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Rotator Cuff Repair
Rehabilitation Protocol

I perform virtually all rotator cuff repairs through an all-arthroscopic approach. Because of this, the therapist will typically not need to worry about protecting a deltoid repair. If you would like to get a copy of the operative report (eg. to know more about the size of tear, associated pathology, method used for repair), please do not hesitate to contact my office.

Therapy will vary depending on:

- Acute vs. Chronic Tear
  - Slow down chronic tear rehabilitation, relatively, with regards to active motion (chronic tears often have poorer vascularity - we want a little more time for healing compared to acute repairs).
- Mini-open vs. Arthroscopic repair
  - For small cuff repairs, there is no difference between the rehabilitation for these two. However, for medium size repairs done arthroscopically, the repairs are somewhat less secure than mini-open. Therefore, delay certain <u>active</u> exercises within a particular phase for these repairs. Eg.: mini-open cuff repair can start active-assist and isometric flexion exercises at 3-4 weeks; arthroscopic repair should wait until around 5 weeks.
- Size of tear
  - Large and massive tears are somewhat less secure than smaller tears. Certain <u>active</u> exercises need to be delayed. Start active-assist and isometric shoulder flexion around 5 weeks.
- Laxity/Instability
  - If an associated procedure, such as a suture capsulorraphy or Bankart repair for instability was performed, please be careful with external rotation stretching (i.e. easy on passive ER stretching!) or strengthening. If in doubt, consult my Bankart rehabilitation protocol.
- Strength/ROM status
  - Patients with chronic tears may also need help with other muscles such as scapular stabilizers and deltoid.
- Performance/Activity demands
  - Not all patients will complete this entire protocol - those with lower demands, and especially non-throwing athletes may stop or switch to a home program after their particular goals are met, eg. at 3-4 months.

0-3 Weeks

- Immobilizer all times except for PROM
- **No** active shoulder flexion or abduction
- Gentle passive flexion, abduction, external rotation, Codman's pendulums
- Active internal/external rotation with arm at side and elbow extended
- Shoulder shrugs
- Ball squeezes

3-6 Weeks

- D/C Immobilizer
- Modalities as needed
- Joint mobilization as needed
- Continue PROM, add active assisted (wall climbs, wand)
- Isometrics: IR/ER, Abduction, Flexion, Extension
  - For arthroscopic repairs, begin active/assist and abd/flex isometrics at 5-6 weeks.
- Active IR/ER with Theraband as tolerated
- Active Shoulder extension lying prone or standing (bending at waist)
- Active horizontal adduction (supine) as tolerated

6 to 8 Weeks

- Continue ROM as needed (passive, active-assist, and active)
- Continue Theraband and progress to free weights as strength improves
- ER lying prone with arm abducted 90 or sidelying with arm at side
- IR supine with arm at side and elbow at 90
- Add supraspinatus strengthening if adequate ROM is available (0-90). Movement should be pain-free and in scapular plane
- Active shoulder flexion through available ROM as tolerated

2-3 Months

- Continue ROM as needed. (Should have full PROM and AROM)
- Continue isotonics with emphasis on eccentric cuff strengthening
- Add push ups (pain-free). Begin with wall push-ups. Progress as strength allows (modified-hands and knees, or military hands and feet as tolerated)
- Add shoulder bar hang exercise to increase ROM in flexion and abduction (as needed)
- Active horizontal abduction (prone)
- Elbow and wrist strengthening as needed
- Upper extremity PNF patterns may be added (Flexion/abduction/ER and Extension/adduction/IR diagonals are emphasized).

4 Months

- Add advanced capsule stretches as necessary
- Continue to progress Isotonics
- Isokinetic strength and endurance (high speeds-200 plus degrees/sec) for shoulder IR and ER (arm at side) and ab/adduction, horizontal ab/adduction may be added. Prerequisite strength requirements of the cuff are 5-10 lbs for ER and 15-20 lbs for IR
- Add arm ergometer for endurance training
- Add Military press

5 Months

- Isokinetic strength and endurance test (as tolerated). Test IR/ER (arm at side), ab/adduction, and horizontal ab/adduction. Shoulder should be pain-free and have no swelling
- Continue to increase weight resistance and high speed training with isotonic and isokinetic exercises. For IR/ER gradually increase stress by exercising in the functional position (progress form 0-45 to 80-90 of shoulder abduction as tolerated
- Continue Eccentric phase cuff strengthening
- Add total body conditioning program – strength and endurance. Flexibility exercises as needed

6 Months

- Continue strengthening in sport specific position. Isokinetic testing at least 80% of uninvolved side before proceeding with exercises specific to the activity setting.
- Continue total body conditioning with emphasis on rotator cuff
- Skill Mastery. Skill specific activity
- Progressive Shoulder Throwing program
- Use heat prior to stretching and ice after throwing.
- Toss ball (no wind-up) on alternate days not more than 20 feet, for 10-15 minutes

6-1/2 Months

- Easy tossing 30-40 feet no wind-up on alternate days for 10-15 minutes

7 Months

- Add jogging/biking/swimming
- Continue stretching and strengthening to the wrist, elbow, shoulder
- Chin-ups
- Lob the ball (playing catch with easy wind-up on alternate days, throwing ball not more than 30 feet. 2 to 3 times per week and 10-15 minutes per session limit).
- Swimming (Butterfly not recommended)

8 Months

- Increase throwing distance to 40 feet while still lobbing. Alternate days for throwing and strengthening. Increase throwing to 15-20 minutes per session.

8-1/2 Months

- Increase throwing distance to 60 feet lob with an occasional straight throw at no more than ½ speed. Increase throwing to 20-25 minutes per session.