Reverse Total Shoulder Replacement

- **6-10 Visits over 4 months**
- Reverse Total Shoulder Replacements are especially susceptible to dislocation during internal rotation, glenohumeral extension, and during an axial load on humerus (such as when pushing oneself up out of bed, pushing up out of a chair with hand behind body, and during extreme external rotation). Care must be taken to avoid such positions.
- Patients who have had a Reverse Total Shoulder Replacement are considered rotator cuff deficient
- Emphasis will eventually be on an AAROM and a high repetition, low weight free weight program
- Address scapular mal-positioning if indicated
- Minimal to no pain during or after exercises, although fatigue is OK
- **No passive ROM (PROM) or pulleys unless specifically indicated by the physician**

**Subscapularis Repair Precautions:**
- No active IR or glenohumeral extension beyond midaxillary line for 6 weeks; no resisted IR until 12 weeks post-op.
- ER at 0° or less until 4 weeks post-op., 20° or less until 8 weeks post-op., and near symmetric by 4 months post-op.; no ER in abduction beyond neutral for 6 weeks post-op.

**Biceps Tenodesis Precautions:**
- No active elbow flexion or supination against resistance for 4 weeks

**Modalities:**
A. Ice following exercises
B. No phonophoresis/iontophoresis
C. No ultrasound
D. Transfrictional massage for tendonitis (only if indicated by physician)
E. Soft-tissue techniques (only if indicated by physician)

**Stage I (0-6 weeks)**
No physical therapy initiated until 5 weeks post-operatively

A sling is to be worn for 6 weeks, and should not be removed except for elbow ROM exercises.
There should be absolutely no shoulder activity for 4 weeks except tabletop activities in neutral.

I. Stretching:
   Active elbow, wrist, and hand ROM 3-4 times per day
   Begin Codman’s exercises at 2 weeks post-operatively

II. Goals:
    Protect replacement during the early phase of healing

Initiate formal physical therapy at the 5 weeks post-operatively
Discontinue wearing sling at 6 weeks unless otherwise indicated

I. Stretching:
   Codman’s 4-5 times per day for 5 minutes
   AAROM (wand exercises) except ER – No ER until 6 weeks

II. Scapular stabilization exercise #1

III. Goals:
    Continue to protect replacement during the early phase of healing,
    initiate Codman exercises and AAROM exercises

**Stage II (weeks 7-12)**
Focus on all 3 heads of deltoid

I. Stretching/ ROM:
   Codman’s (pendulum) exercises
   AAROM (wand exercises) with ER to 30° max.

II. Strengthening:
   Isometrics
   Supine program (exercises #1-6) – progress to vertical against gravity

III. Scapular stabilization exercises #1-7

IV. Goals:
    Progress with AAROM as indicated and initiate strengthening program

**Stage III (weeks 12+)**
Discontinue isometrics

I. Stretching:
   A. Codman’s to warm up
II. Strengthening:
   Isotonic strengthening exercises #1-8 as tolerated
   1. Perform with free weights only (No theraband - except IR #6)
      a. Repetitions – 20-50 reps before adding/progressing in weight
      b. Start against gravity without weight; progress as tolerated to:
         - 2 oz. (dinner knife)
         - 4 oz. (tuna can)
         - 8 oz. (soup can)
         - 1 lb. weight
         - 2 lbs. weight, etc.

III. General Information:
   A. Isotonic strengthening exercises should be encouraged 1-2x/week for 3-6 months
   B. Functional lifting restriction is 20# for lifetime

IV. Goals:
   Resume functional activities as allowed by the physician

This protocol provides you with general guidelines for the rehabilitation of the patient with a reverse total shoulder replacement. Specific changes in the program will be made by the physician as appropriate for an individual patient.
PENDULUM EXERCISES (CODMAN’S)

1. **Pendulum Exercises**

Bend forward at the waist, (back parallel to ground is ideal). Allow involved arm to hang down, perpendicular to the floor. Keep arm and shoulder muscles relaxed. Move arm slowly, increasing the arc as tolerated. This technique should cause only minimal pain.

Perform _______ repetitions _______ times per day.

1. Front to back
2. Side to side
3. Clockwise circles
WAND EXERCISES (AAROM)

1. Pendulum Exercises

Bend forward at the waist, (back parallel to ground is ideal). Keep arm and shoulder muscles relaxed. Move arm slowly, increasing the arc as tolerated. This technique should cause minimal pain.

Motions: Front to Back, Side to Side, Clockwise Circles, Counterclockwise Circles

Perform _____ repetitions _____ times per day.

2. Flexion in Supine

Slowly raise arm overhead, keeping elbows straight.

Hold _____ seconds.

Perform _____ repetitions _____ times per day.
WAND EXERCISES (AAROM)

3. Flexion In Standing

Keep elbow straight throughout each repetition. Slowly push affected arm up. Hold _____ seconds.

Perform _____ repetitions _____ times per day.

4. Extension

Keep elbow straight throughout each repetition. Slowly push affected arm back. Hold _____ seconds.

Perform _____ repetitions _____ times per day.
WAND EXERCISES (AAROM)

5. Abduction

Keep elbow straight.
Slowly push affected arm up.

____ leading with thumb

or ____ palm facing down.
**Hold _____ seconds.**
**Perform _____ repetitions**
_____ times per day.

6. Internal Rotation

Hold wand behind you.
Slowly raise hands up then slowly return to starting position.

**Hold _____ seconds.**
**Perform _____ repetitions**
_____ times per day.
WAND EXERCISES (AAROM)

7. External Rotation
Place towel roll under elbow.
Keep elbow bent 90°.
Slowly push hand toward floor.

Hold ____ seconds.

Perform ____ repetitions
_____ times per day.
8. **Adduction**

Holding on to the end of the wand with the right hand, right elbow slightly flexed, left hand is on the mid shaft on the wand and pulls right shoulder across the body (for exercising an involved right shoulder, reverse hands for an involved left shoulder).

Hold ____ seconds.

Perform _____ repetitions _____ times per day.
SUPINE ROTATOR CUFF PROGRAM

These exercises are intended for the initial strengthening of acute shoulder problems, and/or long-term rehabilitation for massive rotator cuff tears and other conditions resulting in long-term severe weakness. All of the exercises should be performed with slow and controlled motion. Stay within the pain-free arc of motion. Begin with 5-10 repetitions, advancing to 30 repetitions as able. Initially performed as active range of motion, you may add weight achieving 30 repetitions. The initial amount of weight to add is 4-6 oz. Normal fatigue signs are desirable, never an increase in symptoms.

For all “Reverse Codman” exercises use your uninvolved hand to assist your arm into a vertical position (pointing toward the ceiling).
SUPINE ROTATOR CUFF PROGRAM

1. Reverse Codman’s (Supine Elevation)

Lie on your back, use your uninvolved hand to assist your arm to a vertical position (your upper arm pointed to the ceiling). Actively move your arm over head, then toward your hip, keeping your elbow straight. Stay within the range (arc of motion) that is pain free and in control of your arm. Over time gradually increase to full range of motion. May use wand for assistance and have uninvolved arm guide the movement.

Perform _____ repetitions
_____ times per day.

2. Lateral Reverse Codman’s

Lie on your back, use your uninvolved hand to assist your arm to a vertical position (your upper arm pointed to the ceiling). Actively move your arm across your chest and then out to the side, keeping your elbow straight. Stay within the range (arc of motion) that is pain free and in control of your arm. Over time gradually increase to the full range of motion.

Perform _____ repetitions
_____ times per day.
3. **Circumduction Reverse Codmans**  

Lie on your back, use your uninvolved hand to assist your arm to a vertical position (you upper arm pointed towards ceiling). Actively rotate your arm clockwise, complete reps, then counterclockwise, keeping your elbow straight. Stay within the range (arc of motion) that is pain free and in control of your arm. Over time gradually increase circumduction range of motion.  

**Perform _____ repetitions _____ times per day.**

4. **Shoulder Flexion (bench press)**  

Lie on your back. Begin with your elbow at your side, as shown. Reach toward the ceiling, straightening your elbow as you reach (like a slow punch to the ceiling or bench press). You may use a wand for assistance and have the uninvolved hand guide the movement.  

**Perform _____ repetitions _____ times per day.**
5. Scapular Protraction (punch to ceiling)

Lie on your back. Use your uninvolved hand to assist your arm into a vertical position (your upper arm pointing toward the ceiling). Reach as far toward the ceiling as possible by moving your shoulder blade toward the ceiling. Then lower your shoulder blade back to the resting position, keeping your elbow of your affected arm straight the entire time.

Perform _____ repetitions _____ times per day.

6. Modified Abduction

Lying on uninvolved side, raise involved arm to approximately 60° away from the body while keeping your elbow straight, then slowly lower it back to its resting position.

Perform _____ repetitions _____ times per day.
SHOULDER ISOMETRICS

Hold ____ seconds.

Perform ____ repetitions _____ times per day.

1. Flexion
Press hand forward into wall.

2. Extension
Press hand backward into wall.

3. Abduction
Place towel inside arm.
Push elbow into wall.
SHOULDER ISOMETRICS

4. Adduction
Place towel inside arm.
Pull arm in toward body.

5. External Rotation
Place towel inside arm.
Press back of hand into wall.

6. Internal Rotation
Place towel inside arm.
Press palm of hand into wall.
1. Exercises should not be painful.
2. Perform exercises slowly.
3. Maintain the correct position.
4. Warm up prior to using weights – stretching and pendulum exercises as instructed.
5. Ice after exercise for 10-20 minutes.
6. Exercise 4 days a week.

Perform _____ repetitions.

1. **Flexion**

   Start with arm at side, thumb forward. Raise arm to shoulder level (parallel to ground). Lower slowly to starting position.

2. **Abduction**

   Start with arm midway between front and side of your body, thumb pointing up. Raise arm sideways to shoulder level in scapular plane. Lower slowly.
SHOULDER STRENGTHENING EXERCISES

3. **Abduction**

Start with arm midway between the front and side of your body, thumb down. Raise arm diagonally to 45° level and lower slowly to starting position.

4. **External Rotation**

Lie on uninvolved side. Place a towel roll under elbow. Keep elbow bent at 90° squeeze shoulder blades together. Raise hand away from stomach toward the ceiling. Lower slowly to starting position.

5. **External Rotation**

Keep elbow bent at 90°. Squeeze shoulder blades together. Raise hand up. Lower slowly to starting position.

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SHOULDER STRENGTHENING EXERCISES

6. **Internal Rotation with Theraband**

Place Theraband in door. Squeeze shoulder blades together. Pull hand toward stomach. Slowly return to starting position.

7. **Wall Push-Ups**

Perform standing push-ups against the wall. Progress to a counter top, then to the floor with knees bent and then floor with knees straight.

8. **Biceps Curls**

Raise hand toward shoulder with palm up. Lower slowly to starting position.
SCAPULAR STABILIZATION

General Guidelines
1. Exercises should not be painful.
2. Perform exercises slowly.
3. Maintain the correct position.
4. Ice after exercise for _____ minutes.
5. Perform _____ times per day for _____ days per week.

1. **Scapular Retraction**

Pull shoulder blades together and down.

**Hold _____ seconds**

**Perform _____ repetitions.**

2. **Scapular Depression**

Place theraband over door, squeeze shoulder blades together while pulling your arm to your side. Slowly return to starting position.

**Perform _____ repetitions.**
3. **Extension**

Start with your arm hanging straight down with your thumb pointing down. Raise arm backwards and slowly return to starting position.

Perform _____ repetitions.

4. **Horizontal Abduction**

Start with your arm hanging straight down with your thumb pointing out, raise arm out to the side to shoulder level (parallel to ground) and then slowly return to starting position.

Perform _____ repetitions

5. **Proprioception (Countertop)**

Place your hands on a countertop. Slowly shift weight from one side to the other while keeping your shoulder blades flat to your back.

Perform _____ repetitions.
6. Proprioception (Wall)

Stand facing a wall. Keep your shoulder blades together and down and make circles with a ball in a clockwise direction. Repeat same number of reps in a counterclockwise direction.

Perform _____ repetitions.

7. Proprioception (Ball dribble)

Stand facing the wall. Keep your shoulder blades together and down and dribble to ball off of the wall. You may advance to dribbling the ball in shapes and patterns.

Perform_____ repetitions.

8. Wall Push-Ups

Perform standing push-ups against a wall. Progress to countertop, then floor with knees bent and then floor with knees straight.

Perform _____ repetitions.
9. Proprioception (Hands & Knees)

Get on your hands and knees. Keep your shoulder blades together and down and make circles with the platform in a clockwise direction. Repeat same number of reps in a counterclockwise direction.

Perform _____ repetitions.