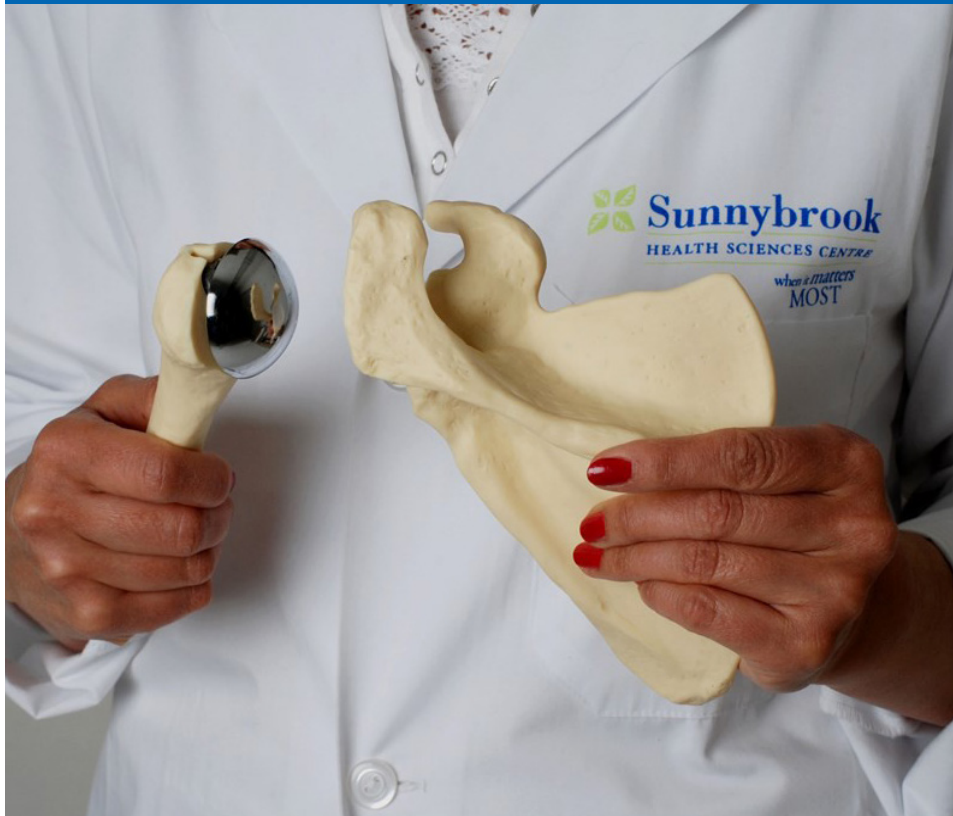


Anatomical and Reverse Total Shoulder Replacement

Exercise Protocol



Patient Name:

Surgeon:

☐ Dr. Axelrod

☐ Dr. Henry

☐ Dr. Nam

☐ Dr. Sheth

Date of Surgery (dd/mm/yy):

**Outpatient Rehabilitation
Services Holland Centre:
416-967-8626**

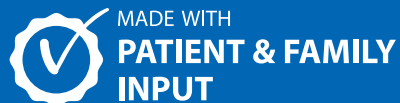


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Before Your Surgery

You can prepare before surgery so that your daily activities are easier to do after your surgery:

- Practice using only the arm that will not be operated on to perform daily tasks such as preparing meals, washing yourself, wiping yourself after using the toilet with one hand.
- Prepare and freeze meals in advance. Purchase easy to prepare meals or frozen dinners that are easy to open.
- Ask your friends and family for assistance with cleaning and meal preparation.
- **Driving** is not permitted while you are still using your sling (4-6 weeks). Please make alternate arrangements for travel. Driving may be permitted after 6 weeks when you are able to easily lift your arm to 90 degrees and able to move your hand over hand to turn the steering wheel.
- Download our free app to help keep you on track as you prepare for surgery and during your recovery. Scan the QR code or visit sunnybrook.ca/shoulderapp.

Your access key/code is
hollandshoulder



Before Your Surgery: Helpful Equipment

- An electric can opener and an electric toothbrush may be helpful (especially if you are having surgery on your dominant arm).
- A “reacher” can help pick things up from the floor and getting hard to reach items. Reachers are available at the hospital gift shop or medical supply stores.
- You may need a reusable hot/cold pack for any swelling or tense muscles that you may experience after surgery.
- Make sure you have a few extra pillows. You will need these to support your shoulder when sleeping on your back or non operated side.
- A non-slip mat in your shower or bath tub as well as a long handled sponge will increase your independence and safety while bathing.

Reduce Pain and Swelling After Surgery

Ice and Heat:

- Ice can be applied to your operated shoulder for about 10 minutes each hour (if needed). You may find this most helpful after exercise.
- Beginning one week after surgery, you may apply heat to your shoulder for 5-10 minutes before you exercise. Heat should be at a warm and comfortable temperature. Apply extra layers of towel between your heat source and your skin to reduce the intensity as needed.
- If you have any numbness around your incision (no feeling when you touch it lightly), check your skin after 5 minutes while heating to ensure you do not get a burn.
- Do not use heat if you have been prescribed antibiotics for your shoulder.

Medication:

- Pain medication should be taken as prescribed.
- It is important that your pain is controlled so that you can complete 3 exercise sessions each day.
- If you have pain when doing your exercises, take your pain medication before starting your exercises or reduce the intensity of your exercise.

General Precautions After Surgery

- Lifting objects heavier than a plate of food should not be done until 12 weeks after your surgery.
- Do not support your body weight with your operated arm for bed mobility and transfers such as moving in and out of bed or getting in and out of chair.
- No active shoulder range of motion or strengthening exercises until your physiotherapist advises you that you have entered the appropriate phase of this Protocol.
- No reaching across the body for 6 weeks.

After Your Surgery

Sleeping

- Sleep on your back or non-operated side. When lying on your back, support your operated shoulder by placing a pillow underneath the elbow. When on your side, one or more pillows can be placed in front of your chest/abdomen to support your operated arm. Initially you may be more comfortable sleeping in a sitting position. Sleep with your sling on for 4-6 weeks (as recommended by your surgeon).
- Practice getting into and out of your bed on the non-operated side. Move your nightstand close to your non-operated side. Make sure you can easily reach the lamp and are able to turn it on with your non-operated arm.
- Wait 4-6 weeks after surgery before trying to sleep on the operated side and only if tolerated. Follow any specific instructions provided to you by your surgeon.

Bathing

- A non-slip mat in your shower/bathub will improve safety. Your arm can hang gently at your side while bathing. Don't forget to wash underneath your operated arm. Lean forward to allow the arm to remain hanging while you do this. You can increase your independence while bathing by using a long-handled sponge to wash your back and legs using your non operated arm. Your nurse will speak to you regarding care of your incision and bandage.

After Your Surgery (continued)

Dressing

- Loose fitting clothing and button-up shirts are ideal.
- Dress your operated arm first, then your non-operated side. You may do up and undo buttons using your operated arm.
- When undressing, begin with your non-operated arm, then your operated arm.
- Bras should be fastened in front, and then turned to the back using your non-operated arm. Pull the straps up last.
- Your sling should be worn over your clothes.
- If you wear shoes with laces, you may want to consider elastic shoelaces or slip-on shoes - it is difficult to tie laces with one hand.
- If you have any questions or concerns about this information please speak to your Occupational Therapist or Nurse.

After Your Surgery: Sling Use

- The sling is worn for comfort and protection of your arm and shoulder for 4-6 weeks after surgery. This includes sleeping. The sling should be removed for bathing, dressing and exercising. You can allow your arm to hang at your side for bathing.
- After 4-6 weeks (unless your surgeon says otherwise), you may stop using the sling and start to use your arm for light activities where your hands remain in front of your body.
- You may choose to wear a sling after 4-6 weeks while in crowded places to protect your operated shoulder.
- There is a charge to cover the cost of the sling. You will receive a hospital bill at discharge. Please follow up with the Patient Accounts at 416-480-4156.



How to put on and remove the sling

- DeRoyal Arm Sling Video: shorturl.at/ilFH0
- You will notice that a blue pad comes with your sling. If it is not on the white strap, insert the strap through the openings of the pad. When the sling is on, this pad helps to decrease the pressure from the strap on top of your non-operated shoulder.
- Place the forearm of your operated arm into the sling. Make sure your elbow rests at the back of the sling pocket where the material curves. The elbow should rest at a 90 degree angle (L shape) in the sling.
- Using your non-operated arm bring the strap behind your neck so the shoulder pad rests on your non-operated shoulder.
- Put the strap through the two silver rings near your wrist. Pull the strap back up towards your chest and attach the Velcro.
- The big white loop is an optional rest for your thumb.
- If you have a grey or black sling, this one will also include a waist strap and cushion to support the weight of the arm.

The following exercise program has been designed to provide guidelines and basic instructions for you and your Physiotherapist to help restore your shoulder's range of motion and strengthen your muscles.

It is recommended that these exercises be taught by a physiotherapist.

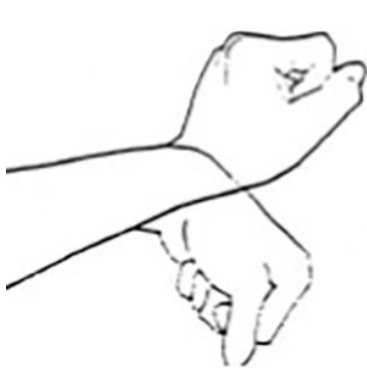
PHASE I:

Day 1 after surgery

Wrist and Hand Mobility Repeat Each Exercise 3 Times A Day

- After your shoulder surgery, it is important to maintain full movement of your elbow, wrist and hand.
- Wrist and hand exercises can be performed in the sling.

Wrist/Hand: Gradually increase to **30** repetitions.



1. Bend your wrist forward, backwards and in a circular motion.



2. With your palm open, move hand from side to side.



3. Open and close your hand to make a fist.



4. Squeeze a soft ball.

PHASE I:

Day 1 after surgery

Elbow range of motion

Repeat Each Exercise 3 Times A Day

- After your shoulder surgery, it is important to maintain full range of motion of the joints below the affected shoulder.
- Undo the sling to do these exercises.
- Do not move the arm away from body unless fully supported.
- **Do not add resistance to elbow bending until 8 weeks after surgery due to biceps tenodesis**

Elbow:

- In standing (or sitting), gently bend and straighten your elbow.
- Assist with other hand, if needed.
- Make sure that your elbow straightens fully.



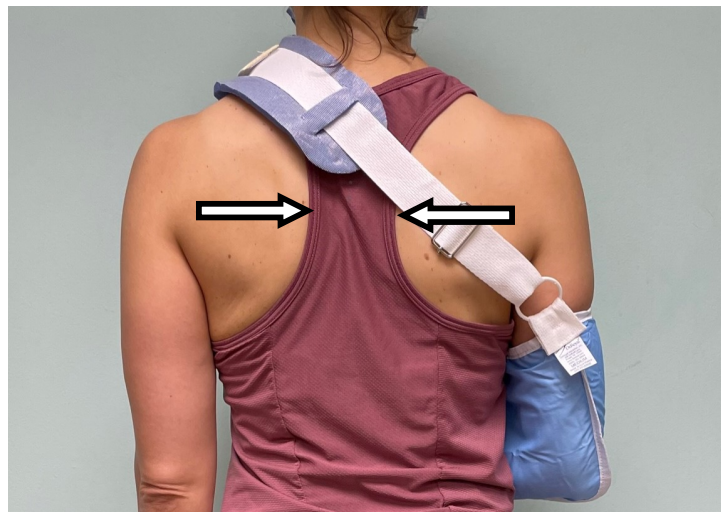
Gradually increase to **30** repetitions

PHASE I:
Day 1 after surgery
Shoulder Posture
Repeat Exercise 3 Times A Day

Shoulder Posture:

While your arm rests in the sling, squeeze the shoulder blades together.

Do not shrug your shoulders up.

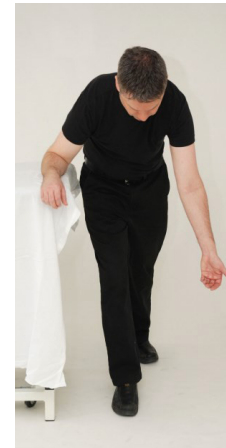


Gradually increase to 30 repetitions.

PHASE I:

Day 1 after surgery or Day 3 after surgery if you went home with a nerve block catheter

Shoulder Exercises Repeat Exercise 3 Times A Day



Pendular exercise:

- Bend forward and support your non-operated arm on a table.
- Relax your operated arm and let gravity and momentum help you to swing the operated arm forward and backward, and clockwise and counterclockwise.

Gradually increase to 30 repetitions.

PHASE I:

Day 1 after surgery or Day 3 after surgery if you went home with a nerve block catheter

Shoulder Exercises

Repeat Exercise 3 Times A Day

Hold 5 seconds, gradually increase to 30 repetitions.

Active Assisted Range of Motion Exercises: *These exercises involve moving the arm with assistance.*

Goal: 90 degrees of flexion by 4 weeks after surgery (see image laying on her back below).

Flexion: To improve your overhead elevation (flexion), you need to move your arm upward. Use your good arm to assist with the movement. Keep your shoulder blades squeezed and do not shrug up your shoulders. This exercise can also be done in sitting.



Flexion with Hands on Table in Sitting:

- Sit up with hands on table.
- Slide hands forwards and bend at the hips until a stretch is felt in the shoulder or under arm area.
- Try to keep your head and chest up
- A towel on the table may help it easier to slide on the table



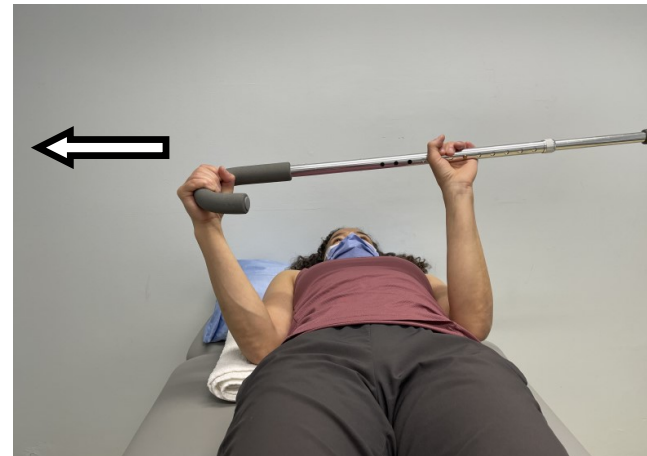
PHASE II:

4 WEEKS AFTER SURGERY

Repeat Exercise 3 Times A Day

Active Assisted Shoulder External Rotation:

- Place a folded towel behind your operated arm so that your elbow does not contact the bed.
- Use a cane and push the operated arm outwards with your non-operated arm.
- Keep your wrist straight.
- Keep your elbow at a right angle and tucked at side.



DO NOT MOVE BEYOND 30 DEGREES for the first 6 weeks.

Hold 5 seconds, gradually increase to 30 repetitions.

**PHASE II:
4 WEEKS AFTER SURGERY**

Repeat Exercise 3 Times A Day

Active Assisted Shoulder Range of Motion Exercises:

These exercises involve moving the arm with assistance.

Goal: > 120 degrees at 3 months post op

Active Assisted Shoulder Flexion:



Hold 5 seconds, gradually increase to 30 repetitions.

**PHASE II:
4 WEEKS AFTER SURGERY**

Repeat Exercise 3 Times A Day

Active Assisted Range of Motion Exercises:
These exercises involve moving the arm with assistance.



Sit with elbows resting on a table and palms together.



- Lift operated arm off table with assistance from other hand.
- Lift to shoulder height, maintain shoulder blades squeezed and avoid shrugging up shoulders.
- Try to keep both elbows pointing forwards.

Gradually increase to 30 repetitions

**PHASE II:
4 WEEKS AFTER SURGERY**

Repeat Exercise 3 Times A Day

Active Assisted Range of Motion Exercises:
These exercises involve moving the arm with assistance.



- With the assistance of your non-operated arm, press operated hand into a towel on a wall and slide the towel upward on the wall.
- Lift to shoulder height (90 degrees) or slightly higher (120 degrees).

Gradually increase to 30 repetitions

PHASE II: 4 WEEKS AFTER SURGERY

Sub-maximal Shoulder Isometric Strengthening Exercises

*These exercises are performed with your arm in line with the side of your body and your elbow close to your side **without movement of the arm.***

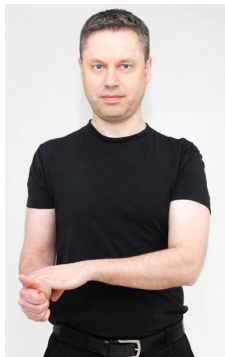
Repeat Exercise 3 Times A Day



Abduction (Open Armpit):

- Push the arm or elbow of the operated arm outwards against your other hand or into a wall.

Hold 5 seconds, gradually increase to 30 repetitions.



External Rotation (Turn Outwards):

- Press the hand or wrist of your operated arm outwards against your other hand or a wall.

Hold 5 seconds, gradually increase to 30 repetitions.

Warning: **Do not push your arm inwards for 8 WEEKS**

PHASE II: 4 WEEKS AFTER SURGERY

Sub-maximal Shoulder Isometric Strengthening Exercises

*These exercises are performed with your arm in line with the side of your body and your elbow close to your side **without movement of the arm.***

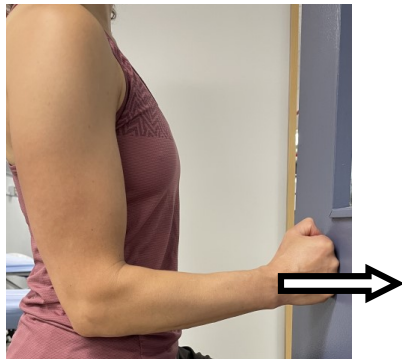
Repeat Exercise 3 Times A Day



Extension:

- Push the elbow of your operated arm backwards into a wall or the back of a chair.

Hold 5 seconds, gradually increase to 30 repetitions.



Flexion:

- Push the hand of your operated arm forwards against your other hand or a wall.

Hold 5 seconds, gradually increase to 30 repetitions.

Warning: **Do not push your arm inwards for 8 WEEKS**

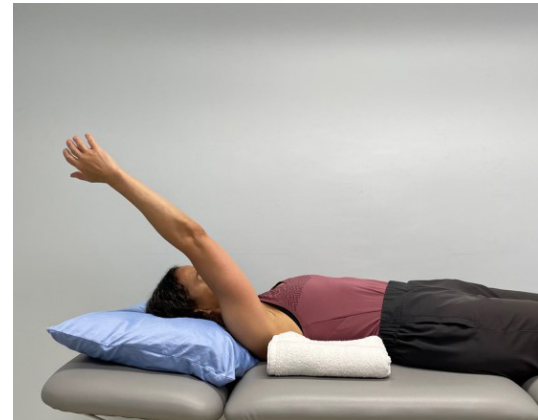
PHASE III:

6 WEEKS AFTER SURGERY

Active Shoulder Flexion Range of Motion

*These exercises involve moving the arm actively **without** assistance within a “pain free range”*

Repeat Exercise 3 Times A Day



Flexion Lying On Your Back:

- Lift straight arm up and overhead without assistance.
- Keep shoulder blades squeezed and avoid shrugging up shoulders. Hold 5 seconds, gradually increase to 30 repetitions.

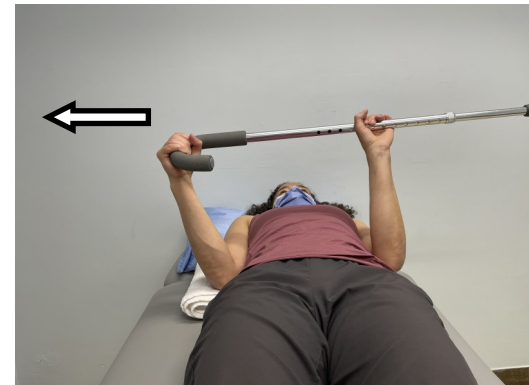
Gradually increase to 30 repetitions

**PHASE III:
6 WEEKS AFTER SURGERY**

Active Assisted Shoulder External Rotation

Repeat Exercise 3 Times A Day

- Place a folded towel behind your operated arm so that your elbow does not contact the bed.
- Use a cane and push the operated arm **outwards** with your non-operated arm.
- Keep your wrist straight.
- Keep your elbow at a right angle and tucked at side. Gradually increase to 30 repetitions



You may now move beyond 30 degrees

Hold 5 seconds

Gradually increase to 30 repetitions.

**PHASE III:
6 WEEKS AFTER SURGERY**

Active Shoulder Flexion Range of Motion Exercises

*These exercises involve moving the arm actively **without** assistance within a “pain free range”*

Repeat Exercise 3 Times A Day



- With the assistance of either a towel or ball against the wall, press hand into wall and slide hand upward on the wall.
- Lift to shoulder height (90 degrees) or slightly higher (120 degrees).

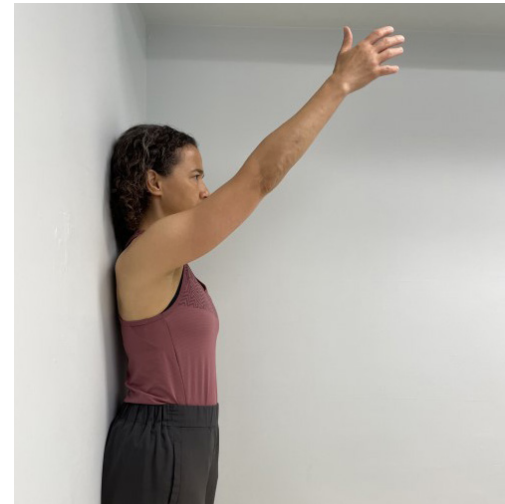
Gradually increase to 30 repetitions

**PHASE III:
6 WEEKS AFTER SURGERY**

Active Shoulder Flexion Range of Motion

*These exercises involve moving the arm actively **without** assistance within a “pain free range”*

Repeat Exercise 3 Times A Day



Flexion With Back To Wall:

- Standing with back against wall, eyes level (do not tilt head).
- Squeeze the shoulder blades together while keeping the shoulders relaxed (do not shrug up shoulders).
- Lift arm(s) up within pain free range.

Gradually increase to 30 repetitions

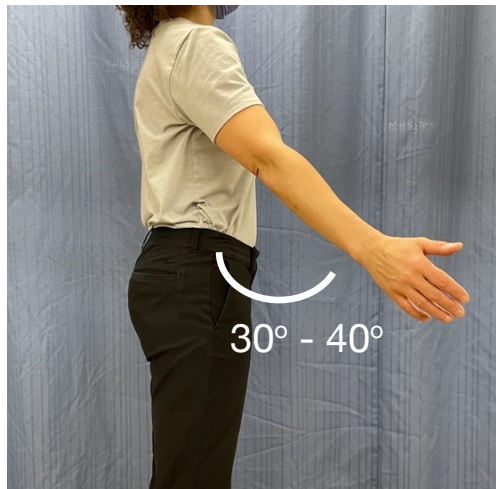
**PHASE III:
6 WEEKS AFTER SURGERY**

Active Shoulder Abduction (in scapular plane) Range of Motion

*These exercises involve moving the arm actively **without** assistance within a “pain free range”*

Repeat Exercise 3 Times A Day

- Lift straight arm to waist height on a 30-40 degree angle with your thumb pointing upwards.



Gradually increase to 30 repetitions

**PHASE III:
6 WEEKS AFTER SURGERY**

Active Shoulder Internal Rotation Range of Motion

*These exercises involve moving the arm actively **without** assistance within a “pain free range”*

Repeat Exercise 3 Times A Day



Active Hand Behind Back:

- Gently try to move your hand behind your buttock or back
- Squeeze the shoulder blades together (do not shrug shoulders).
- Return to the starting position

Gradually increase to 30 repetitions

**PHASE III:
6 WEEKS AFTER SURGERY**

Active Shoulder Range of Motion

*These exercises involve moving the arm actively **without** assistance within a “pain free range”*

Repeat Exercise 3 Times A Day

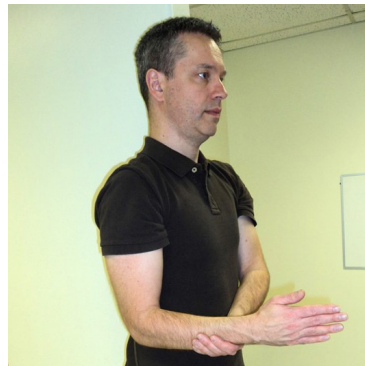
Active Flexion With Sub-maximal Isometric Strengthening External Rotation:

Start with arm at side of body and push outward against your other hand. Continue to push outward against the other hand while raising your operated arm forward.

Start with shoulder blades squeezed together. Elbow is pointing forward at all times.

Gradually increase to 30 repetitions.

Starting Position



Final Position



PHASE IV:

8 WEEKS AFTER SURGERY

Shoulder Internal Rotation (Hand Behind Back) Active Assisted Range of motion

Repeat Exercise 3 Times A Day

This movement is usually limited and painful after surgery.

- To improve your inward rotation, you can either use a strap or your good arm to pull the hand of the operated arm towards the midline and up your back.
- Perform this exercise very gently to increase your range of motion gradually.
- Try to keep the front of your shoulder back as much as you can.

Hold 5 seconds, gradually increase to 30 repetitions

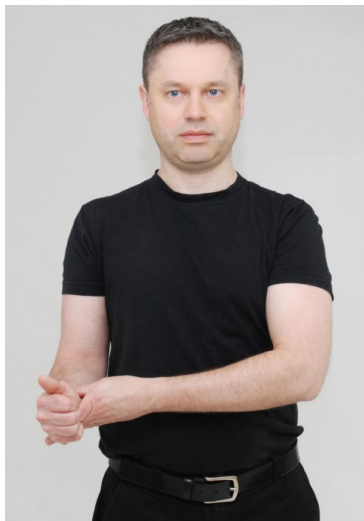


**PHASE IV:
8 WEEKS AFTER SURGERY**

Shoulder Sub-maximal Isometric Strengthening Internal Rotation

These exercises are performed with your arm in line with the side of your body and your elbow close to the side of your body **without movement of the arm.**

Repeat Exercise 3 Times A Day



This specific exercise is started later than other directions to allow subscapularis (your front rotator cuff muscle) to heal properly.

- Push the hand of your operated arm inwards against your other hand.

Hold 5 seconds.

Gradually increase to 30 repetitions

PHASE IV: 8 WEEKS AFTER SURGERY

Shoulder External Rotation

Start progressive strengthening exercises, including the use of light weights or resistance band. Movements should be slow and controlled, no need to hold the position.

Caution: When exercising with elastic resistance bands, inspect your band prior to use for signs of wear or small tears as these can cause the band to break during exercises. Protective eye wear is recommended.

Gradually increase to 30 repetitions, once a day.



External Rotation (Turning Outwards):

- Keep elbow tucked into a rolled towel.
- Your elbow should remain bent at a **right angle (90°)**
- Move your hand out to **no more than 45 degrees** against the ten-sion of the elastic band. Keep wrist straight.

**PHASE IV:
8 WEEKS AFTER SURGERY**

Strengthening: Biceps Curls

Movements should be slow and controlled, no need to hold the position.

Caution: When exercising with elastic resistance bands, inspect your band prior to use for signs of wear or small tears as these can cause the band to break during exercises. Protective eye wear is recommended.

Gradually increase to 30 repetitions, once a day.

- Stand on one end of band while holding other end of band in operated hand. This exercise can also be done in sitting by anchoring one end of the band under your foot.
- Keep palm facing upwards and bend elbow pulling band up towards your shoulder slowly
- Keep your elbow beside your body
- Lower band down slowly.



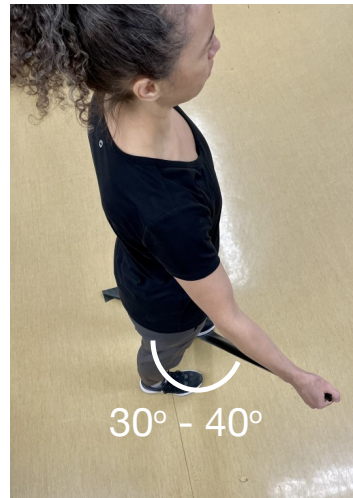
**PHASE IV:
8 WEEKS AFTER SURGERY**

Strengthening: Abductors/Supraspinatus

Think slow and controlled movements, no need to hold the position

Gradually increase to 30 repetitions, once a day.

- Hold an easy resistance band on your operated side with opposite foot anchoring your band.
- Lift straight arm to waist height on a 30-40 degree angle.



PHASE IV: 8 WEEKS AFTER SURGERY

Strengthening: Triceps Pull Downs

Movements should be slow and controlled, no need to hold the position

Gradually increase to 30 repetitions, once a day.



Hold band in each hand:

- Stand or sit close to edge of door holding end of band in each hand
- Bend knees slightly and stick bottom out slightly
- Pull down on band to straighten elbows
- Slowly return to start position
- Keep shoulder blades pulled back

Caution: Please use caution when exercising with **resistance bands** and inspect your band prior to use for signs of wear or small tears. Always protect the eyes when using elastic resistance bands, particularly when performing exercises where the band or tubing may snap back and hit the face. Protective eye wear is recommended.

OR



Hold band in each hand:

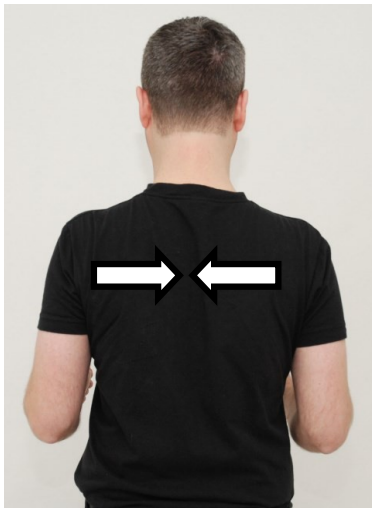
- In sitting or standing, pull band down to straighten the elbow of your operated arm while the other hand anchors the band on your chest
- Slowly return to start position.

**PHASE IV:
8 WEEKS AFTER SURGERY**

Shoulder Girdle Stabilization with Elevation

Movements should be slow and controlled, no need to hold the position

Gradually increase to 30 repetitions, once a day



Squeeze shoulder blades together.



Starting Position:

Lying on back with elbows tucked into side and bent at 90 degrees. Hold ends of **band** in each hand, creating a slight tension outwards, palms facing each other and forearms parallel.



Action:

Lift elbows up toward ceiling maintaining outward pull on band and keeping forearms parallel.

PHASE IV: 8 WEEKS AFTER SURGERY

Shoulder Girdle Stabilization with Elevation at wall

Think slow and controlled movements, no need to hold the position

Gradually increase to 30 repetitions, once a day



Starting Position:

- Stand with back against wall and stomach muscles tight.
- Elbows tucked into side and bent at 90 degrees.
- Hold ends of band in each hand, creating a slight tension outwards, palms face each other, forearms parallel.

Action:

- Squeeze shoulder blades in.
- Lift elbows forward maintaining outward pull on band. Avoid shrugging shoulders as you lift to shoulder height.
- Keep elbows pointing forward.



Progression:

- Standing with feet slightly away from wall.
- Repeat above exercise while doing a 1/4 squat.
- Keep trunk straight (chest up) and buttocks out.
- Knees are NOT ahead of toes. Keep elbows pointing forward.

PHASE V:

10 WEEKS AFTER SURGERY

Strengthening: Shoulder Internal Rotators

Movements should be slow and controlled, no need to hold the position

Gradually increase to 30 repetitions, once a day



Internal Rotation (Turn Inwards):

- Keep your elbow bent at a **right angle (90°)** and **tucked at your side into a rolled towel**.
- Move your hand across your stomach **to about 45 degrees**.

**PHASE V:
10 WEEKS AFTER SURGERY**

Strengthening: Serratus Anterior

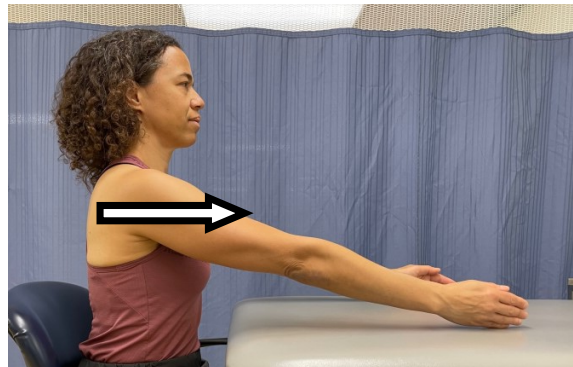
Movements should be slow and controlled, no need to hold the position

Gradually increase to 30 repetitions, once a day



Starting Position:

- Sit tall
- Rest arms on a table in front of you.



Action:

- Slide arms forwards on the table to reach ahead, far enough so that your shoulder blades also move forwards
- Continue to sit tall
- Do not shrug your shoulders up.



Same as previous exercise while pulling on band:

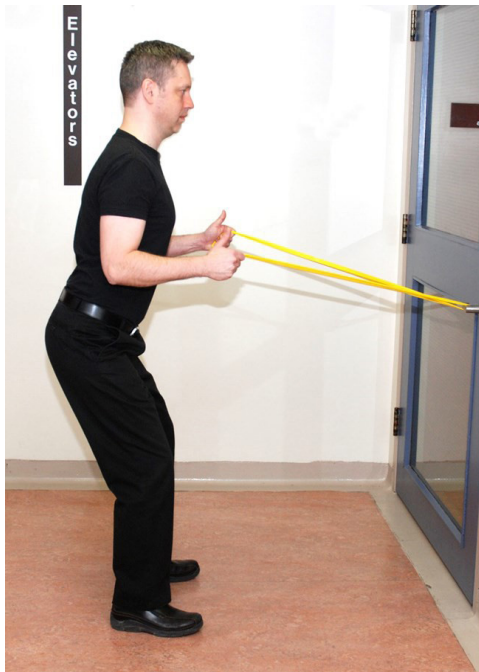
- Hold ends of band wrapped around upper back.
- Slowly move your hands forward.
- Slowly return to start position.

PHASE V: 10 WEEKS AFTER SURGERY

Strengthening: Rowing

Movements should be slow and controlled, no need to hold the position

Gradually increase to 30 repetitions, once a day



- Place band securely around doorknob.

Start position:

- Hold band in each hand, palms face each other, with arms almost straight
- Squat with knees never ahead of toes, tighten stomach muscles.

End position (picture)

- Squeeze shoulder blades together while moving elbows backwards to be in line and close to the body.
- Slowly return to start position.

Caution: Please use caution when exercising with **resistance bands** and inspect your band prior to use for signs of wear or small tears. Always protect the eyes when using elastic resistance bands, particularly when performing exercises where the band or tubing may snap back and hit the face. Protective eye wear is recommended.

Short Version:

After completion of 12-week protocol

The following exercise program has been designed to provide guidelines and basic instructions for you to help restore your shoulder's range of motion and strength.

Caution: Please use caution when exercising with **resistance bands** and inspect your band prior to use for signs of wear or small tears. Snapping/tearing of the band can cause serious injury to your eyes. Always protect the eyes when using elastic resistance bands, particularly when performing exercises where the band or tubing may snap back and hit the face. Protective eye wear is recommended.

Warm-up: Walk with a natural arm swing for 5-10 minutes before exercise.

Shoulder Range of Motion Exercises

(30 repetitions of slow and controlled motion, 1-2 times/day)

Active Assisted Flexion

OR



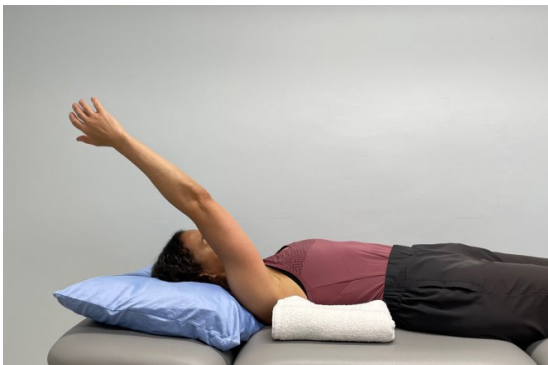
Instructions on page 18



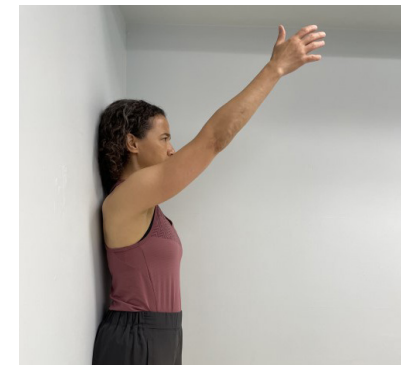
Instructions on page 16

Active Flexion

OR



Instructions on page 23



Instructions on page 26

Shoulder Range of Motion Exercises

(30 repetitions of slow and controlled motion, 1-2 times/day)

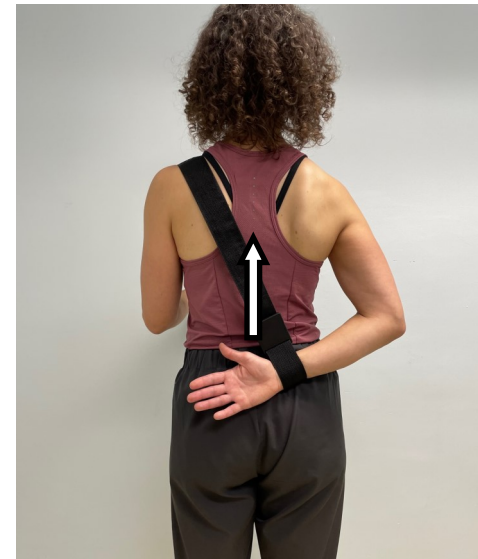
Active Assisted External Rotation

Instructions on page 24



Active Assisted Internal Rotation (Hand Behind Back)

Instructions on page 30

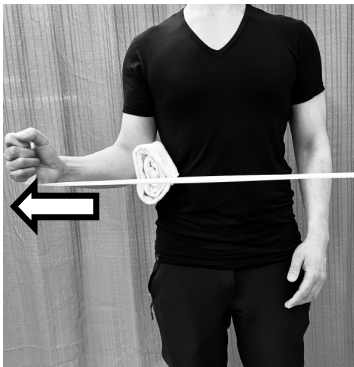


Strengthening Exercises

Think slow and controlled movements, no need to hold the position
Gradually increase **up to** 3 sets of 30 repetitions, once, every other day.

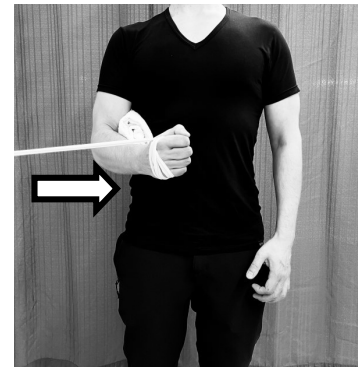
Resisted External Rotation (turn outwards)

Instructions on page 32



Resisted Internal Rotation (turn inwards)

Instructions on page 38



Elbow Flexion (Biceps)

Instructions on page 33



Elbow Extension (Triceps)

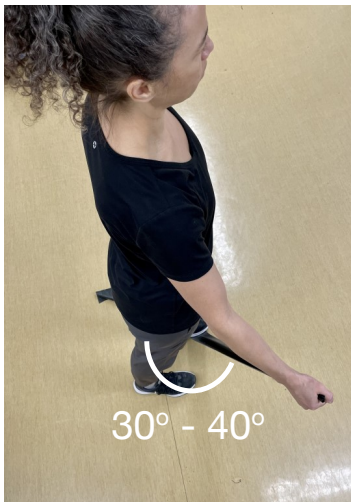
Instructions on page 35

Strengthening Exercises

Think slow and controlled movements, no need to hold the position
Gradually increase up to 3 sets of 30 repetitions, once, every other day.

Shoulder Abductors/Supraspinatus

Instructions on page 34



Serratus Anterior

Instructions on page 39

