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Reverse Total Shoulder Arthroplasty

**Adjunctive exercises

Phase I (Protective Phase)

- Goals: Maintain stable prosthesis
Minimize pain and inflammatory response
Achieve staged ROM goals
Establish stable scapula
Initiate pain free rotator cuff and deltoid strengthening

Days 1 to 3

- i. Elbow, wrist and hand AROM (EWH)
- ii. Supine passive forward elevation in plane of scapula (PFE) to 90
 1. 10-20 reps, 2 x day
 2. Supine PFE by family member or using opposite arm
- iii. Supine passive external rotation (PE) to neutral
 1. T-stick in 20° flexion and 20° abduction
 2. 5-10 reps, 2x day
- iv. Codman's pendulum exercises
- v. C-spine AROM
- vi. Ice
- vii. Positioning full time in sling
- viii. Cautions:
 1. Assure normal neurovascular status
 2. No lifting of involved arm
 3. Shoulder extension is limited. Elbow not to go behind midline of body

Weeks 1 to 2

- i. Continue EWH
- ii. Shoulder shrugs and retractions (no weight)
- iii. Continue PFE. Progress to full as tolerated**
- iv. Continue T-bar PER at 20° abduction
 1. Limit ER to 30 degrees if subscapularis repair performed
- v. Isometrics, keeping elbow flexed to 90° (sub maximal, pain free)
- vi. **Manual scapula strengthening
- vii. **Pain control modalities PRN / Polar Care
- viii. Complications/Cautions:
 1. If pain level is not dissipating, decrease intensity and volume of exercises
 2. Continue to limit shoulder extension past midline of body

Weeks 2 to 6

- i. Heat/Ice PRN to help obtain motion
- ii. **D/C sling at week 4**
 1. Week 6 if subscapularis repair performed
- iii. **Progress passive and AAROM ER exercises to full after week 3**
- iv. **Start AROM at week 4**
- v. Theraband scapula retractions
- vi. Progressive serratus anterior strengthening (isolated)
- vii. AAFE
- viii. Continue isometric abduction
- ix. **Pain control modalities PRN
- x. **Aquatics AAROM→ AROM
- xi. **Trunk stabilization/strengthening
- xii. Cautions:
 1. Do not initiate dynamic rotator cuff strengthening
 2. Assure normal scapulohumeral rhythm with AAFE

Phase II (Progressive Strengthening)

- Goals: Maintain stability of prosthesis
Achieve staged ROM goals
Eliminate shoulder pain
Improve strength, endurance and power

Weeks 6 to 9

- i. Theraband ER strengthening (pain free, elbow by side)
 1. Week 7 or after
 2. Very light with high repetitions.
 3. Continue self stretching all planes to obtain PROM WFL
- ii. Advance scapula strengthening
- iii. AFE as tolerated to full
- iv. **Mobilizations PRN
- v. **Aquatics** AROM
- vi. **Trunk stabilization/strengthening
- vii. Cautions:
 1. Strengthening program should progress only without signs of increasing inflammation
 2. Strengthening program should emphasize high repetitions, very light resistance and should be performed a maximum of 2 x day

Weeks 9 to 12

- i. Continue stretches PRN for PROM WFL
- ii. Advance theraband strengthening of cuff and scapula below shoulder level
- iii. Initiate isotonic dumbbell exercises for deltoid, supraspinatus
 1. Up to 2 lbs max (once nearly full AFE achieved)
- iv. **Mobilizations PRN
- v. **Trunk stabilization/strengthening

Phase III (Return to activity/Advanced conditioning)

Goals: Maintain stability of prosthesis
Normalize strength, endurance and power for age
Return to full ADL's and recreational activities

Months 3 to 6

- i. Light PFN or manual resistance for cuff/deltoid/scapula
(rhythmic stabilization or slow reversal hold) in pain free and comfortable range
- ii. Stretching PRN
- iii. Continue deltoid/cuff/scapula strengthening. Avoid overuse of deltoid.

Discharge/Return to sport criteria

1. PROM WFL for ADL's/work/sports
2. MMT 5/5 shoulder girdle
3. Successful return to functional activities