

**IMPORTANT  
PATIENT  
INFORMATION  
ENCLOSED**

# **MY GUIDE TO TOTAL SHOULDER REPLACEMENT**

The logo for Middlesex Hospital Alliance features three overlapping squares: a light green square at the top left, a dark blue square in the middle, and another light green square at the bottom right. The text 'MIDDLESEX HOSPITAL ALLIANCE' is centered within the dark blue square.

**MIDDLESEX  
HOSPITAL  
ALLIANCE**

**Please bring this booklet with you to each of your hospital visits, including your preadmission appointment and hospital stay**

2021

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# WELCOME TO THE MIDDLESEX HOSPITAL ALLIANCE

On behalf of all the staff at the Middlesex Hospital Alliance, we would like to welcome you.

This booklet was created to help address the many questions and concerns you may have about your upcoming total shoulder replacement. It includes information on what the surgery involves, how to prepare yourself for the surgery, what to expect in the days following the surgery, how to prepare your home for when you are discharged from the hospital, and tips that will hopefully make this experience as positive and stress-free as possible.

Please read this guide thoroughly and write down any questions you may have on the “My Notes” page at the end of this booklet. Bring this booklet with you on the day of your surgery and for follow-up visits.

If you have any questions about the contents of this booklet, please contact the *physiotherapy department* at Strathroy General Hospital at: 519-246-5901 or the Nurse Practitioner at Ext. 5106.

## CONTACT PHONE NUMBERS

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# Shoulder Anatomy and Function

The shoulder joint allows a large range of motion with movements in all directions: forwards, backwards, sideways and rotation. The upper end of the humerus (arm) bone ends in a ball shape and fits onto the saucer-shaped socket called the glenoid. The glenoid is part of the scapula (shoulder blade).

The rotator cuff muscles surround the shoulder joint and help to stabilize the shoulder. The surfaces of the humerus and the glenoid are lined with cartilage which acts as cushioning and allows the bones to move easily over each other. Thickened tissue called the capsule also encloses the shoulder providing stability.

## Anatomy (parts) of the Shoulder

**Acromion** - the top part of the shoulder blade, which connects the shoulder with the collar bone.

**Bursa** - a small sac filled with fluid. The bursa acts like a cushion between the tendon and the bone. The bursa helps with the movement of the shoulder.

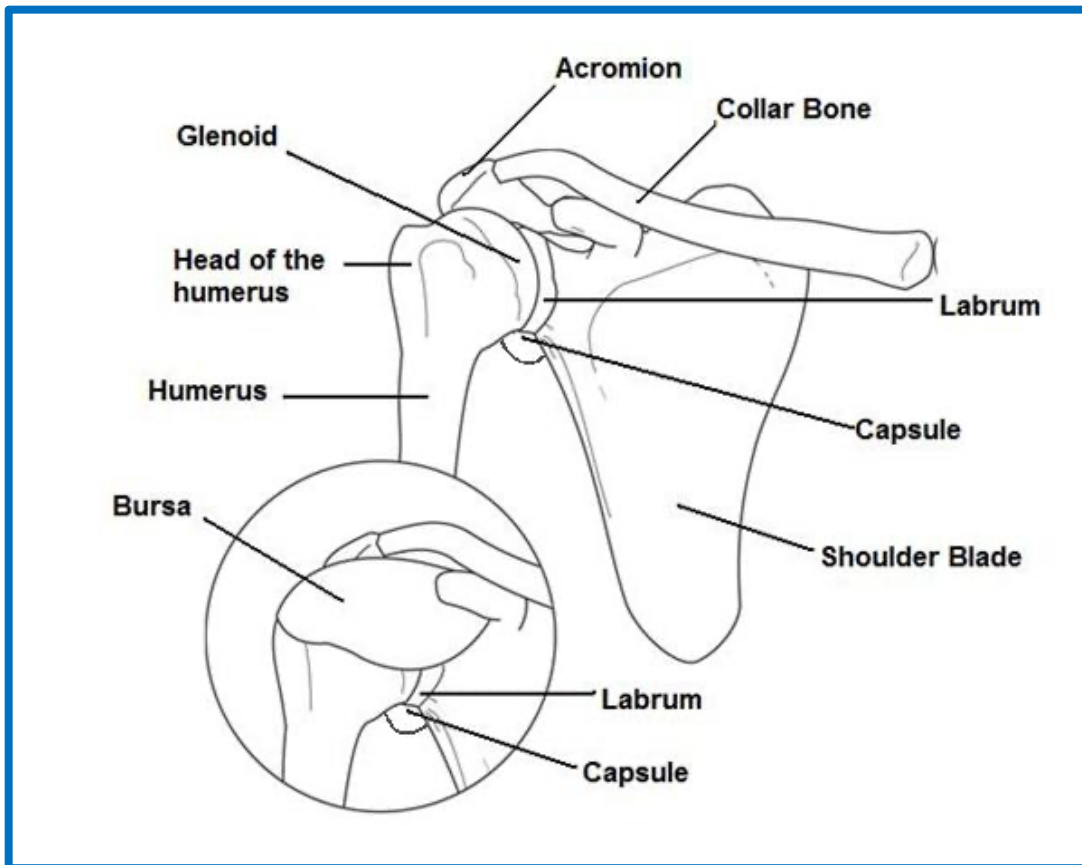
**Rotator cuff** – a group of four muscles /tendons that stabilize the shoulder joint.

**Capsule** – a sac of strong connective tissue filled with fluid that lubricates and surrounds the shoulder joint and helps keep the joint stable.

**Humerus** – the long bone of the upper arm that joins the shoulder to the elbow

**Glenoid** - a smooth socket or cavity in which the head (top) of the **humerus** or long bone of the arm sits

**Labrum** - a thin rim of cartilage. Cartilage is firm flexible tissue which connects muscles to bone. It gets less flexible as you get older. The labrum helps to keep the joint stable and act as a "bumper" for the shoulder joint

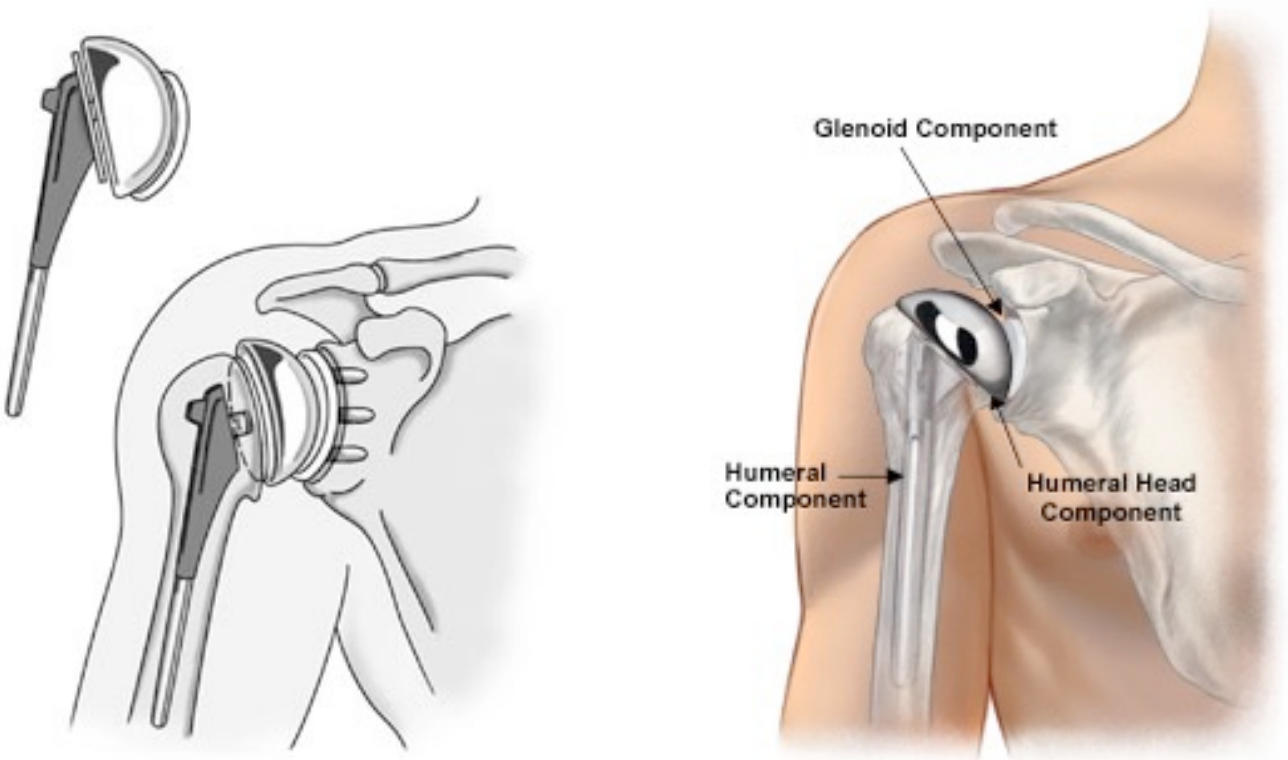


## TOTAL SHOULDER REPLACEMENT

(Total Shoulder Arthroplasty)

The shoulder joint allows a large range of motion with movements in many directions: forwards, backwards, sideways and rotational. The surfaces of the bones in the shoulder (humerus and glenoid) are lined with cartilage which acts as cushioning and allows the bones to move smoothly. Deterioration of the cartilage or weakening of the muscles, often due to arthritis or damage to the joint, can cause severe pain and stiffness in the shoulder joint.

When other treatments no longer work and you cannot carry on with normal activities because of pain and limited movement, your surgeon may recommend a total shoulder replacement. Shoulder replacement removes damaged bone and cartilage and provides smooth working surfaces made of plastic and metal. During the surgery an incision (cut) is made into the skin, muscles, and capsule of the shoulder and the joint is opened. The top (head) of the humerus bone is removed and a rounded metal head on a short stem of metal is inserted into the shaft or center of the humerus bone. The other side of the joint is replaced with smooth plastic that is curved to fit smoothly with the humerus implant pieces.



**ABOVE: Picture showing Total Shoulder Replacement.** Metal stem with rounded metal head is placed into the shaft of the humerus. A rounded plastic shell is placed into the other side of the joint (glenoid).

## Reverse Shoulder Replacement (Arthroplasty)

A reverse shoulder replacement is often used when patients have a severe rotator cuff muscle weakness and the muscles are no longer able to keep the shoulder joint stable. A reverse shoulder replacement can also be used where there is severe trauma or when revision (repeat) surgery is required.



# How Long Will My Shoulder Replacement Last?

How long the shoulder replacement will last depends upon the type of surgical implant pieces, your age, activity level and your general physical health. Over time, even normal use will cause the shoulder replacement implants to wear. Activities that place a lot of stress on the joint may cause the implant to wear out more quickly. Avoid activities such as:

1. Repetitive lifting
2. “Jamming” movements such as using a hammer or punching.

Shoulder replacements with normal use last 15 to 25 years.

## Potential Complications

While we will do everything we can to ensure you have a positive surgical experience and outcome, the reality is that sometimes complications occur. The risk is low but you should be aware of the following:

### **Anesthetic**

Problems with anesthesia are rare today. The rate of unexpected death is about 1 in 200,000.

### **Pre operative Health**

Heart disease, smoking, diabetes, rheumatoid arthritis, being overweight or obese, chronic lung disease or other medical issues may slow your recovery

### **Infection**

Infection in any artificial joint is a very serious complication. You will be given antibiotics before and for a short time after your shoulder replacement surgery. If infection occurs, the implanted pieces may need to be removed and a longer treatment with antibiotics given. Once the infection has been cleared, a new shoulder replacement can be done. The infection rate is less than 1%.

### **Infection from other body parts**

Infections in other parts of your body such as sinuses, lungs, teeth, fingernails or toenails, or skin can spread to your shoulder replacement. It is very important to treat any infection quickly to reduce the chance that it will spread to the shoulder.  
(continued on next page)



Tell your dentist that you have a shoulder replacement. If you have an infection in your mouth it should be treated right away. Antibiotics may also be needed prior to other types of procedures such as kidney stone or bowel surgery, or colonoscopy. Speak with the surgeon who will be doing the procedure to find out if you will need antibiotics.

### **Nerve or Blood Vessel Damage**

The nerves that help to move your hand and the blood vessels that supply your arm sit very close to the shoulder joint. Nerve or blood vessel damage is rare, less than 1%. Nerve damage may leave your hand or arm numb or weak. It could also make it difficult to move.

### **Dislocation or Instability**

Dislocation means that bones of the shoulder joint become separated or “move out of joint”. Stability of the shoulder joint depends on the rotator cuff muscles and the joint capsule tissue to hold the bones in good position. The rate of dislocation or instability is 5 to 6 % with total shoulder replacement. In reverse shoulder replacement the rate of dislocation is less than 1%.

### **Pain**

It is very important to keep your pain under control. Pain medication should be taken **BEFORE** your pain becomes severe. It is recommended to take pain medication 30 minutes before physiotherapy. If the medication causes nausea, you can take an anti-nausea medication as well.

### **Swelling (Edema)**

Even normal healing will cause swelling of your arm or hand. ELEVATING your hand and arm is a very good way to reduce swelling. **Be sure** to follow any movement precautions that you have been given by the surgeon or physiotherapist.

### **Nausea or Vomiting**

It is important to keep your pain under control because severe pain can cause nausea. Taking your pain medications with food may reduce nausea. Prevent dehydration by eating ice chips or taking frequent small sips of water, tea, or clear flat soda. Avoid dairy products, caffeine, alcohol, nicotine, fatty or spicy foods.

### **Constipation**

Increasing our dietary fiber intake may help prevent constipation (20 to 35 grams per day). Foods that contain bran or fruits such as prunes are helpful. Regular activity is also helpful in preventing constipation.

## PRE-ADMISSION CLINIC

An appointment will be made for you three to four weeks prior to your scheduled surgery date for you to come into the hospital to assess your overall health and provide information about your surgery. This visit will take several hours.

- Bring a family member or friend with you if you have difficulty getting around or if English is not your first language
- Bring your usual medications and any over the counter / herbal supplements in their **original containers**, along with a **prescription list** from your pharmacy
- Bring your ***completed* Pre-anaesthesia Questionnaire** and **History and Physical Assessment** by your family doctor and/or any current reports from any specialist you may be seeing such as an internist, sleep apnea clinic, cardiologist, or hematologist
- Bring reading glasses
- Bring this guide booklet with you with a list of questions you may have about your upcoming surgery
- A physiotherapist will contact you by phone prior to your surgery to review physiotherapy-specific information, such as post-operative exercises, use of the sling, setting up out-patient physiotherapy, etc.

**Note:** You may be required to provide a urine sample during your visit. Please remember to ask the desk clerk in Ambulatory Care to provide you with a collection container before using the bathroom.

# YOUR HOSPITAL STAY

## DAY OF SURGERY:

- ✗ Do not eat after midnight the night before your surgery. The operating room staff will let you know the day before your surgery if you can take morning medications or have a small glass of clear fluid on the day of your operation.
- ✓ You will receive a call the DAY before your surgery to give your surgery time. If your surgery is on Monday, you be called on the Friday before.
- ✓ Expect to be in hospital for **one night**. You need to arrange for a ride home **before 11:00 am** on the morning of discharge. The number of nights you will stay in hospital depends on how well you are moving and your pain level. The surgeon and physiotherapist will determine when you will be discharged.
- ✓ Bring the following items with you (please label all items with your name):
  - Current medications and over the counter supplements in their original containers
  - Slippers with a back and non-slip sole
  - A shirt that is easy to put on and take off, button up shirts are recommend
  - A light weight robe
  - A small overnight bag with clothes and personal care items
  - This guide booklet

# YOUR RECOVERY IN HOSPITAL

<p><b>Tests and Treatment</b></p>	<p><b>You will have:</b></p> <ul style="list-style-type: none"> <li>• An intravenous (IV) continued</li> <li>• Vital signs checked at regular intervals</li> <li>• Dressing checked and changed daily or as needed</li> <li>• Blood tests</li> <li>• Icing of the shoulder</li> </ul>
<p><b>Medications</b></p>	<ul style="list-style-type: none"> <li>• Pain control</li> <li>• Nausea</li> <li>• Anti-Blood Clotting</li> <li>• Antibiotics</li> <li>• Your usual Medications</li> </ul> <p><b>Pain following surgery is expected and normal. Please inform your nurse if you are experiencing pain or nausea.</b></p>
<p><b>Nutrition</b></p>	<ul style="list-style-type: none"> <li>• You will be offered a regular diet as your nausea level permits</li> <li>• Maintain regular sips of fluids after surgery to stay hydrated</li> </ul>
<p><b>Consults</b></p>	<ul style="list-style-type: none"> <li>• Physiotherapy</li> </ul>
<p><b>Education</b></p>	<ul style="list-style-type: none"> <li>• Review post-op precautions &amp; care, activity, and exercises</li> <li>• Review pain management and wound care</li> <li>• Review follow-up appointments and care of your shoulder at home</li> <li>• Review medications</li> </ul>
<p><b>Discharge Planning</b></p>	<ul style="list-style-type: none"> <li>• Discharge is <u>one day</u> after surgery before 11:00am.</li> <li>• Outpatient physiotherapy appointment should be scheduled for 2 weeks following surgery at SMGH/FCHS or a private clinic of your choice.</li> </ul>

## Care of Your Incision

Your incision will be covered with a waterproof bandage which should stay on until your first follow-up appointment with your surgeon (2 to 3 weeks after your surgery). The incision also has a glue on the skin. This will wear off over time as your skin cells wear off. Do not rub or scratch the glue once the dressing comes off. Occasionally staples may be used with the incision. These will be removed at your follow-up appointment.

You may see bloody or clear yellow drainage on your dressing. This is normal. If the drainage soaks through and fills your bandage, call Dr. Chant's office for assistance. If necessary, you can remove the dressing and reapply a waterproof dressing which can be purchased at any pharmacy.

**If your incision becomes very red with thick yellow or green drainage or needs dressing changes more than once a day, please contact Dr. Chant's office.**

## Preparing for Home

- Arrange for someone to come in and help with household chores upon your return home. You will not be able to do tasks that require heavy lifting or bending, such as vacuuming, washing floors, laundry, and washing the tub.
- It is important that you have a good supply of nutritious foods at home.
  - You may not be able to prepare meals in your kitchen for several weeks after surgery therefore it is recommended that you stock your freezer with healthy foods and pre-cooked meals
  - Arrange for family or friends to do your grocery shopping
  - If it is available in your area, you can have meals delivered to your house via *Meals-on-Wheels*. Contact your nearest Local Health Integration Network (LHIN) office
- Organize a 'recovery room' for your return after surgery. Initially, you may find that sleeping in a recliner chair may be more comfortable than a bed following shoulder surgery.

## ACTIVITY

- Wear your sling at all times, including while sleeping, for the first 4 weeks following surgery. You may remove your sling to bathe, dress and perform prescribed exercises. Confirm at your 2 week appointment with your surgeon when you may take your sling off
- Arrange for help with household chores. You will not be able to do tasks that require the lifting, pushing or pulling with your surgical arm for up to 12 weeks.
- You will not be able to drive for a minimum of 4 weeks post surgery. Confirm with your surgeon when you may drive.
- Your doctor and physiotherapist will discuss with you when it is safe to return to work and sports.

## PHYSIOTHERAPY

- Rehabilitation is a key part of successful recovery following shoulder surgery. The more effort and energy you put into your rehabilitation the more likely you are to achieve the best possible outcome.
- **Pre-Book an appointment with a physiotherapist to start approximately 2 weeks after surgery.** You are eligible for physiotherapy at Strathroy Middlesex General Hospital or Four Counties Hospital (Newbury) free of charge but you may choose to go to any clinic you wish. Remember that you will not be allowed to drive for at least 4 weeks after surgery so you will need to arrange for transportation to your physiotherapy appointments.
  - A list of publicly-funded OHIP clinics is available at [www.southwesthealthline.ca](http://www.southwesthealthline.ca). Select the 'rehabilitation' tab and then the 'Physiotherapy – Publicly Funded Clinics' tab
- Continue the early post-operative exercises 3 times per day until advised differently by your physiotherapist. These exercises were designed to maintain hand/wrist/elbow/back/neck mobility and strength while you are required to wear a sling.
- Your physiotherapist will progress your exercises in accordance with the post-operative protocol for Total Shoulder Replacements and within the surgeon-prescribed restrictions.

## Tips for Recovery

*Everyone heals differently. In general, here's what to do, and what you can expect, for the best possible progress after your surgery:*

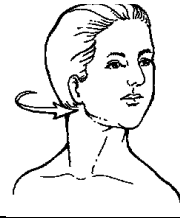
- Be active, gradually increasing your activity as directed by your health care team.
- Remember to rest when you need to, but you do not stay in bed once you get home.
- Follow your exercise program to improve endurance, strengthen your muscles, and ensure a full return to mobility.
- Use the home aids or assistive devices to protect and reduce stress on the surgical areas.
- Resume your normal diet, unless instructed otherwise. Eat plenty of foods high in protein to help with healing.
- Follow your discharge instructions.
- Don't be alarmed by pain, which is quite commonly felt surrounding the surgical site.
- Don't get discouraged. It may be weeks and months before your desired results are achieved. Your improvement might be steady and then slow down. But even after a year or more, activity can increase as muscle strength continues to improve.
- See your surgeon as needed for regularly scheduled follow-up visits. These typically depend on your progress and whether you are having any problems.
- Track your recovery. At the back of this guide, you'll find a diary to note your progress – how you're feeling, what you can do, and any questions you may have. This will help you, and others helping you, to manage your recovery. You can share this information with your surgeon at your follow-up appointment, or if you develop complications.

# Early Post-operative Shoulder Exercises

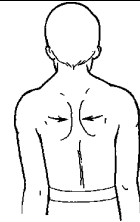
## Post-operative week 0-2

\*\*\* Remember to only do the exercises prescribed by your therapist \*\*\*

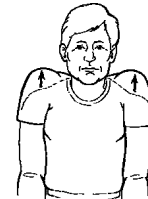
1.  YES Slowly turn your head towards the left, then turn your head towards the right side.  
 NO Repeat 5-10 times, Do 2-3 times per day.



2.  YES While **in your sling**, squeeze both shoulder blades together. Do not let your shoulders shrug up. Hold 5 seconds.  
 NO Repeat 5-10 times, Do 2-3 times per day.



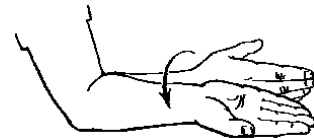
3.  YES While **in your sling**, shrug your shoulders up. Now pull your shoulder down as far as they will go. Hold 5 seconds  
 NO Repeat 5-10 times, Do 2-3 times per day.



4.  YES In **LYING** with **arm kept by your side**, bend your elbow as far as possible ("thumb up"). Straighten your elbow as far as possible. You can use your non-operated hand to help your operated one.  
 NO Repeat 5-10 times, Do 2-3 times per day.



6.  YES While **in your sling**, rotate your forearm so that your palm is facing up and then rotate so that your palm is facing down.  
 NO Repeat 5-10 times, Do 2-3 times per day.



7.  YES While **in your sling**, bend your fist up and down.  
 NO Repeat 5-10 times, Do 2-3 times per day.



8.  YES Squeeze a stress ball or rolled cloth while **in your sling**.  
 NO Repeat 10-15 times, Do 2-3 times per day.





## Sling Application

You will be required to wear a sling for six weeks after surgery. Supporting your arm with a sling will help manage pain and muscle fatigue as you recover from surgery. Wearing your sling properly also helps prevent fluid and blood from accumulating in your hand and wrist.

### To apply a shoulder sling correctly:

1. Gently pull the sling over your arm and elbow. It should fit snugly around the elbow. Your hand should come to the very end of the sling. Make sure the end of the sling doesn't cut into your wrist or hand; if your hand hangs at your wrist; your sling may be too small.
2. Reach around your neck and grab the strap behind your elbow. Pull the strap around the back of your neck and feed it through the loop near your hand.
3. Tighten the straps so your hand and forearm are elevated above the level of your elbow. This helps to prevent blood and fluid from pooling in your hand and wrist.
4. Fasten the strap with the Velcro fasteners. You may wish to put a small piece of terry cloth under the strap for comfort around your neck.
5. Secure the around your back, fastening it near the hand. Make sure the strap is not too tight. You should be able to fit two or three fingers between your body and the strap of the sling.
6. The thumb strap is designed to decrease the pressure on your hand and wrist. You can alternate between using the thumb strap and not for optimal comfort.

Your sling should fit comfortably and not feel binding or tight. It should maintain your shoulder, elbow, and wrist in a relaxed position so you can go about your day-to-day activities.

### Common mistakes to avoid when wearing a shoulder sling include:

1. Wearing the sling too tight
2. Wearing the sling too loose
3. Not exercising neighbouring muscles — be sure to do your exercises as prescribed.



*TOO HIGH*



*TOO LOW*



*TOO LOOSE*



*USE YOUR  
NEIGHBOURING MUSCLES*

## OTHER RESOURCES

**The Health Line ([www.southwesthealthline.ca](http://www.southwesthealthline.ca))**

Access to patient guides and community resources (including publicly-funded physiotherapy clinics) within the South West Local Health Integration Network (LHIN) region of Ontario.

**Canadian Orthopaedic Foundation ([www.whenithurtstomove.org](http://www.whenithurtstomove.org))**

Free patient resources for total joint replacements.

**Middlesex Hospital Alliance Orthopaedic Site ([www.mhalliance.on.ca/guide](http://www.mhalliance.on.ca/guide))**

Electronic copies of MHA patient education guides and (soon to come) virtual exercises and sling education.



Please TAKE THIS sheet to your FIRST physiotherapy appointment

## Rehabilitative Care Best Practices for Patients with Shoulder Arthroplasty

	Reverse Shoulder Arthroplasty Rehabilitative Care
<b>General Precautions</b>	<ul style="list-style-type: none"> <li>• No pushing, pulling or lifting greater than 0.5 Kg (weight of a coffee cup) for 6-12 weeks</li> <li>• Repetitive lifting is discouraged</li> <li>• Lifting limit of 5-7 Kg indefinitely, or as recommended by the surgeon</li> <li>• No internal rotation (hand behind back) for 12 weeks</li> <li>• No extension for 2 weeks</li> <li>• Avoid combined movements of extension, adduction and internal rotation</li> </ul>
<b>0-2 Weeks Post-op</b>	<ul style="list-style-type: none"> <li>• The following exercises are initiated (as per surgeon protocols):               <ul style="list-style-type: none"> <li>○ Pendulum exercises</li> <li>○ Postural exercises</li> <li>○ Hand, wrist, elbow, neck AROM</li> </ul> </li> <li>• Sling should be worn at all times except for bathing and under the direction of the physiotherapist</li> </ul>
<b>2-6 Weeks Post-op</b>	<ul style="list-style-type: none"> <li>• The following exercises are initiated (as per surgeon protocols):               <ul style="list-style-type: none"> <li>○ Progress shoulder PROM to AAROM to AROM, as tolerated</li> <li>○ Periscapular muscle strengthening</li> <li>○ Progress to submaximal pain-free deltoid isometric strengthening</li> </ul> </li> <li>• Sling should be worn at all times up to 4-6 weeks, except for bathing and under the direction of the physiotherapist</li> <li>• Maintenance of general fitness would be beneficial, such as stationary bike or walking</li> </ul>
<b>6-8 Weeks Post-op</b>	<ul style="list-style-type: none"> <li>• Sling is no longer required</li> <li>• The following exercises are initiated (as per surgeon protocols), except as directed in the general precautions:               <ul style="list-style-type: none"> <li>○ Progress to rotator cuff isometric strengthening</li> <li>○ Shoulder AROM in all directions</li> </ul> </li> </ul>
<b>8-12 Weeks Post-op</b>	<ul style="list-style-type: none"> <li>• Initiate light functional activities, including modified occupational duties</li> <li>• The following exercises are initiated (as per surgeon protocols):               <ul style="list-style-type: none"> <li>○ Strengthening of hand, wrist, elbow</li> <li>○ Shoulder girdle stabilization</li> <li>○ Progress general fitness activities</li> </ul> </li> </ul>
<b>12-16 Weeks Post-op</b>	<ul style="list-style-type: none"> <li>• Progress to shoulder resistive strengthening exercises, as tolerated</li> <li>• Functional exercises based on work and/or functional demands</li> <li>• Advancement of proprioception exercises</li> </ul>
<b>16+ weeks Post-op</b>	<ul style="list-style-type: none"> <li>• Transition from supervised therapy to independent home exercise program</li> <li>• Progression toward return to functional and recreational activities within limits, as identified by progress made during rehabilitation and outlined by surgeon and physiotherapist</li> </ul>