

# Breast Reconstruction Surgery

Patient guidebook on  
Enhanced Peri-operative Care (EPOC)

Date of surgery: \_\_\_\_\_



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## Introduction

Breast reconstruction is a major surgery performed by highly skilled specialist surgeons. Our medical team strives to ensure a safe surgery with the best outcome for you. However, your understanding and participation in your treatment is key to achieving the best results.

This guidebook aims to help you understand and prepare you for the upcoming surgery. Your doctors and nurses will guide you throughout the entire process, from pre-surgery preparations to post-operative recovery. This guidebook will also provide guidance on how you can actively contribute to your recovery. Our goal is to help you be prepared both physically and mentally for the journey ahead, and to ensure a seamless surgical experience and comfortable recovery period.



### **Important note:**

Please bring this guidebook with you to the following appointments:

- Anaesthesia, Pain Management Clinic (APAC) counselling
- EPOC nurse counselling
- Nutrition and Dietetics service
- Physiotherapy

### **Things to bring to your APAC appointment:**

- Current medications that you are taking, including the packaging
- Any medical investigation reports done in private hospital or clinic settings

## Understanding your surgery

Surgery	What is it	Duration of procedure/ Length of hospital stay
<input type="checkbox"/> Pedicled Transverse Rectus Abdominis Myocutaneous (pTRAM) Flap	Ellipse of skin and fat transposed up from the lower abdomen along with one side of the rectus muscle. Horizontal abdominal wound is sutured close.	4-6 hours procedure/ 5-7 days stay
<input type="checkbox"/> Free Transverse Rectus Abdominis Myocutaneous (fTRAM) Flap	Similar to pTRAM flap, except tissue is completely detached from abdominal region. Flap is re-attached to blood vessels in the chest/axilla.	8-12 hours procedure/ 5-7 days stay
<input type="checkbox"/> Deep Inferior Epigastric Perforator (DIEP) Flap	Ellipse of skin and fat is harvested from the abdomen without any rectus muscle. Flap is re-attached to vessels in the chest/axilla.	8-12 hours procedure/ 5-7 days stay
<input type="checkbox"/> Implant Reconstruction	May be performed with a Latissimus Dorsi (back muscle) flap, and/ or with Acellular Dermal Matrix (ADM). Done as a single or 2-stage procedure (with tissue expander).	2-4 hours procedure/ 1-2 days stay
<input type="checkbox"/> Others	<p>Latissimus Dorsi (back muscle and skin) flap maybe performed alone or with an implant for skin/soft tissue coverage.</p> <p>In selected cases (eg: locally advanced cancer or patients who are unfit for flap surgery), skin grafts maybe used to cover raw exposed wounds after cancer has been surgically removed. Skin grafts are usually harvested from either thigh.</p>	2-4 hours procedure  1-2 hours procedure

# Preparing yourself for surgery

## Pre-operative anaesthesia assessment

The doctor or nurse at APAC will perform a pre-operative anaesthesia assessment to ensure that you are suitable and ready for the surgery. They will also provide you information on different types of anaesthesia and pain management options during and after your surgery, based on your health profile. The best and safest routes for anaesthesia and pain management will be recommended for you after the assessment.



## Stop smoking and alcohol

Smoking and alcohol consumption can cause complications, such as infection and flap failure, after your surgery and result in a slower recovery. Please let us know if you are keen to stop smoking before your surgery and we can support you through this journey.



You should stop smoking and alcohol consumption at least 2 weeks before your surgery. This will help your body to heal faster from the surgery.

## Eating well and eating right

Nutrition plays a crucial role before surgery because it affects the speed of your recovery. Remember to consume a well-balanced diet consisting of rice, meat and vegetables.

Avoid supplements and traditional medications 2 weeks before your surgery, unless prescribed by your doctors. Please consult with your doctor if you need any clarification.



## Staying active

Undergoing a major surgery is like running a marathon as the body is subjected to high levels of stress. It is recommended that you optimise your fitness by exercising regularly before your surgery. Simple exercises like a 15 to 30 minute walk is better than being physically inactive. Staying fit will enhance your recovery from surgery and likely help you to return to normal activities faster.

Here are some exercises that would be useful for you:

<p>□ Knee extension:</p>  <p>20 repetitions 3 times a day</p> 	<p>□ Quadriceps tightening</p>  <p>10sec hold, 10 repetitions 3 times a day</p> 
<p>□ Bridging:</p>  <p>5 sec hold, 10 repetitions 3 times a day</p> 	<p>□ Sit to stand:</p>  <p>Place your hands on the arm-rests or on your thighs for some support. Slightly lean forward to stand. Sit back down, slowly.</p> <p>20 repetitions, 3 times a day</p> 

Endurance exercises like walking, cycling or swimming will also be beneficial in improving your body's condition for the surgery. Do ensure that you work within safe intensity levels while you are exercising. Always consult your doctor or physiotherapist if you are unsure of how much you can do.

## On the day of surgery

One day before your surgery, you will receive a call from our staff and be advised on the reporting details.

Here's what to expect on the day of your surgery:

### 1. Registration at the Short Stay Unit (SSU)

Please arrive at the SSU and register yourself for the surgery. Once registration is completed, our nurses will attend to you shortly and direct you to an assigned bed.

### 2. Pre-operative preparation at the Prep Holding Area

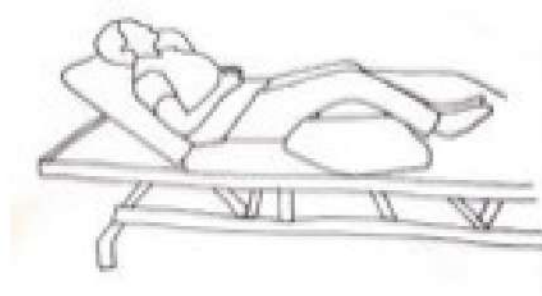
Your nurse-in-charge will provide you with instructions to change into a hospital gown and remove your jewellery and belongings for safekeeping. Your nurse will also gather information from you to ensure you are fit for the surgery. The surgical team will complete the final assessment to review your health condition. The surgical nurse will then bring you to the induction area.

### 3. Induction area

The anaesthetist will set an intravenous cannula and then prepare you for anaesthesia administration. From there, the surgical team will bring you to the operating room and prepare you for surgery.

### 4. Post-surgery monitoring at the Post Anaesthesia Care Unit (PACU)

After the surgery, you will be sent first to the Post Anaesthesia Care Unit (PACU) for close monitoring before being transferred to the ward. You may be given oxygen through a mask or a tube in your nose to help you feel better. You may also have intravenous drip, urine tube or drains from your surgery site. You will be encouraged to do early leg movements and exercises on the bed at the recovery unit once you have woken up from your surgery. If you had undergone the pTRAM Flap procedure, you are required to wear an abdominal binder and required to lie on a jack-knife (head up, knee up) position on the first few days after your surgery.



## After surgery

### Resuming normal diet

This begins as early as the day after surgery to meet your increased nutritional needs. You should gradually increase your oral intake by starting with fluids and nutritional drinks prescribed by doctor, then progress to eating normal food.

Inform your doctor or nurse if you experience any nausea or abdominal discomfort.

### Resuming daily activities

You are expected to sit out of bed for at least 3 hours a day on the day after surgery. Sit or walk at least 6 hours a day in the subsequent days after your surgery. Your nurse and physiotherapist will assist you in resuming your normal daily activities after your surgery.

It is important to start planned mobilisation through physical activities and arm exercises as soon to prevent complications after the surgery, such as abnormal postures (e.g. hunched back), pain, seroma, hematoma, surgical site infection, fatigue, reduced circulation, skin tightness over chest wall, restricted shoulder range of motion, joint pain and lymphedema. Actively doing post-operative exercises can help reduce the negative effects of these complications.

The primary goal for yourself and your medical team after the surgery is for you to regain normal range of motion.

Doing simple arm exercises after breast surgery help to:

- Reduce swelling, promote tissue healing
- Reduce chest and shoulder tightness
- Achieve full shoulder range of movement,
- Prevent frozen shoulder
- Prevent lymphoedema
- Improve posture and restore overall physical mobility



It is also important to start moving out of bed and walking as soon as you are able, to prevent complications such as chest infections and blood clots from forming in the veins of your legs.



### **When do I start exercising?**

Exercises and moving out of bed will usually be allowed after the surgery. On the first day after surgery, your physiotherapist and or nurse will assist you to move out of bed and walk once you are deemed fit to do so. Patients who have undergone mastectomy or breast reconstruction may be advised to rest in bed in a special position for up to 48 hours.

If you are prescribed with an abdominal binder, it is important that you wear it before moving out of bed.

### **What precautions should I take?**

Protective posturing due to pain and inactivity can lead to a frozen shoulder. Hence, try to maintain a good posture. You should try to use your arm for normal everyday activities (e.g. eating, drinking, brushing your teeth, picking up light objects), within limits of discomfort. It is normal to feel gentle stretching, but stop your activity if you feel any pain.

If you have a drain inserted or have a large surgical scar (e.g. undergone breast reconstruction), refrain from raising the arm of the operated side above your shoulder level until the drains are removed and the wound is completely closed, which may take up to 2 weeks. You should also:

- Avoid carrying or lifting loads more than 1.5kg for 4 to 6 weeks after surgery
- Avoid jumping or jogging activities for 6 weeks after surgery
- Avoid swimming for 6 to 10 weeks after surgery. Your physiotherapist, nurse or doctor will advise you on when you can return to swimming and the strokes permissible after surgery.

### **How do I start exercising?**

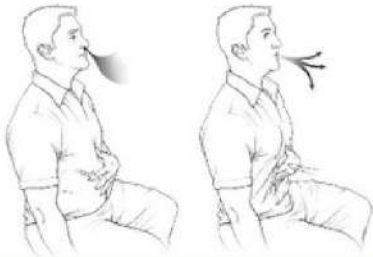
- Each mobilisation stretch or exercise is coordinated with a relaxation breath. (A relaxation breath is breathing in through the nose and slowly exhaling through pursed lips for a count of 6 to 8. Stretching is done on the exhaled breath.)
- Perform the exercise in a smooth motion and avoid jerky movements.
- You may wish to take your pain relief medication prior to exercise. Mild and gentle stretching discomfort are expected during exercise.

Stop exercising when:

- You feel pain or discomfort during or after exercise. Please consult your physiotherapist or doctor if the pain persists after stopping.
- You notice seroma (collection of fluid) under your arm, in your breast or in your chest wall
- Any wound infection or problems healing as advised by your doctor and nurse

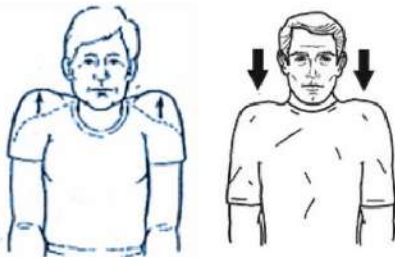
## Useful exercises

### 1. Deep Breathing exercises:



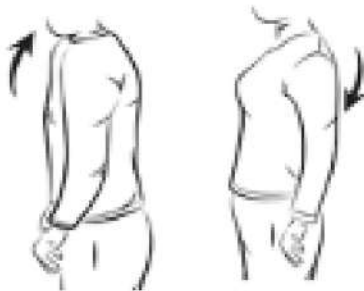
- Breathe in through nose for a mental count of 4
- Breathe out through lips for a mental count of 6 to 8
- Repeat 4 times, complete 4 sets per day

### 2. Shoulder Shrugs



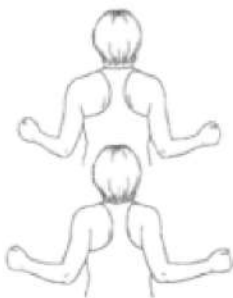
- Place arms down along the side of body
- Breathe in, raising shoulders to ears holding for 1 second
- Breathe out, lowering shoulders
- Do 10 repetitions, 2 sets, 3 times a day

### 3. Shoulder Circles



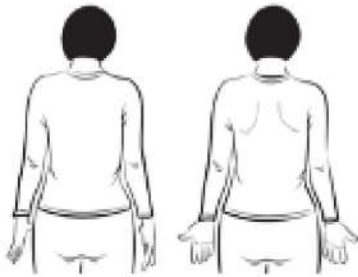
- Stand or sit comfortably with your feet supported and arms relaxed at your sides
- Bring your shoulders forward, up backward, and down. Try to make the circle as large as you can and move both shoulders at the same time
- Breathe in while rotating shoulders up and back
- Breathe out as you lower shoulders
- Do 10 repetitions, 2 sets, 3 times a day

### 4. Shoulder Arm Rotation



- Place arms down along the side of body
- Rotate palms and entire arm back and forth
- Do 10 repetitions, 2 sets, 3 times a day

### 5. Shoulder blade squeeze



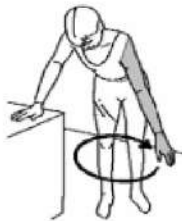
- Sit or stand facing straight ahead. Your arms should be at your side with your palms facing inwards
- Open your chest, gently squeeze your shoulder blades towards your spine and down and rotate your thumbs so your palms face forward
- Hold for 5 to 10 seconds whilst slowly breathing
- Relax and return to start position
- Do 10 repetitions, 2 sets, 3 times a day

### 6. Chest fly



- Place fingers on ears
- Breathe in as you open and gently bring elbows back, stretching the chest muscles
- Breathe out and slowly bring elbows forward to center of chest
- Do 10 repetitions, 2 sets, 3 times a day

### 7. Shoulder Pendulum



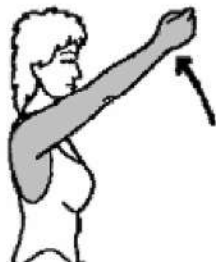
- Stand leaning against a table with your good hand
- Relax your arm on the operated side
- Swing your arm as if you are drawing a circle on the floor
- Change Direction
- Do 10 rounds, 2 sets, 3 times a day

### 8. Hand behind back



- Stand upright
- Hold your affected arm (at wrist level) with the other hand
- Pull your affected arm across the body and upwards
- Do 10 repetitions, 2 sets, 3 times a day

### 9. Assisted Shoulder Elevation



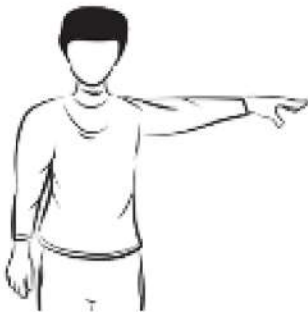
- Sit or stand
- Lift your arm up to \_\_\_ degree, let your thumb lead the way
- Progress to full range only after \_\_\_ weeks or only after your drains are removed
- Do 10 repetitions, 2 sets, 3 times a day

## 10. Forward Wall Crawls



- Stand facing the wall, making sure you are standing tall and your shoulder blades are back and down
- Place both hands on the wall and crawl your fingers up the wall until your elbows are the same height as your shoulder, or until you feel a stretch
- Slide your fingers back down the wall
- Progress to full range only after advice from your doctor or physiotherapist
- Do 10 repetitions, 2 sets, 3 times a day

## 11. Side Wall Crawls



- Stand with your operated side to the wall
- Crawl your fingers up the wall until your elbow is the same height as your shoulder, or until you feel a stretch
- Return to the starting position by crawling down the wall
- Progress to full range only after advice from your doctor or physiotherapist
- Do 10 repetitions, 2 sets, 3 times a day

Eating well and resuming physical activities after surgery aids in speed up your recovery and reduce the risk of complications.

### Pain relief

Good pain control is essential for a speedy return to normal activities. You should be able to move around the ward and eat without excessive pain.

Your doctors and nurses will ask you regularly about your pain score (scale of 0 to 10) and administer your analgesia accordingly.



0

Does not hurt



2

Hurts a little bit



4

Hurts a little more



6

Hurts even more



8

Hurts a whole lot



10

Hurts worst

## Wound care

Our nurses will ensure that you are confident in looking after your wound dressing before going home. You should try to keep your dressing dry and intact until the wound is reviewed in the clinic.

## Drain care

You will have few surgical drains (3-4) inserted during the operation. Nurses will teach you and your caregiver how to measure and chart your drain output before discharge. You should feel confident in looking after your drains before going home.

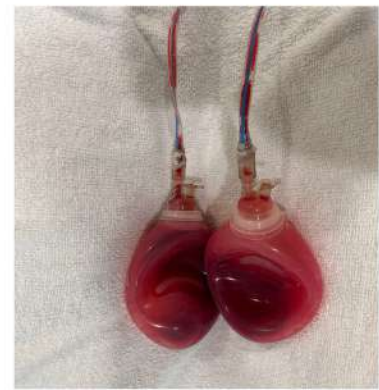
A Blake drain is a round, flexible system that can be carried around. It is used for closed wound drainage, to drain blood and other fluids from your wound post-surgery. This helps to prevent infection and speed up wound healing.

Your drain usually lasts between 2 to 3 weeks, but may last longer depending on your drainage amount.

### You should empty your drain at least 3 times a day:

- Once in the morning
- Once in the afternoon
- Just before you go to bed, or whenever it is half full

You should also empty the drain when there is no vacuum in the bottle (when the bottle is bulge up).



Utilise the drain chart in pages [<page numbers>](#) to chart the amount of drain output when you are at home. Please bring along this booklet for all of your follow up appointments. Your surgeon will review the drain chart to decide on the appropriate time to remove the drains.

## Discharge from the hospital

Our goal is to ensure a smooth and swift recovery from your surgery and minimise the duration of your hospital stay. You will be discharged from hospital once you are competent in managing your drains and your pain is adequately controlled with oral medications.

You will be given a follow-up appointment to see your breast and plastic surgeon at the Specialist Clinic.



## Steps to empty your blake drain(s)

<p>1. Wash your hands with soap and water</p>	
<p>2. Prepare 70% alcohol swabs, a measuring cup and your Wound Drainage Record Chart.</p>	
<p>3. Holding the tubing together with the bottle and flip open the plug from the bulb.</p>	
<p>4. Once the bulb is inflated, turn your bottle upside down over the measuring cup.</p>	
<p>5. Squeeze the drainage bulb gently and empty the content into the measuring cup</p>	
<p>6. Once empty, fold the bulb into half and squeeze all the air out.</p>	
<p>7. Clean the emptying port with alcohol swabs. Close the cap.</p>	
<p>8. Secure the cap with a tape. Do not dangle the drain and carefully put it back into your pocket.</p>	
<p>9. Record the date, time, amount and color of the fluid in your chart.</p>	
<p>10. Flush the fluid into the toilet bowl. Rinse the measuring cup.</p>	
<p>11. Wash your hands with soap and water.</p>	

**Drain chart**

<b>Date/Time</b>	<b>Drain 1</b>	<b>Drain 2</b>	<b>Drain 3</b>	<b>Drain 4</b>	<b>Remarks</b>

**Drain chart**

Date/Time	Drain 1	Drain 2	Drain 3	Drain 4	Remarks



## After discharge

### What you can eat

You can eat and drink normally after returning home. It is normal to have reduced appetite for a period of time after the surgery, but this should gradually improve.

### Managing pain at home

You will be given oral painkillers upon discharge to help you reduce your pain and aid in your rehabilitation.

### Continuing activity and movement

You should continue to stay active at home. Shoulder and arm exercises are allowed on the operated side. Gentle circular movement of your shoulder and elbow joints are encouraged to prevent swelling and stiffness. Avoid lifting heavy loads for about 2 months after your surgery. Wear your abdominal binder as much as possible to provide support especially when you are moving about.

### Things to take note of

If you experience severe pain, fever, nausea or repeated vomiting, please contact us immediately or visit the Emergency Department.

You should also visit the Emergency Department immediately if you experience breathlessness or notice fresh bleeding from surgical wound or drains.

For any enquiries about this booklet, please contact us at 6363 3000.



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This brochure is produced for educational purposes and should not be used as a substitute for medical diagnosis or treatment. Please seek the advice of a qualified healthcare provider before starting any treatment or if you have any questions related to your health or medical condition.

Information shared is accurate as of April 2024 and subject to revision without prior notice.



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