Background & General Considerations:

Anterior-Inferior and Posterior-Inferior Labral Tears: With a first-time severe dislocation of the shoulder or chronic shoulder instability in multiple directions can create "360 degree" complete tears of the labrum, involving the anterior, posterior, and superior labrum. This situation requires repair with anchors in the anterior glenoid, the posterior glenoid, and the superior glenoid.

Postoperative Pain Pump: No shoulder exercises while a pain pump is in place

Sling Time: Have the patient wear sling at all times except while showering and while doing exercise or physical therapy for the first 6 weeks or as directed on the initiating prescription

Range of Motion Restrictions: In an animal model of healing, at least four weeks was necessary for the healing of a simulated labral injury. Considering the difference between humans and rabbits, we maximally protect labral repairs for 6 weeks from motions that would put them under tensile load, that is maximal abduction combined with external rotation. For 180 degree tears, we protect them from full motions for 8 weeks. The tension, of the inferior glenohumeral ligament is negligible in positions of neutral adduction and adduction in external rotation but increases in value for angles between 45° and 90.° This is why we avoid maximal external rotation combined with abduction for the first 8 weeks.

Maturation Time: Since repair maturation requires at least 3 months and these are complete labral disruptions, avoid heavy lifting, pushing, or pulling for the first 6 months to allow for proper healing and maturation of the repair.

Jogging: The motion and impact of jogging puts significant traction forces on an inferior shoulder repair. For this reason, jogging is discouraged until 3 months.

Return to Sports: A return to sports at 6 months after surgical repair may be considered, but each individuals return to sport will be specified and tailored by the circumstances of their case. For collision sports such as football, 8 months may be ideal to maximize tissue maturation.

Protocols are Guidelines and Functional Progression: Please note that the following protocol is a general guideline. Patient should not be progressed to the next phase until they demonstrate proper form with all activities and functional criteria are met in the current phase. The timelines of this protocol are a general guideline.

Whole Body Approach: Assess functional movements of the whole body and incorporate treatment modalities for loss of mobility and stability in the entire system.

Ideal Frequency: Formal physical therapy provides the optimal environment and guidance throughout the recovery process. In an ideal situation, 20-40 visits during the first 6 months of the recovery would be optimal. Patients should visit with a physical therapist 2 times a week for the first 6 weeks, then 2 to 3 times a week for the next 6 weeks. During the next phase of recovery, patients should visit a physical therapist once a week to once every other week during the 3-month to 6-month time points. This is not always possible and must be tailored for each patient. Since not all patients have access to the same equipment, exercises should be tailored appropriately.

BLOOD FLOW RESTRICTION THERAPY: Blood Flow Restriction (BFR) has compelling evidence that it can improve the systemic healing response when used post-operatively with low-intensity resistance training (LIRT). However, not everyone will have access to BFR.

Neurocognitive Rehabilitation: It is clear that injury events effect the brain as much as the muscles and joints involved. Progressive rehabilitation programs are combining neuromuscular with neurocognitive methods. Consider the addition of neurocognitive methods to each phase of the rehabilitation process.

Phase I (Maximal Protection Phase, Generally Weeks 0-6):

Principles/Goals:

-Diminish Pain Associated with Swelling and Initial Post-Surgical Inflammatory Response

-Protect Repair

-Optimize Nutrition and Healing Response

-Prevent Negative Effects of Sling Immobilization

-Minimize Muscle Atrophy

Treatment Recommendations/Examples (Day 1-14)

-Elbow/Hand ROM and Gripping Exercises, Encourage Use of Squeezing Ball that Accompanies Sling

-Upper Trap and Levator Scapulae Stretches

-Gentle, Pain-Free ROM

- Passive Flexion to 60 degrees by end of week 1
- Passive flexion to 75 degrees by end of week 2
- Passive ER at 30 degrees of abduction to 5-10 degrees
- No Passive IR, horizontal adduction, or posterior glides

-No active shoulder movements away from body nor active biceps activities

-Light and non-painful isometrics for rotator cuff and deltoid

-Neck mobility, stability exercises

-Cryotherapy and soft tissue modalities as needed

Treatment Recommendations/Examples (Day 15-28)

-Continue gentle PROM

-Continue isometrics and rhythmic stabilization

-May begin rhythmic stabilization at 90 degrees flexion

-Gentle, Pain-Free ROM

- Passive flexion to 90 degrees
- Passive abduction to 85 degrees
- Passive ER at 35 degrees of abduction to 25-30 degrees
- Passive IR at 35 degrees of abduction to 15-20 degrees
- No active biceps, shoulder extension, ER, nor elevation

-ER/IR tubing 0 degrees with arm at side, reactive isometrics

-Initiate scapular stabilization exercises and rhythmic stabilization drills

-Thoracic, mobility, stability exercises

-Cryotherapy and soft tissue modalities as needed

-Blood Flow Restriction (BFR) has compelling evidence that it can improve the systemic healing response. Considering using with LE strengthening exercises.

Neurocognitive Rehabilitation: Consider the addition of neurocognitive methods to each phase of the rehabilitation process.

Treatment Recommendations/Examples (Day 29-42)

-Continue gentle PROM

-Continue isometrics and rhythmic stabilization

-May begin rhythmic stabilization at 90 degrees flexion

-Gentle, Pain-Free ROM

- Passive flexion to 145 degrees
- Passive abduction to 135 degrees
- Passive ER at 45 degrees of abduction to 45-50 degrees
- Passive IR at 45 degrees of abduction to 25-30 degrees
- No active biceps, shoulder extension, ER, nor elevation

-No isolated biceps strengthening

-Continue scapular stabilization exercises and start light rotator cuff strengthening

-Progress AAROM within above limits

-Rhythmic stabilization at 90 degrees of flexion

-Prone Row

-Prone Shoulder Extension

-Horizontal Abduction

-Supine shoulder flexion

-Thoracic, mobility, stability exercises

-Cryotherapy and soft tissue modalities as needed

-Blood Flow Restriction (BFR) has compelling evidence that it can improve the systemic healing response. Considering using with LE strengthening exercises.

-Neurocognitive Rehabilitation: Consider the addition of neurocognitive methods to each phase of the rehabilitation process.

Phase II (Intermediate ROM and Strengthening Phase, Generally Weeks 7-16)

Principles/Goals:

-Gradually Restore Full Range of Motion

-Initiate Biceps Strengthening

-Restore Scapular Stability and Neuromuscular Timing

-Improve RTC activation and strength

-Enhance Neuromuscular Control

-Optimize Nutrition and Healing Response

-Begin Restoring Muscle Mass

Treatment Recommendations/Examples (Week 8-10)

-Restore Normal Range of Motion

- Passive flexion to 160 degrees
- Passive ER at 90 degrees abduction to **80 degrees, unless throwing athlete and then 90 degrees**
- Passive IR at 90 degrees abduction to 55 degrees

-Active ROM Can Progress to Limits Above

-May Begin to Work on Gentle Behind the Back Stretches to Tolerance

-Progress all Isotonic Strengthening

-Progress all Scapula Stabilization Exercises

-Progress Proprioceptive Neuromuscular Facilitation (PNF) Techniques

-Core Strengthening and Farmer's Carries

-Blood Flow Restriction (BFR) has compelling evidence that it can improve the systemic healing response. Considering using with LE strengthening exercises.

-Neurocognitive Rehabilitation: Consider the addition of neurocognitive methods to each phase of the rehabilitation process.

Treatment Recommendations/Examples (Weeks 12-16)

-Progress ROM to functional demands of athletes, for example overhead thrower to previous ER

-Continue to Progress all Strengthening, Stabilization, Mobility Exercises

-Blood Flow Restriction (BFR) has compelling evidence that it can improve the systemic healing response. Considering using with LE strengthening exercises.:

-Neurocognitive Rehabilitation: Consider the addition of neurocognitive methods to each phase of the rehabilitation process.

Phase IV (Strength/Proprioception and Return to Sport, Generally Weeks 16-26)

Principles/Goals:

-Maintain Full Range of Motion

-Improve Muscular Strength and Endurance

-Optimize Neuromuscular Control

-Enhance Muscular Strength, Power, Endurance

-Progress Functional Activities

-Return to Sport Activities

Treatment Recommendations/Examples

-Consider Once a Week to Once Every Other Week Visits

-Continue/Progress All Relevant Activities

-Initiate Endurance Training

-Initiate/Progress Interval sport Program

-Consider restricted/Non-contact return to sport activities

Return to Sport Considerations

- A return to sports at 6 months after surgical repair is reasonable considering animal models of healing tissues, but each individuals return to sport will be specified and tailored by the circumstances of their case.
- Timing of Return to Sport Considers Many Factors Including Age, Specific Sport, Participation Level, Time of Season. This will be tailored and considered in light of risks and benefits of timing.
- Consider Video Recording of Athletic Activities to Ensure a Return of Proper, Balanced Functional Movements as well as Form and Technique
- Athlete Must Demonstrate Quality and Symmetric Movement Throughout the Entire Body
- Return to Sport Testing Can be Used to Help Identify Deficiencies and Guide Final Preparations

Updated July, 2024
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For additional information, please contact the office of Dr. Adam Anz, serving the greater Pensacola, Gulf Breeze, and Gulf Coast communities.