# **General Notes**

As tolerated should be understood to include with safety for the surgical procedure; a sudden increase in pain, swelling, or other undesirable factors are indicators that you are doing too much too soon. If any of these occur, decrease activity level and ice.

During rehabilitation if there are any neurovascular findings please call the office.

Ice should be applied to the shoulder for 15-20 minutes following each exercise, therapy, or training session. Return to sport is based on provider team (physician, physician assistant, athletic trainer, and therapist) input and appropriate testing.

All times and exercises are to serve as guidelines. Progression through the protocol should be based upon criteria as opposed to dates listed and will vary depending on each individual patient. Progress should be agreed upon by the patient and his/her team of providers

# Post-Operative Phase I: Healing Phase - (Day 1 - Week 4)

# Goals:

- Minimize shoulder pain and inflammatory response
- Protect the integrity of the surgical repair: NO shoulder or elbow active range of motion (AROM) until week 3
- Gradually restore pain free passive range of motion (PROM)
- Enhance/ensure adequate scapular function

# Sling:

• To be worn at all times except when bathing or performing therapy

# PROM:

- Glenohumeral (GH) flexion to 60-120 degrees
- Scaption to 60-115 degrees
- Internal rotation (IR) to 45 degrees at 30 degrees of abduction
- External rotation (ER) to 0-10 degrees at 30-40 degrees of abduction; respect anterior capsule tissue integrity with ER ROM.
- Abduction: NONE until week 3 then 75-85 degrees

# Therapeutic Exercises (beginning at week 2):

- Pendulum exercises
- Scapular stabilization exercises
- At week 3: initiate submaximal GH isometrics: flexion, extension, abduction, IR, ER

# **Modalities/Education**

- Frequent cryotherapy for pain and inflammation
- NMES (neuromuscular electrical stimulation) for scapula stabilizer strengthening as needed
- Patient education regarding posture, joint protection, positioning, hygiene, etc.



### Manual

- · Scar and soft tissue mobilization as needed
- Joint mobilizations as needed
- Cryotherapy 6-8 times per day for 15-20 minutes each
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# Post-Operative Phase II: Motion Phase - (Week 4 - Week 8)

### Goals:

- · Minimize shoulder pain and inflammatory response
- Protect the integrity of the surgical repair
- Progress PROM
- Begin light waist level activities

# Sling:

- Discontinue use of pillow as directed by physician/therapist after week 4.
- Begin to wean from sling between weeks 6-8

### ROM:

- Progress shoulder PROM (do not force any painful motion)
  - Glenohumeral (GH) flexion to 135 degrees (full by week 6-8)
  - Scaption to 135 degrees (full by week 6-8)
  - Internal rotation (IR) to Full
  - External rotation (ER) to 30 degrees (Progress slowly to 90 degree @ 90/90 by week 6-8
  - Abduction: 120 degrees (160 degrees by week 6-8)

# **Proprioception:**

• Initiate rhythmic stabilization as tolerated in allowed range of motion

# **Modalities**

Continue cryotherapy for pain and inflammation

# Manual:

- Scar and soft tissue mobilization as needed
- Joint mobilizations as needed

# Progression to Phase III:

- No pain
- No swelling
- Full motion including 90 degrees external rotation @ 90 degrees of abduction
- Adequate shoulder strength (4/5)



# Post-Operative Phase III: Activity Phase - (Week 8 - Week 12)

# ROM

• Full pain free range of motion

# Therapeutic Exercises:

- Progress as tolerated, concentric and eccentric exercises
  - Achieve full PROM/AROM in a given plane before strengthening in that plane
- Continue to advance scapula and upper extremity strengthening as tolerated in all planes
  - Include diagonal planes
- Begin strengthening @ 90/90 position (Week 10)
- Avoid chest/anterior strengthening exercises

# Manual:

- Scar and soft tissue mobilizations as needed
- Joint mobilizations as needed

### Cardio:

• UBE, Stationary bike, Elliptical with light upper body, treadmill

# **Modalities:**

Cryotherapy after activity/therapy for pain

# **Progression to Phase IV:**

- No pain
- Normal Strength (5/5 MMT)

# Post-Operative Phase IV: Sport Specific Phase - (Week 12 +)

# Therapeutic Exercises:

- Continue to advance scapula and upper extremity strengthening as tolerated in all planes
- Progress strengthening @ 90/90 position

# **Proprioception:**

- Progress subscapularis strengthening to focus on both upper and lower segments:
  - PNF patterns
  - IR resistive band at 45, 90 degrees of abduction
- Increase resistance for UBE
- Progress isotonic strengthening if patient demonstrates no compensatory strategies, is not painful, and has no residual soreness

# **Plyometrics:**

- Initiate light upper body plyometric program, rebounder toss with two hands, progress to one hand as tolerated
- Initiate return to throwing program at month 4



# Cardio:

• UBE, Stationary bike, Elliptical, treadmill

# Manual: as needed

# Modalities:

Cryotherapy after activity/therapy for pain if needed

# 6 month follow up testing:

- Isokinetic testing to assess strength of shoulder internal and external rotation muscles
- Endurance testing of upper extremity
- Power testing of upper extremity

