



## Care of the Injured Rotator Cuff

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**R**otator cuff injury with and without surgical repair is a common diagnosis in multiple rehabilitation settings including home healthcare. Injuries to the four muscles comprising the rotator cuff (the supraspinatus, infraspinatus, teres minor, and subscapularis muscles) have increased prevalence rates with advancing age (Lashgari & Redziniak, 2012). This *Focus on Therapy* will provide considerations for the care of individuals following rotator cuff injury or surgery.

A detailed examination inclusive of the patient's lifestyle,

with the physician overseeing the patients' care. A common restriction in a postsurgical tendon repair is a period of passive range restrictions (van der Meijden et al., 2012). A sling or abduction brace 24 hours a day may be ordered. Once restrictions are confirmed, PTs are instrumental in assuring everyone involved in the care of the individual (e.g., nurses, home healthcare aides) understands these restrictions. A seemingly easy activity can place undue stress or strain on a rotator cuff, leading to further injury. Continual education using practical

is muscle weakness and guarding. Therefore, it will require the skill of a PT to assure safe movement patterns. Early therapeutic interventions should include maintenance of at least functional range of motion to prevent guarding and contracture formation. One effective technique is passive motion stretching performed by the PT to a patient's tolerance. Other effective techniques are joint mobilizations to a grade 2 and functional massage (Krause & Evjenth, 2014). Both techniques are passive, help to maintain range of motion, reduce pain, and can be progressed to more aggressive versions as tissue healing permits.

Although the four muscles comprising the rotator cuff are at the core of the intervention, alignment and strengthening of the surrounding musculature including the trapezius, levator scapula, the rhomboids, pectoralis minor, and serratus anterior should be included in the exercise plan. Improper alignment of the scapula and/or strength imbalance can directly impact rotator cuff function. Proper application of manual stretching to the upper trapezius, levator scapula, and pectoralis minor poses no increased injury risk to a rotator cuff, can provide pain relief, and will allow for improved scapular position. Coupling these manual stretches with strengthening of the often-weak serratus anterior, middle trapezius, and rhomboids can provide improved shoulder girdle

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home situation, and personal goals provides the best guide for treatment. Outcome measures such as the Disabilities of the Arm, Shoulder and Hand (DASH) (Institute for Work & Health, 2018) or Focus on Therapeutic Outcomes (FOTO) (Focus on Therapeutic Outcomes Inc., 2018) can be helpful tools to establish baseline function. Physical therapists (PTs) can structure the rehabilitation program to fit the individual's needs. Educating patients on long-term prognosis and expectations related to the injury is important in the initial visits to assure the patient understands the importance of the rotator cuff to upper extremity movement, and the expected recovery time.

Permitted activities and any restrictions should be confirmed

examples from the home environment is helpful as the rehabilitation program progresses. If the patient has a weight lifting restriction, educating on the weight of items in the home may be useful. Education on safe compensatory strategies to optimize function for activities (i.e., washing or combing the hair) that commonly cause strain of the rotator cuff musculature is also warranted.

When initiating therapeutic interventions, the use of the classic shoulder pendulum exercises as well as self-passive motion activities can be very helpful if performed correctly and without compensatory movements. Although correct technique is important, it can be a difficult skill for patients in the initial phases especially if there

position and stability allowing the rotator cuff to more easily perform its functions.

The long-term goal of a rotator cuff rehabilitation program is to improve an individual's level of function. As a rotator cuff injury begins to recover function, one of the biggest challenges is to make certain the individual does not overwork the healing tissue and cause reinjury. The importance of providing a specific dosage of exercises with detailed activity guidelines cannot be overstated. Progressing active motions from gravity assisted, to gravity reduced, to gravity resisted, and then adding forms of resistance should not be rushed. It is also important to keep patients interested and involved in the recovery process to optimize exercise compliance. Use of recreational and practical home-based objects for exercise is a great way to do this. If the individual enjoys golfing, using one of their own golf clubs

for range-of-motion exercise for lightweight resistance is a great option to make the patient feel involved in their recovery.

In summary, there are several points that should be considered when caring for a patient following rotator cuff injury or surgery. First and foremost, adhering to the referring physician's protocol and activity restrictions. Of parallel importance is to educate the individual to optimize their self-efficacy. A hands-on approach including passive motion stretching, graded joint mobilization, and functional massage can improve motion and reduce pain. Assessing and treating adjacent musculoskeletal structures around the scapula, thoracic, and cervical areas will help alleviate stress on the rotator cuff and can be a valuable way to bolster treatment sessions. Finally, making activities and exercises specific to the patient's goals will likely garner better participation and overall satisfaction. ▲

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#### REFERENCES

- Focus on Therapeutic Outcomes Inc. (2018, September 10). *Frequently asked questions*. Retrieved from <https://www.fotoinc.com/science-of-foto/frequently-asked-questions>
- Institute for Work & Health. (2018, September 10). *The DASH Outcome Measure*. Retrieved from <http://www.dash.iwh.on.ca/about-dash>
- Krause, J. R., & Evjenth, O. (2014). *Extremity Orthopedics Lab Manual*. Rochester Hills, MI: Lakeview Media LLC Publication.
- Lashgari, C., & Redziniak, D. (2012). Upper extremity: The natural history of rotator cuff tears. *Current Orthopaedic Practice*, 23(1), 10–13.
- van der Meijden, O. A., Westgard, P., Chandler, Z., Gaskill, T. R., Kokmeyer, D., & Millett, P. J. (2012). Rehabilitation after arthroscopic rotator cuff repair: Current concepts review and evidence-based guidelines. *International Journal of Sports Physical Therapy*, 7(2), 197–218.

## Learning About Fatal Opioid Overdoses Changes Prescribing Behavior

Researchers led by Dr. Jason Doctor from the University of Southern California wanted to see if putting an individual face on the opioid epidemic could alter prescribers' behavior. The team identified 170 people who had a fatal prescription opioid overdose over a year in a single county in California. They located 861 clinicians who'd written at least one prescription to one of the deceased.

The team randomly divided the clinicians into two groups. Half received a letter signed by the county's chief deputy medical examiner. The letter notified the clinician of the overdose death, including their patient's name, address, and age. It also included information on prescription drug monitoring efforts and safe prescribing strategies. The tone of the letter aimed to be supportive, not judgmental. The other half of the clinicians served as a control group and received no information.

Over a three-month period beginning a month after the letters were mailed, opioid prescribing was almost 10% lower among the clinicians who received the letters compared to the control group.

Clinicians who received the letters were 7% less likely to start a new patient on opioids and wrote fewer prescriptions for high-dose opioids.

The letters may have worked for several reasons, the authors explained. One is that people tend to act on recent, high-impact information when making decisions. Another is that health care professionals regularly see patients who refill their prescriptions at the clinic. Without receiving a letter, they may not know a patient has died of overdose.

