

Rotator Cuff Repair Analysis – 2 Weeks Post-Op

Watch

Watch the following videos of Alice (018) that show her status at 2 weeks post-op:

- Rotator Cuff Repair, 2 weeks post: Patient Interview, Part 1
- Rotator Cuff Repair, 2 weeks post: Patient Interview, Part 2
- Rotator Cuff Repair, 2 weeks post: Patient Interview, Part 3
- Rotator Cuff Repair, 2 weeks post: Home Exercise Program, Seated and Supine
- Rotator Cuff Repair, 2 weeks post: Home Exercise Program, Standing

Answer

1. What four muscles make up the rotator cuff? What is the primary action of each muscle?

Supraspinatus: shoulder abduction (especially 0-15°)
Infraspinatus: shoulder external rotation, assist in shoulder extension
Teres minor: shoulder external rotation, assists in shoulder adduction and extension
Subscapularis: shoulder internal rotation, assist in shoulder adduction and extension

2. Which muscle(s) of the rotator cuff do you anticipate were injured and subsequently repaired, based on Alice's reports?

Alice's injury was probably in the supraspinatus, as it is on the superior surface of the shoulder where Alice describes the surgery; its primary muscle action is shoulder abduction (0-15° before deltoid is more active); and common mechanisms of injury are heavy lifting and falling on an outstretched arm, similar to Alice's description.

3. There are some mild lingering problems from the left shoulder surgery a few years ago. How might this influence your intervention planning for the right shoulder?

One of the deficits in fatigue or decreased endurance. Initial exercise was primarily designed to facilitate ROM. As Alice recovers, therapeutic exercise should facilitate gradual and safe strengthening, and then functional or occupation-based activities should address endurance.

Another deficit Alice describes in the left hand is numbness, probably due primarily to carpal tunnel syndrome. Since Alice had carpal tunnel release on the right side, intervention should address prevention of recurrence of carpal tunnel symptoms. This includes continued scar massage, occupation-based activities with a neutral wrist, and avoidance of other carpal tunnel risk factors.

4. Alice's early progress will depend, in part, on her engagement in the therapeutic exercise program.
 - a. What are the advantages of passive range of motion (PROM) for Alice?

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Typically, post-surgical protocols will progress from PROM to AAROM to AROM, although the needs of the patient and protocols of the medical team should be considered in this progression.

PROM for Alice will primarily prevent long-term loss of motion, increase circulation to support healing of all structures, and can may contribute to pain management.

b. What are the advantages of active assisted range of motion (AAROM) for Alice?

For Alice, AAROM will advance her available arc of motion, which was limited in the initial post-op period. AAROM also facilitates initial (light) strengthening, improve circulation and contribute to pain and edema management. AAROM will progress functional use of the right arm as she engages in activities of daily living, although it is not alone for full occupational performance.

c. What are the advantages of active range of motion (AROM) for Alice?

AROM is required to build strength in the injured muscle(s), address any possible loss of motion from the prior limitations. Most importantly, it will be required for full use of the right upper extremity in all aspects of Alice's occupational performance.

5. How was her therapeutic exercise program affected by her decision to have carpal tunnel repair surgery at the same time as the shoulder surgery?

After rotator cuff surgery, therapeutic exercises focuses on PROM and AAROM at the shouder. Distal joints are also included so that restricting motion with the sling will not have a negative impact on the elbow, forearm, wrist and hand. In Alice's situation, the supination / pronation and the wrist flexion and extension are even more important for scar management, improved long-term AROM, improved circulation for healing, and potential for increasing strength later in her recovery.

6. Which functional activities are affected by the shoulder surgery? Which functional activities are affected by carpal tunnel surgery?

Alice describes limitation to ADLs in the interview, including showering, toileting, dressing, and grooming (ie flossing her teeth). All of her ADLs would likely be impacted. In addition, IADLs would be more difficult, such as reaching into closets or cabinets, meal preparation, shopping, carrying groceries, etc. Driving would be unsafe while she is required to wear the sling.

7. Alice is able to perform standing exercises safely in her home.

a. How would you adapt the post-op therapeutic exercises for a person with decreased balance?

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Alice performs her pendulum exercises in standing, while moving both arms. If she had less stable standing balance, she could stand at a kitchen counter or other elevated surface to stabilize herself with the left upper extremity while moving her trunk to passively move the right upper extremity. In addition, she stands at the top of a flight of stairs to use the wall corner for her external rotation exercises. If balance was impaired, she could stand or sit at a doorway located between rooms so that there is no fall risk with the stairs. Finally, the distal exercises could be performed while seated.

- b. How would you adapt the post-op therapeutic exercises for a person with decreased cognition?

Providing detailed written handouts and posting them in full view (ie. Refrigerator door or bathroom mirror) would be useful for a person with decreased memory. Providing pictures and other means of representation of information would be useful for a person with decreased literacy. Caregiver training may also be a useful technique for a person with cognitive impairments, so that they could provide instruction and supervision as needed.