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Dr. Chad Myeroff, Shoulder and Elbow Specialist Updated: May 2019

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Shoulder General Conditioning Protocol

Three times per day home exercise program including:

- Phase I
 - 4 quadrant stretches using A/AA/PROM
 - Wall climbs, table slides, sleeper stretches
 - Wand exercises: Supine gravity eliminated FF and external rotation. IR behind the back
 - Posture exercises
 - Periscapular isometrics
 - Rhomboid, Latissimus, Deltoid
- Phase II (when full ROM achieved)
 - Progress to rotator cuff and periscapular strengthening
 - Including isometrics and therabands
- Phase III
 - Progress towards generalized strengthening and core conditioning
 - Return to sport or work hardening program

*OK for modalities as indicated including pool therapy, dry needling, acupuncture as long as it does not detract from regaining motion, posture and strength







Scapular Dyskinesia / Thoracic Outlet / SLAP Tear Non-Op

Three times per day home exercise program including:

- Phase I
 - 4 quadrant stretches using A/AA/PROM
 - Wall climbs, table slides
 - Wand exercises: Supine gravity eliminated FF and external rotation. IR behind the back, sleeper stretches
 - Pec minor stretches (in doorway)
 - Posture exercises
 - Periscapular isometrics
 - Rhomboid, Latissimus, Deltoid
 - Periscapular proprioception and stabilization
- Phase II (when full ROM achieved)
 - Progress to rotator cuff and periscapular strengthening
 - Including isometrics and therabands
 - Continue to focus on periscapular proprioception and stabilization
- Phase III
 - o Progress towards generalized strengthening and core conditioning
 - Return to sport or work hardening program

*OK for modalities as indicated including pool therapy, dry needling, acupuncture as long as it does not detract from regaining motion, posture and strength

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Adhesive Capsulitis (Frozen Shoulder) Non-op

Three times per day gentle self-guided home stretching program including:

- A/AA/PROM TID 4-quadrant gentle static progressive stretches
 - o Pulleys, table slides, wall climbs, sleeper stretches, supine wand exercises in all planes
- Posture and rhomboid isometrics

*OK for modalities as indicated including pool therapy, dry needling, massage, acupuncture.

*Patient with true adhesive capsulitis may benefit from intra-articular glenohumeral steroid injections up to 4 times per year if needed. Please contact my office and we will facilitate if indicated.

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Accelerated Rotator Cuff Repair Protocol

Three times per day home exercise program including:

Pre-operative (Prehab) Appointment to establish care and coaching on:

- Post-operative preparation
 - Expectations and training on recovery, exercises and restrictions
 - Work and home modifications including ADLs, hygiene, sleep
- Sling donning and doffing

Phase 1: Week 0-5 (1st post-operative PT visit scheduled at 1-2 weeks post-operatively)

- Maintain sling use
- POD 1: hygiene, finger, wrist, elbow AROM
- POD 7-10 (at 1st therapy visit): Formal PT AND Three time daily (TID) home exercise program (HEP)
 - Shoulder PROM as tolerated, scapular retractions
 - Pulleys, table slides, supine wand exercises in all planes

Phase 2: Week 5-10

- PROM progressing towards AAROM
- Wean out of sling at 6 weeks
- Phase I & II stretching in PT
- May begin to use arm for ADLs at 6 weeks
- No lifting > 1lbs

Phase 3: Week 10-14

- Add Phase I cuff strengthening, scapular strengthening
- Add biceps and triceps strengthening
- May use arm for ADLs
- No lifting > 5lbs
 - At 12 weeks post op, no lifting >10 lbs

Phase 4: Week 15-24

- Progressive stretching and strengthening
- Independent home exercise program
- Return to play program
- Work hardening

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Standard Rotator Cuff Repair Protocol

Three times per day home exercise program including:

Pre-operative (Prehab) Appointment to establish care and coaching on:

- Post-operative preparation
 - Expectations and training on recovery, exercises and restrictions
 - Work and home modifications including ADLs, hygiene, sleep
- Sling donning and doffing

Phase 1: Week 0-6 (1st post-op PT visit should immediately follow 2-week post-op surgical visit)

- Maintain sling use
- POD 1: hygiene, finger, wrist, elbow AROM
- POD 7-10 (at 1st therapy visit): Formal PT AND Three time daily (TID) home exercise program (HEP)
 - Shoulder PROM, rhomboid isometrics
 - o FF 0-130°, ER 0-30°, Abduction 0-60°

Phase 2: Week 6-12

- Wean out of sling (maintain sling use for one more week in public)
- Full unrestricted PROM progressing towards AAROM
 - Pulleys, table slides, supine wand exercises in all planes
- May begin to use arm for ADLs
- No lifting > weight of coffee cup

Phase 3: Week 12-18

- Add Phase II stretching and phase I strengthening, scapular strengthening
- Add biceps and triceps strengthening
- May use arm for ADLs
- No lifting > 5lbs
 - At 16 weeks post op, no lifting > 10 lbs
 - At 18 weeks post op, no lifting > 15 lbs

Phase 4: Week 19-24

- Independent home exercise program
- Return to play program
- Work hardening

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Protected Rotator Cuff Repair Protocol

Three times per day home exercise program including:

Pre-operative (Prehab) Appointment to establish care and coaching on:

- Post-operative preparation
 - Expectations and training on recovery, exercises and restrictions
 - Work and home modifications including ADLs, hygiene, sleep
- Sling donning and doffing

Phase 1: Week 0-6 (1st post-op PT visit should immediately follow 2-week post-op surgical visit)

- Maintain sling use
- POD 1: hygiene, finger, wrist, elbow AROM
- Week 2: Scapular retractions, sling donning and doffing
- No lifting

Phase 2: Week 6-12

- Wean out of sling (maintain sling use for one more week in public)
- Formal PT AND Three time daily (TID) home exercise program (HEP)
- Unrestricted PROM, rhomboid isometrics
 - o Pulleys, table slides, supine wand exercises in all planes
- At 8 weeks
 - May begin to use arm for ADLs
 - o Begin AAROM, biceps and triceps strengthening
- No lifting > weight of coffee cup

Phase 3: Week 12-18

- Add phase II stretching, scapular strengthening
- Initiate AROM
- Add Phase I cuff strengthening
- No lifting > 5 lbs

Phase 4: Week 19-24

- Continue strengthening as tolerated
- Total arm strengthening
- No lifting > 10 lbs
- At week 24
 - Independent home exercise program
 - Return to play
 - Work hardening program

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Acromioclavicular (AC) Joint – Reconstruction or Repair

Three times per day home exercise program including:

Phase 1: Week 0-6 (1st PT visit scheduled to follow on day of 2-week post-op surgical visit)

- Maintain sling use (except for TID elbow wrist finger ROM, hygiene and therapy)
- Add supine passive ER 0-30° with wand at 2 weeks post op
 - *Focus on static progressive stretching
- Periscapular isometrics in neutral
- No lifting > weight of coffee cup
- No pushing or weight-bearing through arm

Phase 2: Week 6-12

- Wean out of sling for therapy and in the house
 - Continue sling in public for 12 weeks
- Light and pain free biceps/triceps strengthening
- Begin PT
 - Unrestricted shoulder PROM
 - Pulleys, table slides, supine wand exercises in all planes
 - Phase I strengthening
 - Scapular strengthening
- Shoulder AAROM at 8 weeks
- No pushing or weight-bearing through arm

Phase 3: Week 12-18 weeks

- Discontinue sling altogether
- Advance to AROM
 - o Continue 4 quadrant stretches
- Phase I and II cuff strengthening
- Periscapular strengthening
- No Lifting > 10lbs
- Independent home exercise program
- Return to play
- Work hardening program

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Sternoclavicular (SC) Joint – Reconstruction or Repair

Three times per day home exercise program including:

Phase 1: Week 0-6 (1st PT visit scheduled to follow on day of 2-week post-op surgical visit)

- Maintain sling use (except for TID elbow wrist finger ROM, hygiene and therapy)
 - Add supine passive ER 0-30° with wand at 2 weeks post op
 - *Focus on static progressive stretching
 - No overhead lifting
- No lifting > weight of coffee cup
- No pushing or weight-bearing through arm

Phase 2: Week 6-12

- Wean out of sling for therapy and in the house
 - o Continue sling in public until 12 weeks post-operative
- Add periscapular isometrics
- Advance to shoulder PROM / AAROM as tolerated in all planes
 - Pulleys, table slides, supine wand exercises in all planes
- no more than a coffee cup overhead, avoid pushing and pulling

Phase 3: Week 12-18 weeks

- Discontinue sling altogether
- Advance to shoulder strengthening
 - Phase I and II cuff strengthening
 - Periscapular strengthening
- No Lifting > 5 lbs overhead
- Independent home exercise program

Phase 4: 18+ weeks

- Return to play no return to contact sports prior to 6 months for posterior SC dislocations
- Work hardening program

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Proximal Biceps Tenodesis (open or arthroscopic)

Three times per day home exercise program including:

Phase 1: Week 0-6 (1st PT visit scheduled to follow on day of 2-week post-op surgical visit)

- Maintain sling use x2 weeks except for hygiene and TID therapy
 - Wean from sling at 2 weeks
- POD 1: hygiene, finger, wrist, elbow AROM
- POD 7-10 (at 1st therapy visit): Formal PT AND Three time daily (TID) home exercise program (HEP)
 - Unrestricted shoulder PROM, rhomboid isometrics
- No lifting > weight of coffee cup
- Core strengthening for athletes

Phase 2: Week 6-12

- Phase 1 cuff, biceps and triceps strengthening
- No lifting > 5 lbs

Phase 3: Week 12-16

- Continue stretching and strengthening as tolerated
- Independent home exercise program
- Return to play
- Work hardening program
- No lifting > 10 lbs

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Distal Clavicle Excision (open or arthroscopic)

Three times per day home exercise program including:

Phase 1: Week 0-6 (1st PT visit scheduled to follow on day of 2-week post-op surgical visit)

- Maintain sling use x2 weeks except for hygiene and TID therapy
 - Wean from sling at 2 weeks
- POD 1: hygiene, finger, wrist, elbow AROM
- POD 7-10 (at 1st therapy visit): Formal PT AND Three time daily (TID) home exercise program (HEP)
 - Add unrestricted shoulder PROM, rhomboid isometrics
 - Progress AAROM → AROM → Phase I and II cuff and periscapular strengthening as able
- OK to use arm for ADLs
- No lifting > weight of coffee cup

Phase 2: Week 6-12

- Use arm as tolerated
- Independent home exercise program
- Return to play
- Work hardening program

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Arthroscopic Debridement and/or Subacromial Decompression

Three times per day home exercise program including:

Phase 1: Week 0-6 (1st PT visit scheduled to follow on day of 2-week post-op surgical visit)

- Maintain sling use x2 weeks except for hygiene and TID therapy
 - Wean from sling at 2 weeks
- POD 1: hygiene, finger, wrist, elbow AROM
- POD 7-10 (at 1st therapy visit): Formal PT AND Three time daily (TID) home exercise program (HEP)
 - Add unrestricted shoulder PROM, rhomboid isometrics
 - Progress AAROM → AROM
- OK to use arm for ADLs
- No lifting > 5#

Phase 2: Week 6-12

- Phase I and II cuff and periscapular strengthening as able
- Progress to activities as tolerated
- Independent home exercise program
- Return to play
- Work hardening program

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Arthroscopic Shoulder Capsular Release, Manipulation Under Anesthesia

Three times per day home exercise program including:

Phase 0: Day of Surgery – Post-op day 2

- Patient will have long acting shoulder block
 - Should have <u>formal therapy</u> visit <u>pre-arranged</u> day of and day after surgery:
 - Immediately following surgery PACU recovery (POD#0)
 - ^{1 st} appointment the following morning (POD#1)
- PROM with therapist assist as long as block is functional
- Maintain sling use

Phase 1: Day 2 – week 6

- Wean out of sling after block wears off
- Formal PT AND Three time daily (TID) home exercise program (HEP)
- PROM and AROM TID formal PT AND home exercise program
 - Pulleys, table slides, wall climbs, sleeper stretches, supine wand exercises in all planes
- Scapular stabilization, rhomboid and lower trapezius strengthening
- Use arm for ADLs

Phase 2: Week 6-12

- Add deltoid, rotator cuff, and periscapular strengthening
- Independent home exercise program
- Return to play
- Work hardening program

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Arthroscopic Bankart Repair (Anterior, Posterior, or SLAP)

Three times per day home exercise program including:

Phase 1: Week 0-6 (1st PT visit scheduled to follow on day of 2-week post-op surgical visit)

- Maintain sling use
- POD 1: hygiene, finger, wrist, elbow AROM
- POD 7-10 (at 1st therapy visit): Formal PT AND Three time daily (TID) home exercise program (HEP)
 - Passive ER 0-30 supine wand with elbow at the side
 - Passive FF 0-140 (OK to table slides, pulleys, supine wand exercises)
 - Avoid 90-90 position
 - Periscapular isometrics
- Core strengthening for athletes
- No lifting greater than a coffee cup

Phase 2: Week 6-12

- Wean out of sling (maintain for one more week in public)
- PROM 4-quadrant stretches avoiding the position of apprehension
 - Phase I and II stretches
 - o Pulleys, table slides, supine wand exercises in all planes
- Periscapular isometrics, stabilization and proprioception
- Phase I cuff strengthening
- Biceps and triceps strengthening
- No lifting > 5 lbs
 - For posterior Bankart repairs
 - No pushing or bike riding until 12 weeks post op

Phase 3: Week 12-16

- Total arm strengthening
- No pushups until 3-4 month's post op

Phase 4: Week 16-18

- Independent home exercise program
- Return to play
- Work hardening

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Latarjet Procedure

Three times per day home exercise program including:

Phase 1: Week 0-6 (1st PT visit scheduled to follow on day of 2-week post-op surgical visit)

- Maintain sling use
- POD 1: hygiene, finger, wrist, elbow AROM
- POD 7-10 (at 1st therapy visit): Formal PT AND Three time daily (TID) home exercise program (HEP)
 - \circ ~ Passive ER 0-30° with elbow at the side, FF 0-130° ~
 - Table slides, supine wand external rotation
 - Periscapular isometrics
- Core strengthening for athletes
- No lifting greater than a coffee cup

Phase 2: Week 6-12 (*Initiate based on osseous integration)

- Wean out of sling (maintain for one more week in public)
- PROM 4-quadrant stretches avoiding the position of apprehension
 - Unrestricted phase I and II stretches
 - Pulleys, table slides, supine wand exercises in all planes
- Periscapular isometrics, stabilization and proprioception
- Phase I cuff strengthening
- Biceps, triceps, deltoid strengthening
- No lifting > 5 lbs

Phase 3: Week 12-16

• Add total arm strengthening

Phase 4: Week 16-18

- Independent home exercise program
- Return to play
- Work hardening

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Anatomic Total Shoulder Arthroplasty / Hemiarthroplasty

Three times per day home exercise program including:

Pre-operative (Prehab) Appointment to establish care and coaching on:

- Post-operative preparation
 - Expectations and training on recovery, exercises and restrictions
 - o Work and home modifications including ADLs, hygiene, sleep
- Sling donning and doffing

Phase 1: Week 0-6 (1st post-op PT visit should immediately follow 2-week post-op surgical visit)

- Maintain sling use
- POD 1: hygiene, finger, wrist, elbow AROM
- POD 1-14: Formal PT AND Three time daily (TID) home exercise program (HEP)
 - PROM: ER 0-30° (subscap protection) with elbow at the side, FF 0-140°
 - Overhead pulleys, table slides, supine wand exercises
 - Periscapular isometrics
- No lifting > weight of coffee cup

Phase 2: Week 6-12

- Wean from sling except when in public
- Advance to unrestricted PROM \rightarrow AAROM
 - Overhead pulleys, table slides, wall climbs, supine wand exercises
- Isometrics
 - o ER isometrics
 - Periscapular strengthening
- Begin to use arm for ADLs
- No lifting > 5 lbs
- No active IR strengthening
- Phase 3: Week 12-18
 - *(once ROM complete)
 - AROM
 - Phase I cuff strengthening \rightarrow total arm strengthening
 - Independent home exercise program
 - Activities as tolerated
 - Avoid repetitive heavy lifting
 - No bench press, military press, pushups

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Reverse Total Shoulder Arthroplasty

Three times per day home exercise program including:

Pre-operative (Prehab) Appointment to establish care and coaching on:

- Post-operative preparation
 - Expectations and training on recovery, exercises and restrictions
 - o Work and home modifications including ADLs, hygiene, sleep
- Sling donning and doffing

Phase 1: Week 0-6 (1st post-op PT visit should immediately follow 2-week post-op surgical visit)

- Maintain sling use
- POD 1: hygiene, finger, wrist, elbow AROM
- POD 1-14: Formal PT AND Three time daily (TID) home exercise program (HEP)
 - PROM: ER 0-30° with elbow at the side, FF 0-140°
 - Overhead pulleys, table slides, supine wand exercises
 - Periscapular isometrics

Phase 2: Week 6-12

- Wean from sling except when in public
- Advance to AAROM → AROM as pain allows
 - Overhead pulleys, table slides, wall climbs, supine wand exercises
- Isometrics
 - ER isometrics
 - o Periscapular strengthening
- Begin to use arm for ADLs

Phase 3: Week 12-18

- *(once ROM complete)
- Cuff and periscapular strengthening ightarrow total arm strengthening
- Independent home exercise program
- Activities as tolerated
 - Avoid repetitive heavy lifting
 - No bench press, military press, pushups
 - Avoid pushing out of a chair

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Post-Op Protocol for Chad Myeroff, MD

Proximal Humerus Fracture – Non-operative

Three times per day home exercise program including:

Phase 1: Week 0-3 (starting immediately)

- Maintain sling use, no shoulder ROM, avoid firing shoulder muscles
- OK to come out of sling for:
 - hygiene (pendulum hangs)
 - TID finger, wrist, elbow AROM
- No lifting > weight of a coffee cup

Phase 2: Appx Week 3-8

*Initiation will be based in initial signs of fracture callous healing

- Continue sling
- Formal PT AND Three time daily (TID) home exercise program (HEP)
 - PROM 4 quadrant stretches as pain allows
 - Overhead pulleys, table slides, supine wand exercises
 - Posture and rhomboid isometrics
- Advance to AAROM → AROM as pain allows
 - Overhead pulleys, table slides, wall climbs, supine wand exercises
- No lifting > weight of a coffee cup

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Phase 3: Appx Week 8-12

*Initiation based on complete fracture healing

- Wean from sling except in public
- Advance to AAROM then AROM as pain and time allows
- No lifting > 5#

Phase 4: Appx Week 12-16

*Initiate once ROM has plateaued

- Continue aggressive TID HEP shoulder ROM
- Cuff and periscapular strengthening \rightarrow total arm strengthening, core strengthening
- Independent home exercise program

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Proximal Humerus Fracture – Operative Fixation

Three times per day home exercise program including:

Phase 1: Week 0-6 (1st PT visit scheduled within 7-10 days of surgery)

- Maintain sling use
- POD 1: hygiene, finger, wrist, elbow AROM
- POD 7-10 (at 1st therapy visit): Formal PT AND Three time daily (TID) home exercise program (HEP)
 - Shoulder PROM, rhomboid isometrics
 - Pulleys, table slides, supine wand exercises in all planes
- No lifting > weight of a coffee cup
- No active firing of the shoulder muscles

Phase 2: Week 6-12

- Wean from sling except in public
- Continue progressive PROM 4 quadrant stretches
 - Posture and rhomboid isometrics
- Advance to AAROM \rightarrow AROM as pain and time allows
- Isometrics
 - ER isometrics
 - Periscapular isometrics
- No lifting > 2#

Phase 3: Week 12-16

- Discontinue sling altogether
- Cuff and periscapular strengthening \rightarrow total arm strengthening, core strengthening
 - As pain allows
- Independent home exercise program
- No restrictions

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Proximal Humerus Fracture – Reverse Shoulder Arthroplasty

Three times per day home exercise program including:

Phase 1: Week 0-6 (1st post-op PT visit should immediately follow 2-week post-op surgical visit)

- Maintain sling use
- POD 1: hygiene, finger, wrist, elbow AROM
- POD 14: Formal PT AND Three time daily (TID) home exercise program (HEP)
 - PROM: ER with elbow at the side, FF 0-140°
 - Overhead pulleys, table slides, supine wand exercises
 - Periscapular isometrics

Phase 2: Week 6-12

- Wean from sling except when in public
- Advance to AAROM as pain allows
 - Overhead pulleys, table slides, wall climbs, supine wand exercises
- Isometrics
 - o ER and deltoid isometrics
 - Periscapular strengthening
- Begin to use arm for ADLs

Phase 3: Week 12-18 *(Initiated once ROM complete)

- AROM \rightarrow strengthening once ROM maximized
- Cuff and periscapular strengthening \rightarrow total arm strengthening
- Independent home exercise program
- Activities as tolerated
 - Avoid repetitive heavy lifting
 - No bench press, military press, pushups
 - Avoid pushing out of a chair

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Clavicle Fracture – Non-Operative

Three times per day home exercise program including:

Phase 1: Week 0-4 (early fracture healing)

- Maintain sling use (except for TID elbow wrist finger ROM, hygiene)
 - Elbow should be supported
- Rhomboid and periscapular isometrics, posture exercises
 - No lifting > weight of coffee cup
 - No active shoulder ROM
- No pushing or weight-bearing through arm

Phase 2: Week 4-8

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- Wean out of sling for therapy and in the house
 - Continue sling in public for 12 weeks
- Continue elbow, wrist and finger motion, periscapular isometrics
- Begin Formal PT AND Three time daily (TID) home exercise program (HEP)
 - Shoulder 4 quadrant PROM progressing towards AAROM
 - Pulleys, table slides, supine wand exercises in all planes
- No lifting > weight of coffee cup

Phase 3: Week 8-12 (following clinical fracture healing)

- Discontinue sling altogether
- Advance to AROM
 - Continue 4 quadrant stretches, periscapular isometrics, posture
- Phase I and II cuff strengthening
- Periscapular and complete extremity strengthening
- No Lifting > 10lbs

Phase 4: Week 12-16

- Independent home exercise program
- Return to sport
- Work hardening

 $More\ info:\ twincities should erandel bow.com/clavicle-should er-elbow-special ist-minneapolis-saint-paul.html$

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Clavicle Fracture – ORIF

Three times per day home exercise program including:

Phase 1: Week 0-2

- Maintain sling use (except for TID elbow wrist finger ROM, hygiene)
 - Elbow should be supported
- Rhomboid and periscapular isometrics, posture exercises
 - No lifting > weight of coffee cup
 - No active shoulder ROM
- No pushing or weight-bearing through arm

Phase 2: Week 2-6

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- Use sling only as needed
- Continue elbow, wrist and finger motion, periscapular isometrics
- Begin Formal PT AND Three time daily (TID) home exercise program (HEP)
 - Shoulder 4 quadrant PROM, AAROM, AROM
 - Pulleys, table slides, supine wand exercises in all planes
- No lifting > weight of coffee cup

Phase 3: Week 6-12 weeks (following clinical fracture healing)

- Discontinue sling altogether
- Phase I and II cuff strengthening
- Periscapular, complete extremity, core strengthening
- Activities as tolerated (if there are signs of bony healing)
 - Independent home exercise program
 - o Return to sport
 - Work hardening

More info: twincitiesshoulderandelbow.com/clavicle-shoulder-elbow-specialist-minneapolis-saint-paul.html







Rib Fracture / Chest Wall – ORIF

Three times per day home exercise program including:

Phase 1: Week 0-6

- Posture and periscapular isometrics
- Incentive spirometry every hour
- Preference for upright or seated posture as able
- Should ambulate at least TID
- Weight bearing as tolerated for transfers and mobilization
 - No lifting > weight of coffee cup overhead
 - Avoid excessive bending and twisting

Phase 2: Week 6-12 weeks

- Add upper extremity and core conditioning
- Lift no more than 5# overhead

Phase 3: 12-18 weeks

- Activities as tolerated without restrictions
 - o Independent home exercise program
 - o Return to sport
 - Work hardening

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Scapula Body Fracture – Non-operative

Three times per day home exercise program including:

Phase 1: Week 0-2

- Maintain sling use (except for TID elbow wrist finger ROM, hygiene)
 - Elbow should be supported
- No lifting > weight of coffee cup
 - No active shoulder ROM
- Begin TID HEP for elbow wrist finger ROM

Phase 2: Week 2-6

- Use sling except with hygiene and therapy
- Continue elbow, wrist and finger motion
- Begin Formal PT AND Three time daily (TID) home exercise program (HEP)
 - Shoulder 4 quadrant PROM, AAROM
 - Pulleys, table slides, supine wand exercises in all planes
- No lifting > weight of coffee cup

Phase 3: Week 6-12 weeks (following clinical fracture healing)

- Wean from sling
- Add shoulder AROM, continue PROM, AAROM
- Rhomboid and periscapular isometrics, posture exercises
- Phase I and II cuff strengthening when ROM is full and painless and fracture is healed
- Periscapular, complete extremity, core strengthening
- Activities as tolerated (if there are signs of bony healing)
 - Independent home exercise program
 - Return to sport
 - Work hardening

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Scapula Body Fracture – ORIF

Three times per day home exercise program including:

Phase 1: Week 0-6

- Sling as needed for comfort
- No lifting > weight of coffee cup
- Begin formal PT and TID HEP
 - Elbow wrist finger ROM
 - Shoulder 4 quadrant PROM, AAROM
 - Pulleys, table slides, supine wand exercises in all planes

Phase 2: Week 6-12 weeks

- Wean from sling
- Add shoulder AROM, continue PROM, AAROM
- Rhomboid and periscapular isometrics, posture exercises
- Phase I cuff strengthening when ROM is full and painless and fracture is healed
- Periscapular, complete extremity, core strengthening
- Lift no more than 5# overhead

Phase 3: 12-18 weeks

- Phase 2 cuff strengthening
- Activities as tolerated without restrictions
 - o Independent home exercise program
 - Return to sport
 - Work hardening

More info: twincitiesshoulderandelbow.com/scapula-fractures-shoulder-elbow-specialist-minneapolis-saint-paul.html







Humeral Shaft Fracture – Non-Operative

Three times per day home exercise program including:

Phase 1: Week 0-2 (to start immediately after initiation of Sarmiento bracing)

- No lifting > weight of coffee cup
- Upright posture at all times, maintain sling use or collar and cuff as needed
 Elbow should be unsupported as much as possible
- Swelling control (with stocking)
- TID HEP: elbow, wrist, finger A/AAROM. No shoulder ROM

Phase 2: Week 2-6

- No lifting > weight of coffee cup
- Wean from sling to allow gravity to align the arm (OK for collar and cuff), continue upright posture
- BID tightening of fracture brace
- daily hygiene and skin checks in pendulum position
- Continue TID HEP: A/AAROM elbow, wrist and finger motion, biceps isometrics
- Start shoulder periscapular isometrics / shoulder posture
 - No shoulder ROM other than pendulums for hygiene

Phase 3: Week 6-12 weeks (following clinical fracture healing)

- No lifting > 5# at the side, or coffee cup overhead
- Add TID HEP shoulder 4 quadrant AAROM as tolerated with brace on
 - Pulleys, table slides, wall climbs, supine wand exercises in all planes

Phase 4: Appx Week 10-14 weeks (following clinical fracture healing)

- Add shoulder AROM, PROM as tolerated
- Generalized UE strengthening
- Activities as tolerated (if bony healing complete)
 - Independent home exercise program
 - o Return to sport
 - Work hardening

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Humeral Shaft Fracture – ORIF

Three times per day home exercise program including:

Phase 1: Week 0-6

- Sling as needed for comfort, wean as able
- Elbow, wrist, finger A/AA/PROM
- Shoulder 4-quadrant AAROM
 - o OK for wall climbs, table slides, pulleys, supine wand exercises all planes
- Rhomboid and periscapular isometrics, posture exercises
- Weight bear as tolerated for ambulation
 - No lifting > coffee cup overhead

Phase 2: Week 6-12 weeks (following clinical fracture healing)

- Discontinue sling altogether
- Phase I and II cuff strengthening as tolerated
- Periscapular, complete extremity, core strengthening
- No lifting >5# overhead

Phase 3: Week 12-16

- Activities as tolerated
 - o Independent home exercise program
 - Return to sport
 - Work hardening

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Distal Humerus Fracture – ORIF

Three times per day home exercise program:

Goal: Avoid fracture displacement but obtain max ROM by 3 months post-operatively Phase 1: Week 0-6

Sling as needed for comfort

- Edema control:
 - Compressive stocking
 - Elevate above heart on pillows while supine
- TID finger, wrist, forearm pronation / supination A/AA/PROM
- TID elbow motion
 - o If olecranon osteotomy: A/AAROM flexion, P/AAROM gravity assisted extension
 - o If NO olecranon osteotomy: Active, Active assist, gentle PROM flexion and extension
- Avoid varus force at the elbow
 - Keep elbow tucked at the side for all activities
 - \circ $\;$ Avoid holding the elbow out and away from the body (abduction at the shoulder)
- Rhomboid and periscapular isometrics, posture exercises, pendulum hangs
- No lifting > coffee cup

Phase 2: Week 6-12 weeks

- Discontinue sling altogether
- Advance to more aggressive elbow AAROM, PROM static progressive stretches (no restrictions)
 Static progressive splinting if needed
 - Add 4 guadrant shoulder A/AA/PROM as tolerated
- No lifting >5# at the side or >coffee cup overhead

Phase 3: Week 12-24 weeks

- Activities as tolerated (if clinical fracture healing)
 - $\circ \quad \text{Independent home exercise program}$
 - Return to sport
 - \circ Work hardening

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Olecranon Fracture – ORIF

Three times per day home exercise program:

Goal: Avoid fracture displacement but obtain max ROM by 3 months post-operatively

Phase 1: Week 0-6

- Sling as needed for comfort
- Edema control:
 - Compressive stocking
 - Elevate above heart on pillows while supine
- TID finger, wrist, forearm pronation / supination A/AA/PROM
- TID elbow motion
 - A/AAROM elbow flexion, P/AAROM gravity assisted elbow extension
- Rhomboid and periscapular isometrics, posture exercises, pendulum hangs
- No lifting > coffee cup
- No elbow extension against resistance (pushing)

Phase 2: Week 6-12 weeks

- Discontinue sling altogether
- Advance to more aggressive elbow A/AA/PROM
- Add 4 quadrant shoulder A/AA/PROM as needed
- No lifting >5# at the side or >coffee cup overhead

Phase 3: Week 12-16 weeks

- Activities as tolerated
 - Independent home exercise program
 - o Return to sport
 - Work hardening

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Terrible Triad Fracture Dislocation – ORIF

Three times per day home exercise program:

Goal: obtain full motion while protecting the lateral elbow ligament while it heals

Phase 1: Week 0-6

- Sling x 6 weeks except for hygiene and TID elbow wrist and finger ROM
 - Post-operative splint with forearm in supination x 1-2 weeks
 - Followed by OT custom night splint (90°flexion, 60° supination)
- Edema control:
 - OT or clinic provided compressive stocking
 - Elevate above heart on pillows while supine
- TID finger, wrist ROM
- TID elbow A/AA/gentle PROM with the elbow tucked at the side:
 - o Flexion
 - Extension (with the forearm in pronation)
 - Pronation / Supination with the elbow flexed to 90°
 - Rhomboid and periscapular isometrics, posture exercises, pendulum hangs
- Precautions
 - o Avoid varus force at the elbow
 - Keep elbow tucked at the side of the body for all activities
 - Avoid holding the elbow out and away from the body (active abduction or FF at the shoulder)
 - No lifting > coffee cup

Phase 2: Week 6-12 weeks

- Wean from sling and night splint
- Add 4 quadrant shoulder A/AA/PROM as needed
- Advance aggression on TID elbow wrist finger A/AA/PROM
 - Static progressive splinting OK if needed
- Continue above precautions

Phase 3: Week 12-16 weeks

- Activities as tolerated (if ROM adequate and healed)
 - Independent home exercise program
 - o Return to sport
 - Work hardening

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Elbow Dislocation – Operative and Non-op

Three times per day home exercise program: Goal: obtain full motion while protecting the elbow ligaments while they heal

Phase 1: Week 0-6

- Splint for 0-2 weeks
- Sling x 6 weeks as needed except for hygiene and TID elbow wrist and finger ROM
- Edema control:
 - OT or clinic provided compressive stocking
 - Elevate above heart on pillows while supine
- TID finger, wrist, forearm elbow A/AAROM with the elbow tucked at the side:
 - Elbow Flexion
 - Extension (with the forearm in pronation)
 - \circ $\,$ $\,$ Pronation / Supination with the elbow flexed to 90° $\,$
- Rhomboid and periscapular isometrics, posture exercises, pendulum hangs
- Biceps and Triceps isometrics with the elbow at 90° flexion
- Precautions
 - Avoid varus force at the elbow
 - Keep elbow tucked at the side of the body for all activities
 - Avoid holding the elbow out and away from the body (active abduction or FF at the shoulder)
 - No lifting > coffee cup

Phase 2: Week 6-12 weeks

- Wean from sling entirely
- Add 4 quadrant shoulder A/AA/PROM as needed
- Add elbow and forearm PROM
 - Static progressive splinting OK if needed
 - Add wrist, forearm and elbow gentle strengthening
- Continue above precautions (especially avoiding varus at the elbow)

Phase 3: Week 12-16 weeks

- Activities as tolerated (if ROM adequate and healed)
 - $\circ \quad \text{Independent home exercise program}$
 - o Return to sport
 - \circ Work hardening

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Lateral Ulnar Collateral Ligament (LUCL) - Reconstruction or Repair

Three times per day home exercise program:

Goal: obtain full motion while protecting the elbow ligaments while they heal

Phase 1: Week 0-6

- Splint for 0-2 weeks
- Sling x 6 weeks as needed except for hygiene and TID elbow wrist and finger ROM
- Edema control:
 - OT or clinic provided compressive stocking
 - Elevate above heart on pillows while supine
- TID finger, wrist, forearm elbow A/AAROM with the elbow tucked at the side:
 - Elbow Flexion
 - Extension (with the forearm in pronation)
 - \circ $\,$ Pronation / Supination with the elbow flexed to 90° $\,$
- Rhomboid and periscapular isometrics, posture exercises, pendulum hangs
- Biceps and Triceps isometrics with the elbow at 90° flexion
- Precautions
 - Avoid varus force at the elbow
 - Keep elbow tucked at the side of the body for all activities
 - Avoid holding the elbow out and away from the body (active abduction or FF at the shoulder)
 - No lifting > coffee cup

Phase 2: Week 6-12 weeks

- Wean from sling entirely
- Add 4 quadrant shoulder A/AA/PROM as needed
- Add elbow and forearm PROM
- Add wrist, forearm and elbow gentle strengthening
- Continue above precautions (especially avoiding varus at the elbow)

Phase 3: Week 12-16 weeks

- Activities as tolerated (if ROM adequate and healed)
 - Independent home exercise program
 - o Return to sport
 - Work hardening

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Ulnar Collateral Ligament (UCL) - Tommy John Reconstruction

Three times per day home exercise program:

Goals:

- 1) Obtain ROM while protecting repair
- 2) Wrist and forearm strengthening
- 3) Return to competitive sport

Phase 1: Week 0-6

- Splint for 0-2 weeks
- Sling x 6 weeks as needed except for hygiene and TID elbow wrist and finger ROM
- Edema control:
 - OT or clinic provided compressive stocking
 - Elevate above heart on pillows while supine
- TID finger, wrist, forearm elbow A/AAROM
- Rhomboid and periscapular isometrics, posture exercises, pendulum hangs
- Biceps and Triceps isometrics with the elbow at 90° flexion
- Precautions
 - Avoid functional valgus (no pushing or throwing)
 - No lifting > coffee cup

Phase 2: Week 6-12 weeks

- Add 4 quadrant shoulder A/AA/PROM as needed
- Add elbow and forearm PROM
- Add wrist, forearm and elbow gentle strengthening
 - o Include flexor pronators
- Precautions
 - Avoid functional valgus (no pushing or throwing)
 - No lifting > 5#

Phase 3: Week 12-16 weeks

- Progressive unrestricted strengthening
- Core conditioning
- Initiate return to sport / throwing program at 4 mo post-op
 - Goal return to competition at 10 months

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Monteggia Fracture Dislocation-ORIF

Three times per day home exercise program:

Goal: Avoid fracture displacement but obtain max ROM by 3 months post-operatively

Phase 1: Week 0-6

- Sling as needed for comfort
- Edema control:
 - Compressive stocking
 - Elevate above heart on pillows while supine
 - TID finger, wrist ROM
- TID elbow motion
 - A/AAROM elbow flexion
 - P/AAROM gravity assisted elbow extension with the forearm in pronation
 - Pronation / Supination with the elbow flexed to 90°
- Rhomboid and periscapular isometrics, posture exercises, pendulum hangs
- Precautions
 - \circ $\;$ Avoid varus force at the elbow
 - Keep elbow tucked at the side of the body for all activities
 - Avoid holding the elbow out and away from the body (active abduction or FF at the shoulder)
 - No lifting > coffee cup, No pushing against resistance

Phase 2: Week 6-12 weeks

- Discontinue sling altogether
- Advance aggression on TID elbow wrist finger A/AA/PROM
 - Static progressive splinting OK if needed
- Add 4 quadrant shoulder A/AA/PROM as needed
- Continue above precautions

Phase 3: Week 12-16 weeks

- Activities as tolerated (if ROM adequate and healed)
 - Independent home exercise program
 - Return to sport
 - Work hardening

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Elbow Release (Arthroscopic or Open)

Three times per day home exercise program:

Phase 1: 0-12 weeks

- Sling as needed for comfort
- Edema control:
 - Compressive stocking
 - Elevate above heart on pillows while supine
- Finger, wrist, forearm, elbow unrestricted A/AA/PROM
 - OK for static progressive splinting as indicated
- Precautions
 - Weight bearing as tolerated

Phase 2: 12-18 weeks

- Activities as tolerated (if ROM adequate and pain free)
 - \circ $\;$ Independent home exercise program, unrestricted strengthening
 - o Return to sport
 - Work hardening

More info:

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Lateral Epicondylitis (Tennis Elbow) – Non-Operative

Three times per day home exercise program:

Goals:

- 1) Strengthen your wrist and forearm flexors and extensors
- 2) Decrease lateral elbow inflammation for a focused period of times
- 3) Protect the wrist during heavy activities

Phase 1: 0-12 weeks

- Generalized flexor-pronator, mobile wad, wrist stretching and strengthening
 - Use a hammer or similar object
- Eval and treat with additional modalities as indicated
 - OK for Iontophoresis, dry needling, acupuncture, desensitization
- Precautions would include avoiding heavy lifting (more than 5 pounds repetitive)
 - Especially avoid heavy resisted wrist extension and supination
 - Use wrist brace
 - Most of the day while active
 - Especially during any high demand activities
 - Remove for hygiene, therapy, sleep
- Couple this period of treatment with an anti-inflammatory protocol if medically tolerable:
 - Scheduled ibuprofen (600mg TID) if not contraindicated
 - Ice massage for 30 minutes 3 times per day over the lateral epicondyle
 - Nitroglycerine patches daily to the lateral epicondyle if prescribed

Phase 2: 12-24 weeks

- Wean from wrist brace except for when lifting >5#
- Generalized UE strengthening
- Activities as tolerated (if ROM adequate and pain free)
 - o Independent home exercise program
 - Return to sport
 - Work hardening
- Return to Dr. Myeroff for consideration of PRP injection, TENEX or surgery if still symptomatic

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Lateral Epicondylitis (Tennis Elbow) – Operative

Three times per day home exercise program:

Goals:

- 1) Strengthen your wrist and forearm flexors and extensors
- 2) Decrease lateral elbow inflammation for a focused period of times
- 3) Protect the wrist during heavy activities

Phase 1: 0-6 weeks

- Gentle flexor-pronator, mobile wad, wrist stretching
- Precautions
 - No lifting >coffee cup
 - NO resisted wrist extension and supination
 - o Use wrist brace full time except for hygiene exercises ROM exercises
- Starting at 2 weeks Ice massage for 30 minutes 3 times per day over the lateral epicondyle

Phase 2: 6-12 weeks

- Wean from wrist brace except for work and household activities
- Generalized flexor-pronator, mobile wad, wrist stretching and strengthening
 - Use a hammer or similar object
- Eval and treat with additional modalities as indicated
 - OK for Iontophoresis, dry needling, acupuncture, desensitization
- Precautions
 - No lifting >5#
 - NO resisted wrist extension and supination >2#
 - \circ Wean from wrist brace
 - Except for work and household activities
 - Remove for hygiene, ROM exercises, sleep

Phase 2: 12-18 weeks

- Activities as tolerated (if ROM adequate and pain free)
 - o Independent home exercise program, unrestricted strengthening
 - Return to sport
 - Work hardening

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Medial Epicondylitis (Golfer's Elbow) – Non-Operative

Three times per day home exercise program:

Goals:

- 1) Strengthen your wrist and forearm flexors and extensors
- 2) Decrease medial elbow inflammation for a focused period of times
- 3) Protect the wrist during heavy activities

Phase 1: 0-12 weeks

- Generalized flexor-pronator, mobile wad, wrist stretching and strengthening
 - Use a hammer or similar object
- Eval and treat with additional modalities as indicated
 - OK for Iontophoresis, dry needling, acupuncture, desensitization
- Precautions would include avoiding heavy lifting (more than 5 pounds repetitive)
 - o Especially avoid heavy resisted wrist flexion and pronation
 - Use wrist brace
 - Most of the day while active
 - Especially during any high demand activities
 - Remove for hygiene, therapy, sleep
- Couple this period of treatment with an anti-inflammatory protocol if medically tolerable:
 - Scheduled ibuprofen (600mg TID) if not contraindicated
 - Ice massage for 30 minutes 3 times per day over the lateral epicondyle
 - Nitroglycerine patches daily to the lateral epicondyle if prescribed

Phase 2: 12-24 weeks

- Wean from wrist brace except for when lifting >5#
- Generalized UE strengthening
- Activities as tolerated (if ROM adequate and pain free)
 - o Independent home exercise program
 - Return to sport
 - Work hardening
- Return to Dr. Myeroff for consideration of PRP injection, TENEX or surgery if still symptomatic

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Medial Epicondylitis (Golfer's Elbow) – Operative

Three times per day home exercise program:

Goals:

- 1) Strengthen your wrist and forearm flexors and extensors
- 2) Decrease lateral elbow inflammation for a focused period of times
- 3) Protect the wrist during heavy activities

Phase 1: 0-6 weeks

- Gentle flexor-pronator, mobile wad, wrist stretching
- Precautions
 - No lifting >coffee cup
 - NO resisted wrist flexion or pronation
 - \circ ~ Use wrist brace full time except for hygiene exercises ROM exercises
- Starting at 2 weeks Ice massage for 30 minutes 3 times per day over the lateral epicondyle

Phase 2: 6-12 weeks

- Wean from wrist brace except for work and household activities
- Generalized flexor-pronator, mobile wad, wrist stretching and strengthening
 - Use a hammer or similar object
- Eval and treat with additional modalities as indicated
 - OK for Iontophoresis, dry needling, acupuncture, desensitization
- Precautions
 - No lifting >5#
 - NO resisted wrist flexion or pronation >2#
 - \circ $\,$ Wean from wrist brace
 - Except for work and household activities
 - Remove for hygiene, ROM exercises, sleep

Phase 2: 12-18 weeks

- Activities as tolerated (if ROM adequate and pain free)
 - o Independent home exercise program, unrestricted strengthening
 - Return to sport
 - Work hardening

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Distal Biceps Repair

Phase 1: 0-12 weeks

- Finger, wrist, forearm, elbow A/AA/PROM
- Precautions
 - No lifting >coffee cup
 - NO resisted elbow flexion or supination

Phase 2: 12-18 weeks

- Gentle biceps and triceps strengthening
 - o Use a hammer or similar object
- Activities as tolerated (if ROM adequate and pain free)
 - o Independent home exercise program, unrestricted strengthening
 - o Return to sport
 - Work hardening

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Forearm Fracture – ORIF

Three times per day home exercise program:

Phase 1: Week 0-6

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- Sling as needed for comfort x 2 weeks, then wean from sling
- Edema control:
 - Compressive stocking
 - Elevate above heart on pillows while supine
 - TID finger, wrist, forearm, elbow pronation / supination A/AA/PROM
 - Consider OT provided removable night splint in 60° supination
- Rhomboid and periscapular isometrics, posture exercises, pendulum hangs
- No lifting > 5#, no pushing or pulling against resistance

Phase 2: Week 6-12 weeks

- Advance to more aggressive elbow A/AA/PROM
- Add 4 quadrant shoulder A/AA/PROM as needed
- No lifting >10#

Phase 3: Week 12-16 weeks

- Activities as tolerated
 - Independent home exercise program
 - o Return to sport
 - Work hardening

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Distal Radius Fracture – Non-op

Three times per day home exercise program:

Phase 1: Week 0-6

- Sling as needed for comfort
- Edema control:
 - Elevate above heart on pillows while supine
- TID finger, elbow A/AA/PROM
- Rhomboid and periscapular isometrics, posture exercises, pendulum hangs
- Modalities as indicated
- No lifting > coffee cup

Phase 2: Week 6-12 weeks

- Removable wrist brace to be worn as needed
 - Remove for TID therapy and hygiene
- Advance to A/AA/PROM fingers, wrist, forearm and elbow
- Gradual strengthening, putty, isometrics
- Add desensitizing, mirror therapy, dexterity exercises as needed
 - Modalities as indicated
- Add 4 quadrant shoulder A/AA/PROM as needed
- No lifting >5#

Phase 3: Week 12-16 weeks

- Activities as tolerated
 - Independent home exercise program
 - o Return to sport
 - Work hardening

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Distal Radius Fracture – ORIF

Three times per day home exercise program:

Phase 1: Week 0-6

- Sling as needed for comfort
 - Removable splint x 6 weeks except for TID HEP and hygiene
- Edema control:
 - Elevate above heart on pillows while supine
- TID A/AA/PROM fingers, elbow
- TID A/AAROM wrist and forearm
- Rhomboid and periscapular isometrics, posture exercises, pendulum hangs, shoulder ROM
- Gentle scar massage, silicone pads
- Modalities as indicated
- No lifting > coffee cup

Phase 2: Week 6-12 weeks

- Wean from brace
- Advance to PROM wrist and forearm
- Gradual strengthening, putty, isometrics
- Continue scar massage, silicone pads
- Add desensitizing, mirror therapy, dexterity exercises as needed
 - o Modalities as indicated
- No lifting >5#

Phase 3: Week 12-16 weeks

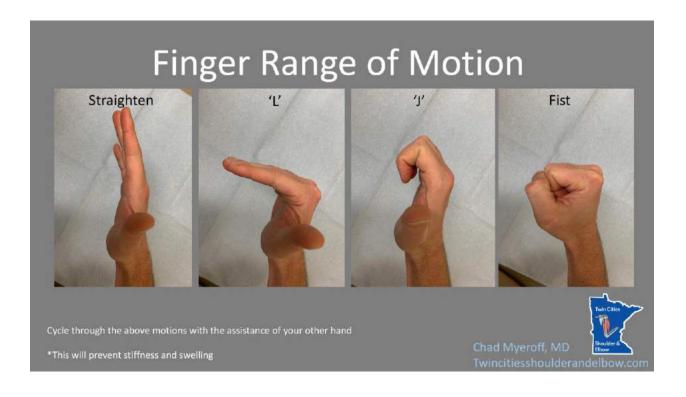
- Activities as tolerated
 - Independent home exercise program
 - o Return to sport
 - Work hardening
- More info: twincitiesshoulderandelbow.com/distal-radius-fractures-shoulder-elbow-specialistminneapolis-saint-paul.html







Finger Range of Motion Diagram



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Elbow Elevation Technique Diagram







2. Place one pillow doubled over next to your injured shoulder to keep your upper arm from dropping down

3. Place another pillow doubled over on your chest to support your forearm

*It helps to have your sling on

*You should be in this position most of the day for the first 1-2 weeks *This is the only reliable way to elevate your elbow above your heart Chad Myeroff, MD

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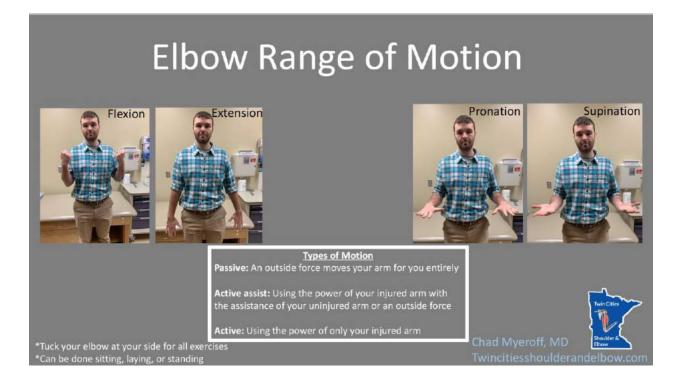
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Standard Elbow Range of Motion Diagram



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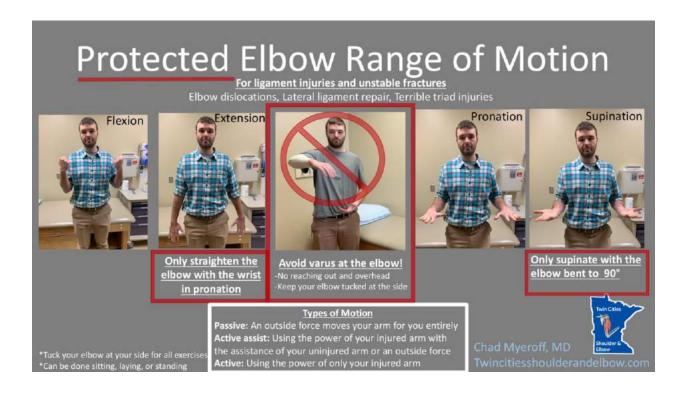
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LUCL Protection Elbow Range of Motion Diagram



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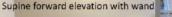






Shoulder Range of Motion Diagram

Shoulder Range of Motion















Rhomboid Isometrics and Posture Squeeze your shoulder blades together as if pinching a towel between them Types of Motion Passive: An outside force moves your arm for you entirely *relax the shoulder like a wet noodle

Active assist: Using the power of your injured arm with the assistance of your uninjured arm or an outside force

Active: Using the power of only your injured arm

Chad Myeroff, MD

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