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Innovative repair technique puts shoulder pain in 'reverse'

You could say Linda Esper's had a lot on her shoulders.

In retirement, Esper, 70, has been tending flowers and a small vegetable garden on 1.5 acres in Madisonville with her husband. Before that, she ran a commercial cleaning business with her sister.

By 2008, Esper's right shoulder had reached its limit.

"I was out in the yard using hedge trimmers when I felt something 'pop,' in my right shoulder," she said. "I thought I'd just sprained it. But then it got so bad I couldn't put my hands behind my back or over my head."

Esper had an injury called a "torn rotator cuff." The rotator cuff is a network of four muscles that come together at the upper arm, covering the top of the shoulder. Each muscle is tipped by a tendon, a flexible cord of tissue that attaches it to the bone.

Esper had developed several tears in these tendons. A rotator cuff tendon tear is usually quite painful, making it difficult to reach up to comb your hair or get dressed. The tear also causes weakness in the arm.

A rotator cuff tear can either develop slowly over years, as the tendons become frayed with wear and tear, or they can be torn quickly during a single overhead activity.

Esper went to see Dr. Paul Brady, an orthopedic surgeon at Parkwest Medical Center. After several tests to determine the extent of the tears, they tried several nonsurgical treatments.

Brady injected corticosteroids into Esper's shoulder to relieve the swelling and give the muscles a chance to recover. However, that didn't bring relief. Eventually, Brady recommended surgery to repair the torn tendons.

Using arthroscopic instruments and small incisions, Brady repaired the tears, removed in-

A rotator cuff tendon tear is usually quite painful and causes weakness in the arm, making it difficult to reach up. A reverse shoulder replacement at Parkwest helped Linda Esper of Madisonville get back to the activities she enjoys such as flower gardening.



flamed tissue in Esper's shoulder and smoothed out the bone made rough by arthritis in the shoulder joint.

Recovery from rotator cuff surgery can be a lengthy and difficult process, and Esper said hers was as well. The patient must wear a sling that holds the arm out from the body, making everyday tasks awkward at best. It was six weeks before Esper could even start physical therapy.

"Most people find it difficult to recover from rotator cuff repair," said Brady.

But eventually Esper did recover and, in fact, two years later was back in her yard again. Unfortunately, the "pop" happened again, this time in her left shoulder.

"This time I let it go too long," said Esper. "By the time I went to see Dr. Brady, I had destroyed my shoulder."

A new technique

Esper's left rotator cuff tendons were so damaged that traditional rotator cuff repair could not fix them. Brady instead rec-

ommended a relatively new prosthetic shoulder called a "reverse" shoulder replacement, approved in 2003 by the U.S. Food and Drug Administration.

In a healthy shoulder, the top of the arm bone (the humerus) ends in a ball, and it fits inside the shoulder socket (glenoid), held in place by the rotator cuff muscles.

If those muscles are torn beyond repair, however, the best solution is to implant a prosthetic joint in which the ball and socket are reversed. A metal ball is attached to the glenoid, while a new

plastic socket is attached to the humerus.

This works better because it allows a different muscle (the deltoid) to control shoulder movement instead of the rotator cuff muscles. "The reverse shoulder replacement changes the mechanics of the joint so that the muscle called the deltoid can function better and rotate the shoulder," said Brady. "It allows good pain relief and pretty good function."

Esper had her left shoulder replacement surgery in 2010. Esper found this surgery to be an easier recovery than the rotator cuff repair on her right shoulder two years before.

"The replacement for me was a lot easier than the rotator cuff repair," said Esper. "As a matter of fact, before I even started physical therapy, I could put my arm above my head. They were flabbergasted at PT."

Brady said that's typical. "We don't know why that's the case, but people find it easier to recover from replacement surgery than rotator cuff repair. Although, the repair is better overall for function."

Esper said she would recommend Parkwest Medical Center and Dr. Paul Brady to anyone who needs orthopedic surgery.

"It was excellent care," she said. "Everybody was helpful and so attentive. When you needed something they were there. Dr. Brady is an excellent doctor. He explains everything to you; he's just so good."

Now that she has two repaired shoulders and recently passed her shoulder movement tests with flying colors, Esper said she is now back out in her yard.

"Oh yeah, I was out there today for three hours," Esper said with a laugh. "I might have overdone it, but I had my little cart out there and was pulling weeds."

Rotator cuff repair – When to seek treatment

Shoulder pain can affect every action of the day, from combing your hair and getting dressed, to getting in and out of the car and going to sleep at night.

The rotator cuff is the set of four muscles that come together at the top of the shoulder, attached to the bones by tendons. If one of those tendons develops a tear, which is common in people over the age of 50, everyday activities can become very painful.

"A rotator cuff injury can be caused by all kinds of things, like bone spurs or injuries. People develop rotator cuff tears over time, or sometimes from a single event," said Dr.

Paul Brady, an orthopedic surgeon at Parkwest Medical Center.

"Sometimes people know exactly when it happened, but more often it's a cumulative trauma over time," said Brady. "I typically tell patients that when it's interfering with activities, and particularly with sleep, it's time to seek treatment."

Surgery is not the first option, said Brady.

"We usually try injections to calm down the inflammation and physical therapy to strengthen the muscles. But if it's fully torn, then usually surgery's the best option. Full tears have a hard time healing on their own."

The good news is that with surgery – whether to repair the torn muscles or totally replace the joint – most patients can regain almost full movement in their shoulder without pain.

"I usually tell patients in general, 90 percent of patients

get what they consider to be close to normal shoulder when it's all said and done, about four to six months after surgery," said Brady.

"Sometimes people know exactly when it happened, but more often it's a cumulative trauma over time ... when it's interfering with activities, and particularly with sleep, it's time to seek treatment."

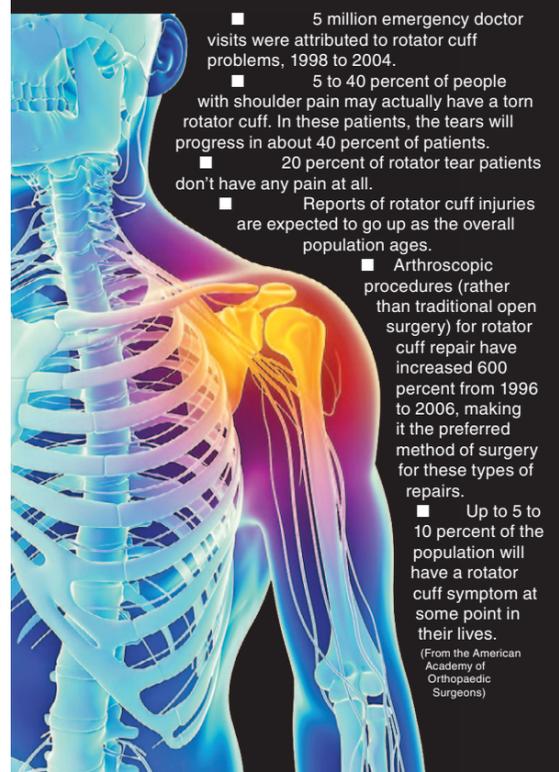
– Paul Brady M.D., on rotator cuff injuries

Brady said he performs all rotator cuff repair surgeries with arthroscopic instruments using small incisions in the skin and utilizing a tiny camera inside the joint to see the problem.

"I fix pretty much everything arthroscopically," said Brady. "It's less invasive, less risky than open surgery; it decreases the risk of infection and developing stiffness later. And it allows the patient to go home quickly with less pain."

To learn more about orthopedic care at Parkwest, visit www.treatedwell.com. To locate a physician, call 373-PARK.

Fast facts about shoulders:



- 5 million emergency doctor visits were attributed to rotator cuff problems, 1998 to 2004.
 - 5 to 40 percent of people with shoulder pain may actually have a torn rotator cuff. In these patients, the tears will progress in about 40 percent of patients.
 - 20 percent of rotator tear patients don't have any pain at all.
 - Reports of rotator cuff injuries are expected to go up as the overall population ages.
 - Arthroscopic procedures (rather than traditional open surgery) for rotator cuff repair have increased 600 percent from 1996 to 2006, making it the preferred method of surgery for these types of repairs.
 - Up to 5 to 10 percent of the population will have a rotator cuff symptom at some point in their lives.
- (From the American Academy of Orthopaedic Surgeons)



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