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Sports Medicine
Shoulder, Elbow, Knee Arthroscopy
Shoulder Replacement Surgery

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DISCHARGE INSTRUCTIONS & PHYSICAL THERAPY PROTOCOL: Total Shoulder Arthroplasty/Hemiarthroplasty/Resurfacing

- Initial recovery after shoulder surgery entails healing, controlling swelling and discomfort and regaining some shoulder motion. The following instructions are intended as a guide to help you achieve these goals until your 1st postoperative visit.

- COMFORT

  - **Cold Therapy**
    - If you elected to receive the **circulating cooling device**, this can be used continuously for the first 3 days, (while the initial post-op dressing is on). After 3 days, the cooling device should be applied 3 times a day for 20-30 minute intervals.
    - If you elected to receive the **gel wrap**, this may be applied for 20 minutes on, 20 minutes off as needed. You may apply this over the post-op dressing. Once the dressing is removed, be sure to place a barrier (shirt, towel, cloth, etc.) between your skin and the gel wrap.
    - If you elected to use **regular ice**, this may be applied for 20 minutes on, 20 minutes off as needed. You may apply this over the post-op dressing. Once the dressing is removed, be sure to place a barrier (shirt, towel, cloth, etc.) between your skin and the gel wrap.
  - **Medication**
    - **Pain Medication-** Take medications as prescribed, but only as often as necessary. Avoid alcohol and driving if you are taking pain medication.
      - You have been provided a narcotic prescription postoperatively. Use this medication sparingly for moderate to severe pain.
      - **You are allowed two (2) refills of your narcotic prescription if necessary.**
      - When refilling pain medication, weaning down to a lower potency or non-narcotic prescription is recommended as soon as possible.
      - Extra strength Tylenol may be used for mild pain.
      - Over the counter anti-inflammatories (Ibuprofen, Aleve, Motrin, etc.) shoulder be **avoided** for the first 4 weeks following surgery.

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- **Anti-coagulation medication:** A medication to prevent post-operative blood clots has been prescribed (Aspirin, Lovenox, etc.) This is the only medication that MUST be taken as prescribed until directed to stop by Dr. Forsythe.
- **Nausea Medication –** Zofran (Odansetron) has been prescribed for nausea. You may take this as needed per the prescription instructions.
- **Constipation Medication -** Colace has been prescribed for constipation. Both your pain medication and the anesthesia can cause constipation. Take this as needed.

- **Driving –** Driving is NOT permitted as long as the sling is necessary.

❖ ACTIVITIES

- You are immobilized with a sling and abductor pillow, full time, for approximately the first 6 weeks. Your doctor can tell you when you can discontinue use of the sling at your 1st postoperative visit. The sling may be removed for exercises.
- **Range-of-Motion Exercises** –
  - While your sling is off you should flex and extend your elbow and wrist – (3x a day for 15 repetitions) to avoid elbow stiffness. You can also shrug your shoulders.
  - Ball squeezes should be done in the sling (3x a day for 15 squeezes).
  - You may NOT move your shoulder by yourself in certain directions. NO active flexion (lifting arm up) or abduction (lifting arm away from body) until Dr. Forsythe or your therapist gives permission. These exercises must be done under supervision of the therapist.
  - Physical therapy will begin approximately 2-3 weeks after surgery. Make an appointment with a therapist of your choice for this period of time. You have been given a prescription and instructions for therapy. Please take these with you to your first therapy visit.
  - Athletic activities such as throwing, lifting, swimming, bicycling, jogging, running, and stop-and-go sports should be avoided until cleared by Dr. Forsythe.

❖ WOUND CARE

- **Bathing -** Tub bathing, swimming, and soaking of the shoulder **should be avoided** until allowed by your doctor - Usually 2-3 weeks after your surgery. Keep the dressing on, clean and dry for the first 3 days after surgery.
  - You may shower 3 days after surgery with a WATERPROOF bandage on. Apply a new dry dressing after showering.
- **Dressings -** Remove the dressing 3 days after surgery. You may apply band-aids or dry sterile gauze to your incision.

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- **Bathroom/Personal Hygiene –** Placing your arm behind your back may predispose you to injuring your shoulder. Avoid tucking in your shirt or performing bathroom personal hygiene with the involved arm until you are cleared by Dr. Forsythe.

❖ EATING

- Your first few meals, after surgery, should include light, easily digestible foods and plenty of liquids, since some people experience slight nausea as a temporary reaction to anesthesia

❖ CALL YOUR PHYSICIAN IF:

- Pain in your shoulder persists or worsens in the first few days after surgery.
- Excessive redness or drainage of cloudy or bloody material from the wounds (Clear red tinted fluid and some mild drainage should be expected). Drainage of any kind 5 days after surgery should be reported to the doctor.
- You have a temperature elevation greater than 101°
- You have pain, swelling or redness in your arm or hand.
- You have numbness or weakness in your arm or hand.

❖ RETURN TO THE OFFICE

- Your first return to our office should be within the first 1-2 weeks after your surgery. You can find your appointment for this first post-operative visit in the post op instruction folder.

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REHABILITATION PROGRAM:
Total Shoulder Arthroplasty/Hemiarthroplasty

NOTE: The following instructions are intended for your physical therapist and should be brought to your first physical therapy visit.

- **The intent of this protocol is to provide the clinician with a guideline of the postoperative rehabilitation course of a patient that has undergone a total shoulder arthroplasty (TSA) or hemiarthroplasty (humeral head replacement, HHR). It is not intended to be a substitute for appropriate clinical decision-making regarding the progression of a patient's postoperative course. The actual post surgical physical therapy management must be based on the surgical approach, physical exam/findings, individual progress, and/or the presence of postoperative complications. If a clinician requires assistance in the progression of a patient post-surgery, consult with the referring surgeon.**
- **Passive Range of Motion (PROM): PROM for all patients having undergone a TSA/HHR should be defined as ROM that is provided by an external source (therapist, instructed family member, or other qualified personnel) with the intent to gain ROM without placing undue stress on either soft tissue structures and/or the surgical repair.**

PHASE I – Immediate Post Surgical Phase

Goals:
- Allow healing of soft tissue
- Maintain integrity of replaced joint
- Gradually increase passive range of motion (PROM) of shoulder; restore active range of motion (AROM) of elbow/wrist/hand
- Reduce pain and inflammation
- Reduce muscular inhibition
- Independent with activities of daily living (ADLs) with modifications while maintaining the integrity of the replaced joint.

Precautions:
- Sling should be worn continuously for 3-4 weeks
- While lying supine, a small pillow or towel roll should be placed behind the elbow to avoid shoulder hyperextension / anterior capsule stretch / subscapularis stretch. **(When lying**

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supine patient should be instructed to always be able to visualize their elbow. This ensures they are not extending their shoulder past neutral.) – This should be maintained for 6-8 weeks post-surgically.

- Avoid shoulder AROM.
- No lifting of objects
- No excessive shoulder motion behind back, especially into internal rotation (IR)
- No excessive stretching or sudden movements, particularly external rotation (ER)
- No supporting of body weight by hand on involved side
- Keep incision clean and dry (no soaking for 2 weeks)
- No driving for 3 weeks

Post-Operative Day (POD) #1 (in hospital):

- **Attention:** DO NOT produce undue stress on the anterior joint capsule, particularly with shoulder in extension
- Frequent cryotherapy for pain, swelling, and inflammation management
- Patient education regarding proper positioning and joint protection techniques
- ROM of elbow and wrist as tolerated

Early Phase I: (out of hospital)

- Continue above exercises
- Begin scapula musculature isometrics / sets (primarily retraction)
- Continue active elbow ROM
- Continue cryotherapy as much as able for pain and inflammation management

Late Phase I: (2-4 weeks post-op)

- Continue previous exercises
- Continue to progress PROM as motion allows
- Begin assisted flexion, elevation in the plane of the scapula, ER, IR in the scapular plane
- Progress active distal extremity exercise to strengthening as appropriate

Criteria for progression to the next phase (II):
If the patient has not reached the below ROM, forceful stretching and mobilization/manipulation is not indicated. Continue gradual ROM and gentle mobilization (i.e. Grade I oscillations), while respecting soft tissue constraints.

- Tolerates PROM program
- Has achieved at least 90° PROM forward flexion and elevation in the scapular plane.

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- Has achieved at least 45° PROM ER in plane of scapula
- Has achieved at least 70° PROM IR in plane of scapula measured at 30° of abduction

PHASE II – Early Strengthening Phase
(Not to begin before 4-6 Weeks post-surgery to allow for appropriate soft tissue healing):

Goals:

- Restore full passive ROM
- Gradually restore active motion
- Control pain and inflammation
- Allow continue healing of soft tissue
- Do not overstress healing tissue
- Re-establish dynamic shoulder stability

Precautions:

- Sling should only be used for sleeping and removed gradually over the course of the next 2 weeks, for periods throughout the day.
- While lying supine a small pillow or towel should be placed behind the elbow to avoid shoulder hyperextension / anterior capsule stretch.
- In the presence of poor shoulder mechanics avoid repetitive shoulder AROM exercises/activity against gravity in standing.
- No heavy lifting of objects (no heavier than coffee cup)
- No supporting of body weight by hand on involved side
- No sudden jerking motions

Early Phase II:

- Continue with PROM, active assisted range of motion (AAROM)
- Begin active flexion, IR, ER, elevation in the plane of the scapula pain free ROM
- AAROM pulleys (flexion and elevation in the plane of the scapula) – as long as greater than 90° of PROM
- Begin shoulder sub-maximal pain-free shoulder isometrics in neutral
- Scapular strengthening exercises as appropriate
- Begin assisted horizontal adduction

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- Progress distal extremity exercises with light resistance as appropriate
- Gentle glenohumeral and scapulothoracic joint mobilizations as indicated
- Initiate glenohumeral and scapulothoracic rhythmic stabilization
- Continue use of cryotherapy for pain and inflammation.

Late Phase II:

- Progress scapular strengthening exercises

Criteria for progression to the next phase (III):
If the patient has not reached the below ROM, forceful stretching and mobilization/manipulation is not indicated. Continue gradual ROM and gentle mobilization (i.e. Grade I oscillations), while respecting soft tissue constraints.

- Tolerates P/AAROM, isometric program
- Has achieved at least 140° PROM forward flexion and elevation in the scapular plane.
- Has achieved at least 60+° PROM ER in plane of scapula
- Has achieved at least 70° PROM IR in plane of scapula measured at 30° of abduction
- Able to actively elevate shoulder against gravity with good mechanics to 100°.

PHASE III – Moderate Strengthening Phase
(Not to begin before 6 Weeks post-surgery to allow for appropriate soft tissue healing and to ensure adequate ROM):

Goals:
- Gradual restoration of shoulder strength, power, and endurance
- Optimize neuromuscular control
- Gradual return to functional activities with involved upper extremity

Precautions:

- No heavy lifting of objects (no heavier than 3 kg.)
- No sudden lifting or pushing activities
- No sudden jerking motions

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Early Phase III:

- Progress AROM exercise / activity as appropriate
- Advance PROM to stretching as appropriate
- Continue PROM as needed to maintain ROM
- Initiate assisted shoulder IR behind back stretch
- Resisted shoulder IR, ER in scapular plane
- Begin light functional activities
- Wean from sling completely
- Begin progressive supine active elevation strengthening (anterior deltoid) with light weights (0.5-1.5 kg.) at variable degrees of elevation

Late Phase III:

- Resisted flexion, elevation in the plane of the scapula, extension (therabands / sport cords)
- Continue progressing IR, ER strengthening
- Progress IR stretch behind back from AAROM to AROM as ROM allows

(Pay particular attention as to avoid stress on the anterior capsule.)

Criteria for progression to the next phase (IV):
If the patient has not reached the below ROM, forceful stretching and mobilization/manipulation is not indicated. Continue gradual ROM and gentle mobilization (i.e. Grade I oscillations), while respecting soft tissue constraints.

- Tolerates AA/AROM/strengthening

- Has achieved at least 140° AROM forward flexion and elevation in the scapular plane supine.
- Has achieved at least 60+° AROM ER in plane of scapula supine
- Has achieved at least 70° AROM IR in plane of scapula supine in 30° of abduction
- Able to actively elevate shoulder against gravity with good mechanics to at least 120°.

Note: (If above ROM are not met then patient is ready to progress if their ROM is consistent with outcomes for patients with the given underlying pathology).

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PHASE IV – Advanced Strengthening Phase

Goals:

- Maintain non-painful AROM
- Enhance functional use of upper extremity
- Improve muscular strength, power, and endurance
- Gradual return to more advanced functional activities
- Progress weight bearing exercises as appropriate

Precautions:

- Avoid exercise and functional activities that put stress on the anterior capsule and surrounding structures. (Example: no combined ER and abduction above 80° of abduction.)
- Ensure gradual progression of strengthening

Early Phase IV:

- **Typically patient is on a home exercise program by this point to be performed 3-4 times per week.**
- Gradually progress strengthening program
- Gradual return to moderately challenging functional activities.

Late Phase IV (Typically 4-6 months post-op):

- Return to recreational hobbies, gardening, sports, golf, doubles tennis

Criteria for discharge from skilled therapy:

- Patient able to maintain non-painful AROM
- Maximized functional use of upper extremity
- Maximized muscular strength, power, and endurance
- Patient has returned to advanced functional activities