will also continue the range of motion and stretching routines.

If the shoulder was injured nine months before the surgery, the muscles have had an eleven-month vacation! That means that it will take just over a year to build the strength in the arm to where it was before the injury. The arm will be very weak, but the good news is that you will be able to see steady progress.

It is important to be consistent and yet not over-work the arm. Becoming tired, even to the point that the arm shakes on your last weight reps is ok. A little soreness after adding weight training is normal. Any soreness should subside within a day, and it is ok to cut back a little if the soreness lasts more than a day. Discuss this with your doctor and physical therapist.

Learn to 'listen' to your shoulder and listen to the professionals who are helping you. Ask lots of questions and listen carefully. Once your home exercise program becomes extensive, have your therapist write out your instructions and how often you need to do things. The goals of this phase are not to build specific muscles, but to recover shoulder strength and co-ordination. This means that you will start with light weights and add weight gradually to your exercises.

Most physicians and physical therapists are not serious shotgunners and they may not

understand the movements that you need to regain your shooting form. You should discuss this with them and see if you can add a shotgun mounting and swinging drill as you start active movement of the arm. You can start this with just the wooden dowel and then use a gun stock and then add the receiver and finally the barrel as you are using weights to strengthen the arm.

In the last phase of physical therapy, as you work to regain strength in your arm, you will continue the movements that take the arm through your range of motion. Your therapist may start adding weight to these movements. Once you start lifting barbells and using weight equal to the weight of your shotgun, you can add mounting the gun to your routine, starting with two sets of ten reps and gradually build to more repetitions. You can do this every other day in your lifting routine. Your ability to lift shows that you are becoming stronger and the repetitions will improve your endurance. The co-ordination comes from paying attention to good form. The goal of this phase is to gain strength, endurance and co-ordination.

## RESIST TEMPTATION

You should recognize that there is significant individual variation in the rate of healing and rehabilitation. There is also variation in the success of the surgery due to age, extent of the damage and the condition of the tendons and muscles. At some point in rehab, there will be an urge to test the arm. Resist that temptation, and stay with in your physical therapy program. Leave the testing and speeding up your rehab schedule to the pros. ■

## TIPS

### FOR RECOVERING FROM ROTATOR CUFF SURGERY

1. Schedule your surgery as soon as you can set aside three months for your recovery and physical therapy.
2. Be sure that you understand and carefully follow the instructions from your doctor and physical therapist. Ask questions and take notes if you need to.
3. Make your physical therapy and home exercise program a high priority. As you increase your exercise and stretch program, plan for it to take about three forty minute sessions each day.
4. Use ice after every session of exercise and physical therapy as recommended by your doctor and physical therapist. Carry ice packs in your vehicle for use immediately after therapy and visits to the doctor.
5. Leave the testing of your arm to your doctor and physical therapist. You will often wonder, "Can I do that?" When it is a new movement, or something heavier than the weight you have been using, don't do it until it is cleared by a professional.
6. Do not attempt to shoot until you are cleared to shoot by the doctor. Ease into it with a light gun, light loads and a reduced number of targets.
7. Stretch and warm up the shoulder before you shoot and ice the shoulder afterwards.
8. Do not plan on shooting competitively for four to six months. It is important not to rush it. Once again, listen to your doctor and physical therapist.

**SPENCER TOMB IS CAUGHT PUTTING ICE ON THE SHOULDER AFTER SHOOTING.**

Additional information on shoulder injuries and physical therapy for the shoulder can be found on the websites of the American Academy of Orthopedic Surgeons at [http://orthoinfo.aaos.org/indepth/thr\\_report.cfm?Thread\\_ID=2&to\\_pcategory=Shoulder](http://orthoinfo.aaos.org/indepth/thr_report.cfm?Thread_ID=2&to_pcategory=Shoulder) and the American Physical therapy Association at <http://www.apta.org/AM/Template.cfm?Section=Search&template=/CM/HTMLDisplay.cfm&ContentID=20448>

