

# Am I doing the right exercises even though I tore my rotator cuff?

**Q:** Despite my daily workout routine I tore my rotator cuff. The surgeon says I probably had a worn out tendon to begin with and the exercises helped but couldn't prevent the injury. Is this true? Maybe I'm just not doing the right kind of exercises (or maybe not enough exercises).

**A:** The rotator cuff is a group of four muscles and their tendons that surrounds the shoulder. They function in two ways. First, they help hold the head of the humerus (upper arm bone) in the acetabulum (shoulder socket). Second, they contract and pull the arm into different positions (e.g., arm up overhead, arm out to the side, arm behind you).

The result of these two functions is stability and mobility. Exercise programs for the shoulder help strengthen the rotator cuff as it performs both functions hundreds of times each day.

Studies show that over time, many people develop degeneration of the tissues of the rotator cuff. In fact, as many as 50 percent of adults age 70 or older have significant degenerative changes of the rotator cuff.

Taking a look at the tissues under a microscope has shown that the injured or degenerating rotator cuff tendon has disorganized tendon fibers, fewer normal cells, and quite a bit of fill-in by fat and scar tissue.

Exercises won't impact that kind of tissue. Instead, other healthier muscles take over or compensate for the weakened tendons. Over time those compensation patterns seem to catch up with us. Then even what seems like a minor movement, fall, or other injury is enough to tear the tendon completely.

Long-term studies of adults and the natural history (what happens over time) of rotator cuff tendons is needed. The information gained may help direct treatment by identifying the true underlying problem. And perhaps help prevent these injuries in the first place!

Reference: Neal C. Chen, MD, Asheesh Bedi, MD. Rotator Cuff Defect: Acute or Chronic? In The Journal of Hand Surgery. March 2011. Vol. 36A. No. 3. Pp. 513-516.