70K

SHOULDER ARTHROPLASTY PROCEDURES HAVE MORE THAN DOUBLED IN THE LAST DECADE TO AS MANY AS 70K SURGERIES PERFORMED EACH YEAR IN THE US

PATIENTS WHO COULD BENEFIT FROM RTSA / TSA

- ADVANCED OSTEOARTHRITIS
- RHEUMATOID ARTHRITIS
- OSTEONECROSIS
- HUMERAL HEAD FRACTURES
- ROTATOR CUFF ARTHROPATHY

REVERSE TSA REPRESENTS A BIOMECHANICAL CHANGE IN APPROACH COMPARED TO AN ANATOMICAL SHOULDER ARTHROPLASTY

> *A reverse TSA is indicated for patients with rotator cuff massive / irreparable tears.*
>
> **BULLOCK, JOSPT**

THE AVERAGE NUMBER OF

PT VISITS

AFTER ARTHROPLASTY IS

15-25 VISITS

FACTORS THAT MAY AFFECT REHABILITATION

PREOPERATIVE SHOULDER STATUS

TYPE OF IMPLANT USED

GLENOID AND HUMERAL BONE QUALITY

INTEGRITY OF THE REMAINING ROTATOR CUFF

OVERALL COMPONENT STABILITY AT THE TIME OF THE RECONSTRUCTION

SHOULDER ARTHROPLASTY

PHYSICAL THERAPY PROTOCOL

At UAMS | Health and at Train · Recover · Move, our goal is to create an environment that is safe for the healing structures, exciting for the patient, and able to provide an open and transparent line of communication with the therapist. If you ever have any questions or concerns, please feel free to give us a call and we would be more than happy to discuss any concerns or questions you might have.

OUR PROTOCOL CAN BE DIVIDED INTO THREE DISTINCT AND SEPARATE PHASES:

PHASE 1	PHASE 2	PHASE 3
PROTECT	MOBILITY	STRENGTH
DAY 1 - WEEK 5	WEEK 6 - WEEK 12	WEEK 13 +

Before we dive into the details of the separate phases, we would love to take some time to answer some common questions our patients often ask considering this surgery and the rehabilitation process:

DO I REALLY NEED TO WEAR MY SLING?

- Based on the size and severity of your rotator cuff tear, you will be instructed to wear your sling for the first four to six weeks following your surgery. Unwanted movement early on can hinder tissue that can lead to an unstable shoulder.
- We encourage the patient to wear the sling at all times. There are componets on the sling that might seem bulky, but we need you to keep these foam cushions in the correct places for the entire four to six weeks unless notified by your surgeon.
- You may remove the sling only for the exercises that have been prescribed by your physical therapist, for using ice, and for dressing or showering.

WHEN DO I BEGIN PHYSICAL THERAPY?

- When physical therapy begins will depend on the type of arthroplasty that you receive and the size of the components.
- **The frequency and when a patient starts physical therapy can be adjusted by the surgeon.**

HOW OFTEN DO I NEED TO GO TO PHYSICAL THERAPY?

- The frequency of physical therapy will typically start at two - three times a week. This frequency can also be adjusted by your surgeon or your physical therapist's recommendations.
- Once strength training begins, the patient's frequency can be reduced to one or two times a week considering good home exercise compliance.

WHEN CAN I START STRENGTHENING?

- We do not recommend strength training until approximately week twelve after surgery.

WELL, WHEN DO I GET BACK TO SPORTS AND MY RECREATIONAL ACTIVITIES?

- Sports that demand high level use of the upper extremity (examples: baseball, volleyball, football, and tennis) will typically be asked to wait six months before returning to the sport or the recreational activity.
- Please seek permission from your surgeon and physical therapist before starting back to any sporting or recreational activity.

IS THERE ANYTHING I NEED TO AVOID AFTER SURGERY?

- We encourage any patient who smokes to avoid smoking after surgery for the first twelve weeks. Smoking can correlate with delayed and improper tissue healing.
- Avoid movements such as reaching up your back or moving your arm away from your body during the first four weeks. If you are at a computer, keep your elbow by your side at all times during the initial six weeks.
- No pushing, pulling, or lifting anything larger than a cup of coffee (approx, 1-2 pounds). Avoid pushing yourself up from a chair, bed, or from your car for the initial six weeks following your surgery.
- We do not want our patient to take any kind of anti-inflammatories (naproxen sodium, ibuprofen, or Aleve) for the first twelve weeks following surgery. In order to manage any pain, we encourage our patients to use their ice machine as needed.

I HAVE FRIENDS WHO HAVE HAD A SHOULDER REPLACEMENT, WILL MY EXPERIENCE BE LIKE THEIRS?

- There are several factors that are specific to the patient that will affect their recovery. Some of these factors can include the type of replacement, the surgical approach, the quality of the tissue, the quality of the remaining tissue, and the mechanism of failure. Each patient's recovery is very individualized. It will generally take approximately four to six months before we hear patients say they feel "back to normal." However, for other patients it might take up to one year before full recovery takes place.

PHASE 1 — PROTECT

DAY 1 - WEEK 5

XXX

GOALS

Protect surgical repair by avoiding unwanted strain to insertion site

Maintain elbow, hand, and wrist mobility

Improve neuromuscular activation that's been inhibited by edema and pain

Normalize scapular position and posture

Address cervical and thoracic posture and mobility

THINGS TO AVOID

There should be no active and aggressive internal rotation movement of the shoulder.

No pushing, pulling, or lifting anything larger than a cup of coffee (approx. 1-2 pounds). Avoid pushing yourself up from a chair, bed, or from your car.

While we encourage you to tease, touch, and nudge any pain you might experience, please don't push through the pain. Do not be aggressive with any passive mobility that might cause spasms or increased sharp pains in the shoulder.

WEEK 3

BEGIN PHYSICAL THERAPY 1X / WEEK

ADDRESS PORTAL SITE MOBILITY, DRAINAGE, EXCESSIVE REDNESS, OR DISCOLORATION

KEEP ANY MOTION IN SCAPULAR PLANE IN ORDER TO STAY IN OPEN PACKED POSITION

PATIENT POSITIONING IN SUPINE OR RECLINED

Avoid supine or prone positions

IF AQUATIC OPTION IS AVAILABLE, THIS CAN BE UTILIZED IF INCISION SITE IS COMPLETLEY HEALED

Scapular plane passive movement only to 90°

Avoid internal rotation

No external rotation greater than 30°

BEGIN HOME EXERCISE PROGRAM THAT IS TO BE COMPLETED 2-3 TIMES EACH DAY:

Pendulums

Elbow, hand, and wrist active mobility exercises. No weights

Submaximal and PAIN FREE isometrics

- Flexion, extension, abduction, adduction, and external rotation

Scapular squeezes, depression, and rolls

Passive scapular plane elevation to 90° with pulley apparatus

Ice and modalities as needed

- No motoric response with electrical stimulation

WEEK 4

CONTINUE TO MONITOR INCISION HEALING PROGRESSION

ASSESS PATIENT COMPLIANCE / UNDERSTANDING WITH HOME EXERCISE PROGRAM

PATIENT MAY NOW BE POSITIONED IN SUPINE POSITION IF TOLERATED

IF AQUATIC OPTION IS AVAILABLE:

Active assisted scapular plane elevation can be performed up to 90°

Active assisted external rotation at neutral can be performed up to 30°

No resistance

CONTINUE HOME EXERCISE PROGRAM:

Grade 1-2 joint mobilizations to reduce pain, guarding, and tone

PNF scapular movement patterns in side lying with elbow at neutral

Therapists guided passive mobility to 90° scapular elevation with grade 1-2 joint oscillations at end range

Continue isometrics

Cervical and seated thoracic mobilizations as needed and guided by clinical examination / history

Continue week three exercises for elbow, wrist, and hand mobility

Ice and modalities as needed

- No motoric response with electrical stimulation

WEEK 5

FINALIZE INCISION HEALING PROGRESSION

ASSESS PATIENT COMPLIANCE / UNDERSTANDING WITH HOME EXERCISE PROGRAM

PATIENT MAY NOW BE POSITIONED IN SALL POSITIONS (EXCEPT DIRECTLY ON INVOLVED SIDE) AS TOLERATED

ONLY IF AQUATIC OPTION IS AVAILABLE:

Active scapular plane elevation to 90° with no resistance can be added to progressions

CONTINUE HOME EXERCISE PROGRAM:

Active assisted range of motion exercises in gravity eliminated positions as tolerated

Scapular PNF movement patterns in varying positions

- Quadruped, side lying, standing, and seated
- No weight bearing on involved shoulder

Therapists guided passive mobility to 120° scapular elevation as tolerated by patient's pain response

Continue isometrics

Cervical and thoracic extension and rotation mobilizations as needed and guided by clinical exam / history

Continue elbow, wrist, and hand mobility exercises

Ice and modalities as needed

- No motoric response with electrical stimulation

PHASE 1 — PROTECT

SUMMARY

- **Begin physical therapy at week three if instructed by surgeon**
- **Incision healing monitoring and compliance with home exercise program**
- **Focus on preventing inhibition and scapular control early in healing process**
- **Improve patient awareness of cervical and thoracic joint posture**
- **Reduce postural musculature tone and desensitize incision site**

PHASE 2 — MOBILITY

WEEK 6 - WEEK 12

GOALS

Discharge sling

Protect surgical repair by avoiding unwanted strain to the replacement

Begin to restore full active and passive mobility in the shoulder girdle

No strengthening of shoulder (above 2lb) until week 12

THINGS TO AVOID

- **No pushing, pulling, or lifting anything larger than a cup of coffee (approx. 1-2 pounds). Avoid pushing yourself up from a chair, bed, or from your car.**
- **While we encourage you to tease, touch, and nudge any pain you might experience, please don't push through the pain. Don't perform any activity that requires more range of motion than you comfortably have during this phase.**
- **No movements that require excessive behind the back movements. Avoid jerky movements behind your back (putting wallet in pocket, putting belt on, or tucking in a shirt)**
- **We will NOT begin running during this phase**

THINGS TO BE DOING

- **Try and go back to "normal life" as safely as possible. You can now use your shoulder for activities such as dressing, bathing, typing, grooming, and driving.**
- **You will begin progressing your home exercises in physical therapy. We want patients to be doing their exercises 1-2x / day.**
- **Physical therapy frequency will increase to 2-3x / week at this time.**
- **Patient can continue to use ice machine for pain relief. However, heat may be added before therapy if needed.**

WEEK 6 - WEEK 12

JOINT MOBILIZATIONS AND MANUAL THERAPY AS NEEDED TO IMPROVE MOBILITY AND REDUCE PAIN AND GUARDING

Grade 1-4 mobilizations as needed

Instrument assisted soft tissue mobilizaitons

ACTIVE AND ACTIVE ASSISTED SHOULDER MOTION WITHOUT RESTRICTION

Forward elevation in scapular plane

Side lying external rotation and abduction

Supine shoulder flexion (active or assisted)

Ball rolls

Wall/table slides

Wand assisted shoulder movements

Supine serratus elevations with circles

Forward reaching (active or active assisted with cane)

Recumbent bike

PASSIVE SHOULDER MOTION WITHOUT RESTRICTION

Pulley apparatus (if proper joint arthrokinematics are noticed)

Prayer stretch

Doorway stretches (avoid 90/90 positions with anatomical shoulder replacements)

Avoid internal rotation movements with reverse total shoulder replacement

SCAPULAR STABILIZATION AND SETTING EXERCISES

PNF scapular movements in all positions

Bilateral external rotation with manual cues for lower trap

Scapular clocks

Protraction and retraction with control and prolonged holds

AQUATIC THERAPY FOR RANGE OF MOTION (IF AVAILABLE). NO RESISTANCE, JUST MOTION.

REGIONAL INTERDEPENDENCE

Cardiovascular demands. Begin increasing cardiovascular benefits with elliptical, stationary bike, or recumbent biking. Avoidance of running is instructed in this phase.

Sagittal and frontal plane lunges

Step ups

Balance and lower extremity proprioceptive work

FACTORS THAT MAY AFFECT REHABILITATION

PREOPERATIVE SHOULDER STATUS

TYPE OF IMPLANT USED

GLENOID AND HUMERAL BONE QUALITY

INTEGRITY OF THE REMAINING ROTATOR CUFF

OVERALL COMPONET STABILITY AT THE TIME OF THE SURGICAL RECONSTRUCTION

PHASE 3 — STRENGTH

WEEK 12+

GOALS

Protect surgical repair until strength and mobility is full

Begin gradually restoring strength, power, and endurance in the shoulder girdle complex

Improve shoulder stability with initiating and progressing weight bearing activities in the shoulder

In REVERSE TOTAL SHOULDER ARTHROPLASTIES, deltoid strength and control is the primary focus due to the insufficiency of the rotator cuff. Strength focus will be focused on functional movements and on deltoid complex.

In TOTAL SHOULDER ARTHROPLASTIES, the rotator cuff remains intact. Strengthening will be focused on dynamic stability through the rotator cuff and force coupling muscle patterns of the shoulder.

THINGS TO AVOID

No sudden jerking or uncontrolled movements

No lifting objects away from the body that is heavier than 5 lbs

No empty can (thumbs down) position with weights

THINGS TO BE DOING

- Continue to use your shoulder as normal as possible for daily activities.
- Strengthening exercises will be added to your home exercise regime. Patients should be performing their exercises 1x / day.
- Physical therapy frequency can decrease to 1-2x / week if patient demonstrates good compliance with home exercise program.
- Home exercise resistance equipment may include Thera bands, free weights, and body weight.

WEEK 12+

GRADUAL PROGRESSION ON ROTATOR CUFF STRENGTH WITH BANDS / FREE WEIGHTS

Thrower's Ten Program
- Advanced Thrower's Ten Program

Body Blade

Prone rowing with shoulder rotation progression

Prone I's / Y's / and T's

SCAPULAR STRENGTHENING PROGRESSION AND DELTOID FORCE COUPLING

Three-way rowing

Scapular push up with plus

Bilateral external rotation with elevation

Serratus wall slides

CLOSED-KINETIC CHAIN UPPER EXTREMITY EXERCISE PROGRESSION

Quadruped opposite arm / opposite leg

Wall push ups

Seated press ups

PNF SHOULDER MOVEMENT PATTERNS

D1 and D2 flexion and extension in varying positions
- Standing, lunge, and supine

REGIONAL INTERDEPENDENCE

Bicep and triceps strengthening

Progress lower extremity cardiovascular endurance
- Running may be progressed in this phase

Return to sport and work hardening activities begin at week 18. Plyometric shoulder progression can be started at week 18.

If the patient is an overhead or throwing athlete and you wish to contact us about our throwing or golf progressions after the physical therapy protocol, please feel free to contact us at:

Train • Recover • Move
UAMS | Health
(479) 966-4055

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