Patient Information Booklet

Peritonectomy Surgery and Hyperthermic Intra-Peritoneal Chemotherapy (HIPEC)

This booklet has been reviewed by patients and consumers through the Sydney Local Health District Community Participation team.

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This information booklet is a guide for patients who will be undergoing Cytoreductive Surgery and Hyperthermic (heated) Intra-Peritoneal chemotherapy (HIPEC) at Royal Prince Alfred Hospital (RPAH). You may also hear the surgery referred to as Peritonectomy surgery. Your family members or carers may also find it helpful to read this booklet.

It includes information about the surgery and information about the hospital. This information should be used as a guide to help you prepare for surgery and for your recovery afterwards. You will be given extra information by hospital staff about your individual needs.

There is some medical terminology in this book. Please ask your treating team if you have any questions about this information.

Your care is important to us, if you have any questions or concerns please speak to your doctor, nurse, or clinical care coordinator.

WHAT IS PERITONECTOMY SURGERY AND HIPEC?

Cytoreductive or Peritonectomy Surgery & Hyperthermic Intraperitoneal Chemotherapy (HIPEC) is a procedure used to treat cancers that involve the peritoneal lining of the abdomen. The peritoneum is a thin lining that covers the small and large bowel and internal organs of the abdomen as well as the inside of the abdominal wall.

There are certain cancers that either begin in, or spread to the peritoneum such as, appendiceal cancer, pseudomyxoma peritoneii, colorectal cancer, ovarian cancer, peritoneal mesothelioma and gastric cancer which can be treated with peritonectomy surgery and HIPEC. Traditional chemotherapy given via tablets or intravenously is less effective when the tumour is on the surface of the abdominal wall and organs. This means that peritoneal disease can be a challenge to treat. Peritonectomy surgery and HIPEC has been around since the early 1980s and there is growing evidence that it can improve survival rates and quality of life in a select group of patients with cancers that have spread to the peritoneum.

CYTOREDUCTIVE SURGERY

The first part of the peritonectomy procedure is to perform cytoreductive surgery which is the removal of all visible disease inside the abdominal cavity. The operation is usually performed through an open incision in the middle of the abdomen. When removing these tumours, it is sometimes necessary that other organs be partly or completely removed. This is only done if the tumour cannot be separated from the organ's surface. Organs that may need to be partly or completely removed include small or large bowel, omentum, spleen, stomach, gallbladder, bladder and female reproductive organs (ovaries, uterus, fallopian tubes). When part of the small or large bowel is removed sometimes there is a need for a stoma to be formed (colostomy/ileostomy) with bowel contents draining into a bag on the abdomen surface. Stomas may be temporary or permanent depending on the extent of surgery and your circumstances. The amount of surgery needed to remove all visible tumours, varies a lot between different patients and it depends on the extent of the disease.

HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY (HIPEC)

After all the visible tumour has been removed, the abdominal cavity is treated with Hyperthermic Intraperitoneal Chemotherapy (HIPEC) which aims to destroy any remaining microscopic cancer cells. During HIPEC, a heated chemotherapy solution is delivered into the abdominal cavity for about 60 minutes during the operation. Only a small amount of the chemotherapy is absorbed so higher doses can be used without the systemic side effects that can occur with traditional chemotherapy. The chemotherapy is heated to 42-43

degrees Celsius as this increases its effectiveness in destroying cancer cells. The type of chemotherapy used depends on the type of cancer that we are treating.

EARLY POSTOPERATIVE INTRAPERITONEAL CHEMOTHERAPY (EPIC)

Some types of tumours such as pseudomyxoma peritoneii may also benefit from additional chemotherapy into the peritoneal cavity in the following 1-4 days after surgery which is delivered through a catheter that is inserted into your abdomen at the time of surgery. This chemotherapy is not heated and if used, it will be given when the patient is in the Intensive Care Unit (ICU) post operatively.

THE RISKS OF PERITONECTOMY SURGERY AND HIPEC

Peritonectomy surgery & HIPEC is a major operation and as with all major surgery, complications can arise. Some of the complications that we see are:

- Bleeding that may require blood transfusion
- Infection
- Formation of blood clots in the legs known as deep Vein Thrombosis (DVT) or blood clots that can travel to other parts of the body such as the lungs known as a Pulmonary Embolism (PE)
- Wound breakdown
- Development of an enterocutaneous fistula (a communication between the bowel and the abdominal skin)
- Anastomotic leak where there is a leak of bowel contents where sections of the bowel are surgically reconnected

A small number of patients will develop serious complications such as organ failure that may require a return to the operating theatre or a return to ICU for support.

Your doctor will discuss Peritonectomy surgery and HIPEC with you at length as well as the complications before you come into hospital.

DECISION MAKING

Your surgeon may have talked to you about Peritonectomy surgery and HIPEC and you may now have some idea what this involves.

The details of the surgery will be unique to your situation. You may have decided to go ahead or you may still be unsure.

The decision whether to have surgery can be difficult, and it is important that you have all the information you need to make an informed choice. It is ok to take time to make sure you are comfortable with your decision.

We encourage you to speak to your surgeon and nurse about any concerns or questions you may have.

You may also wish to discuss this with a trusted family member or friend, or the psychologist on the team.

TIP: You might find it helpful to write down any questions you have in the space below when you come to your next appointment with your surgeon or medical team.

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MEET THE TEAM

You will be meeting a number of health professionals during your hospital stay. The following information will help you understand the role of each staff member.

MEDICAL TEAM:

- Colorectal Consultants (Surgeons)
- Other Consultants (this may include Gynaecology-oncologist, Upper Gastro-intestinal Surgeon)
- Surgical Fellows
- Surgical Registrars
- Senior Resident Medical Officers
- Interns

A member of your medical team will visit you daily - Monday to Friday. Weekends are covered by an on-call consultant.

Please note that although all these health professionals may be involved, your lead surgeon ultimately makes decisions about your medical care.

If you or a family member or carer, has any concerns or issues about your care, an appointment can be made for the medical team to answer your questions at an agreed time.

If you have questions about your day to day care, please ask your nurse on duty or the Peritonectomy Clinical Nurse Consultant.

NURSING TEAM:

Nursing staff work four shifts:

Morning: 7am – 3.30pm	
Mid-shift: 9am – 5.30pm	
Afternoon: 1.45pm – 10:30pm	
Night: 9:45pm–7:45am	

The nursing team includes:

- Nurse Unit Manager (NUM) is in charge of the running of the ward
- Peritonectomy Clinical Nurse *Consultant* will work with you to coordinate your care before and after your surgery and can answer questions you may have.
- Clinical Nurse Specialists (CNS) are experienced nurses who have specialised in colorectal nursing.
- Registered Nurses (RN)/Enrolled Nurses (EN) provide your daily nursing care
- Stomal Therapy Nurses work with you to assist in managing your stoma (colostomy/ileostomy)

Nurses wear the NSW Health uniform which consists of navy pants / skirts and different coloured tops, according to their role:

Role	**Uniform**
Nursing Unit Manager	White with blue and black stripes
Clinical Nurse Consultants	Light Blue and dark blue stripes / Navy Scrubs
Clinical Nurse Specialists	Navy Blue Scrubs
Registered Nurses	Navy Blue Scrubs
Enrolled Nurses	Navy Blue Scrubs with a light blue edging on sleeve
Assistant in Nursing	Royal blue scrubs

ALLIED HEALTH TEAM:

The allied health team includes:

- Clinical Psychologist will discuss your cancer journey, past and current coping strategies and utilising supports to aid your recovery
- Dietician will help you optimise your nutrition before your surgery and provide nutrition support after surgery to assist with your recovery
- Physiotherapist will work with you towards your goals of moving around again after surgery, which may include sitting exercises, walking and exercises in the ward gym
- Social worker will provide you, your family and friends with emotional support, and will also organise practical support if extra assistance is required upon leaving the hospital. The Social Worker may also be able to assist with concerns regarding immigration, welfare, housing and transport.
- Occupational Therapist will work with you in hospital to enable you to participate in your everyday activities. They will practice those activities which you may need or want to do in order to be discharged from hospital. For example, showering, dressing and small meal preparation.

Depending on your individual needs, you may also see:

- Aboriginal Liaison Officer
- Adolescent or Youth worker
- Drug & Alcohol Services
- Interpreter Services
- Hospital Volunteers
- Ministers of Religion
- Palliative Care Services
- Pharmacist
- Speech Therapist

RPAH acknowledges the importance of your cultural and religious needs and will take this into consideration wherever possible regarding your care.

If you require further assistance from one of these staff members please let your nurse know.

SUPPORT STAFF:

You may also see these staff around the ward:

Position	Role	Uniform colour
Ward Clerk	Carries out administrative duties for the smooth running of the ward	Purple
Clinical Support Officer	Administration for NUM and Colorectal Unit	Purple
Ward Assistant	Assists with general ward daily tasks	Green
Porters	Transfer patients through the hospital	Green and navy
Cleaning staff	General cleaning around ward areas	Green and navy
Dietitian assistants	Assist with choosing food menu	Navy and white
Kitchen staff	Deliver your meals	Green and navy

PLANNING TO COME TO HOSPITAL

You have met some of the team at your appointment with the surgeon and are thinking about coming in to hospital for your admission. Here are some ideas to help you prepare.

- Book/magazines – you may not feel like reading in the first few days after surgery, but you might find you need some entertainment
- Ipad/headphones – if you are travelling to Sydney to get to RPA, valuables can be locked away while you are in surgery and ICU. If you are local, consider asking someone to bring these things in for your during your ward stay
- Phone – have you got credit for your phone
- Small amount of money for newspaper or something from the café
- Toiletries and pyjamas
- Cushion/pillow – a favourite item from home can be a comfort
- Photos/soft toy – small reminders of home you may want on your bedside
- Eye mask/earplugs – sometimes it can be difficult to fall asleep in a shared room. Eye mask or earplugs may help

PRE-ADMISSION CLINICS

1. Peritonectomy Pre-Admission Clinic
Suite 410, Level 4 at RPA Medical Centre

You will be provided an appointment at the peritonectomy pre-admission clinic prior to surgery. It may be a few weeks before surgery, or less, depending on your appointment date with the surgeon.

Here you will meet with more staff on the peritonectomy team for specific information and an assessment of your current situation.

- Clinical Nurse Consultant
- Clinical Psychologist
- Dietician
- Pharmacist
- Physiotherapist
- Occupational Therapist
- Social Worker
- Stomal Therapy Nurse (if applicable)
- Pain Specialist (if applicable)

Please allow 2 hours to be spent at the clinic. We suggest that you have something to eat and drink before you come and bring something to keep you entertained!

2. RPA Pre-admission clinic:
Level 2: RPA Medical Centre

You will also be required to attend a GENERAL pre-admission clinic at RPA Medical Centre prior to surgery. At this clinic, you will meet:

Anaesthetist: the anaesthetist will assess your overall health to ensure that you are fit to undergo major surgery. They will also provide you with information about your pain management options.

Resident Medical Officer (RMO): the RMO will ask about your medical history. Please bring a list of all your medications, x-rays and relevant letters as it will help us understand your previous medical problems and provide you the best possible care.

Peritonectomy Clinical Nurse Consultant (CNC): you will meet with the CNC and have a chance to discuss your upcoming surgery and hospital stay.

Stomal Therapy Nurse: The stomal therapy nurse will discuss managing a stoma (colostomy/ileostomy) - if relevant to your situation.

Clinic Nurse: the nurse will check your blood pressure, heart rate, oxygen saturation and height and weight. They will also organise a routine ECG, chest x-ray and blood tests.

*If you are on blood thinning medications such as *aspirin*, *warfarin* or *Plavix*, they will need to be stopped prior to surgery; this is usually the week before.

Please allow 3-4 hours to be spent at the clinic. We suggest that you have something to eat and drink before you come and bring something to keep you entertained!

If you have a chronic medical condition such as *asthma or diabetes*, these will need to be managed as best as possible prior to surgery. You may be required to see your specialist in these areas before your surgery can go ahead.

Smoking increases the risk of post-operative lung infection and impairs wound healing. We encourage you to consider quitting. Please speak to your GP about the role of nicotine patches.

DAY BEFORE YOUR OPERATION

Bowel Preparation: A bowel preparation is a medicated drink that allows the bowel to be cleansed and emptied. Whether you are required to have the bowel preparation depends on your surgeon and the type of surgery you are having. If you do need a bowel preparation, information on how to take it should be given to you by your surgeon.

All bowel preparations are to be taken the day before surgery. We recommend that once you have taken the preparation you remain at home and near a toilet. **If you are required to have a bowel preparation you may only drink clear fluids the day before your operation.**

Fasting: All patients are required to fast before an operation to reduce the chance of food inadvertently entering their lungs, which may cause lung infections.

Strictly no food after 12am (midnight) the night before your operation. You can have clear fluids up until 6am the day of the operation

Skin preparation: Patients, who are hairy, will have their hair clipped by their surgical team on the day of the surgery. Please do not attempt to shave this area at home yourself as this may lead to minor abrasions which could increase the risk of post-operative wound infection. A liquid soap called Avagard (Triclosan) is used as an antiseptic pre-operative wash.

You need to wash yourself in this soap from head to toe the night before, or morning of surgery. This will be provided to you at the Pre Admission Clinic.

Confirmation: you need to contact the Peri-Operative Unit on:

9515 4603 or 9515 4604

Between 3pm – 7pm on the afternoon before surgery, (or on Friday if your surgery is scheduled for a Monday) to confirm what time you need to come into hospital. You can expect this to be around 6-7am.

DAY OF YOUR OPERATION

At home: Before leaving home we suggest you shower. After your shower do not apply any creams, powders, deodorant or makeup.

Admission: On arrival to the Peri-operative Unit (level 3) you need to check in with the clerical staff. A nurse will complete your nursing admission. You will then be asked to wait in the waiting area. Please be aware things can feel like they move quite quickly once you are called.

When the surgeon calls for you, the nurse will take you to change and prepare for surgery. Operating times are only approximate and it is difficult to give you the exact time for the operation.

Operating theatre: From admissions you will be transferred to the anaesthetic bay of your operating theatre where you will receive anaesthetic via a cannula. Once you are asleep under anaesthesia, calf compressors (foam pads or compression stockings) will be applied to help prevent blood clots in your legs. Surgery will then be performed. When the operation is finished, you will be transferred to Intensive Care Unit (ICU) where you will be closely monitored while you wake up from the anaesthetic.

ICU- You will need to be 'intubated' which means having a tube to assist you breathe when you first go to ICU. You will be kept asleep over the first night following surgery, giving your body a chance to rest and allowing the doctors to get any pain under control. The tube will usually be taken out the next morning.

Once awake after your surgery, you will have a "**PCA"** - Patient Controlled Analgesia. This is pain relief that is delivered intravenously which you can control by pressing a button, to assist in controlling any pain. Your pain level will be reviewed daily and medication adjusted appropriately.

It is not uncommon for people to experience some confusion, delirium, unusual thoughts or visions or nightmares while in ICU. This can be due to the combination of pain medications and an unfamiliar and stressful environment. If any of these things distress you, it is important you speak to your nurse. They are there to help you.

To give your bowel a chance to recover, and to make sure you get all the nutrition you need, you will be started on "**TPN"**- total parenteral nutrition. This is a complete liquid nutrition that is delivered to you intravenously. This will keep you nourished until you are eating and drinking again. Your diet will be slowly upgraded - starting with clear fluids and progressing once your doctor is happy with your progress.

ICU can be overwhelming with lots of staff moving around, equipment you may not have seen before, noise and lights. If you feel worried or anxious please ask staff any questions you may have, they are there to help. Your stay in ICU will usually be 2-3 days.

ICU Visiting hours are **8:30am - 1pm**, and **3pm - 8pm**.

Thursdays only: unit closed 11am-12:30pm

Ward: When stable and a bed is available, you will be transferred to 7E2 - the colorectal ward. This is where you will continue your recovery with the help of the Peritonectomy team. This includes the dietitian, clinical psychologist, social worker, physiotherapist and the specialised nursing team who will attend to all your requirements from dressings to administering medications and assisting you with personal hygiene as well as moving around. You will start to become more active in your recovery in setting goals towards going home.

Because you will have been lying down, often in the same position, for a long time in surgery and in ICU, there is a risk of developing pressure sores. To decrease this risk, you will be transferred onto a special air mattress. This relieves pressure to vulnerable points on your body- e.g. the sacrum, heels and shoulders. The nursing staff will also help with pressure sore prevention by helping you re-position frequently.

As this is a complex surgery there may be the chance of complications post-operatively. This could be developing a fever, wound infection or blood clots. If you develop a more serious complication, your surgeon will discuss a management plan with you.

DISCHARGE

Your care team will ensure you have everything you need in planning for your discharge. They will be discussing your needs from very early on to make sure your discharge is well organised.

The Peritonectomy CNC will discuss your transport needs for getting home. Based on your recovery you may require admission to a rehabilitation facility before you can go home. You may also be eligible for some home services or you may require community nursing for a short period when you return home.

On the day that you are discharged you will be given:-

- An appointment with your specialist, and with other specialists as required
- 5 days' supply of any new medications that may have been started during your stay
- Specific instructions for home
- A letter for your GP detailing your hospital stay. **This should be taken to your local GP within one week of discharge.**
- If necessary, a letter for the community nurses
- Medical Certificate if required
- Any private x-rays that you brought into hospital
- Any valuables that have been stored in security
- The Peritonectomy CNC will organise times to call and check in with you.

Please feel free to discuss, any services you usually need at home or may need after discharge. The discharge time is 10am and you may be required to go to the discharge lounge.

Discharge Lounge

If the person taking you home cannot pick you up before discharge time, or your discharge paperwork and medications are not ready, you will be guided to the Discharge Lounge. This is located on Level 5, near the main entrance. If you are unable to sit for long periods, you will not be moved to the discharge lounge.

This occurs because your bed may be needed for another patient coming into the ward. There is a nurse in the Discharge Lounge who will go through your discharge paperwork, appointments and medications. If needed, medications can be given to you in the Discharge Lounge and meals will be provided.

This Discharge lounge is open between:

Monday – Friday 8am – 6:30pm

AFTER DISCHARGE

It may be helpful to prepare for your return home before you are admitted to the hospital. This may mean cooking extra meals or organising a family member or friend to assist with housework and perhaps to stay with you for a few days. Your physical and psychological recovery will continue after you go home.

Diet: Immediately after a major bowel operation, you should refrain from eating too much raw fruit, raw and leafy vegetables for at least 2 weeks. These foods can be re-introduced slowly as you recover from your operation. It is also important to drink lots of fluid, aiming for 2 litres a day.

Physical activity: You should continue walking and non-strenuous physical activity. You may feel tired and need an afternoon nap. This is normal after a major operation and you should regain your strength over 3 months.

You should refrain from heavy lifting (more than 5 kg) for the first 6 weeks as this will increase your chance of developing an incisional hernia. Depending on whether or not you had laparoscopic or open surgery, you may have to refrain from driving for 4-6 weeks after surgery. Your Clinical Nurse Consultant can help advise you on this.

Appointments: All your follow up appointments will be organised by the Peritonectomy Clinical Nurse Consultant and the team looking after you.

These will include appointments with your surgeon six weeks post-surgery and other relevant surgeons if necessary.

Once home, important things to look out for include**: Bleeding, redness, swelling or discharge from a wound, excessive pain or bloating of your abdomen, nausea and vomiting, difficulty in passing urine or faeces and fever or chills**. If you develop any of these symptoms or have concerns, depending on the degree of urgency, you should either get in touch with the Peritonectomy CNC, or see your GP. If it is after hours you should present to your local emergency department.

About Your Hospital Stay

WARD 7 EAST 2 (7E2)

Ward 7 East 2 (7E2) is a 30 bed ward for male and female patients. Ward 7E2 specialises in patients needing treatment for diseases of their small and large bowel.

7E2 has single rooms and four bed rooms. Please note single rooms are **NOT** private rooms. The room you are given is based on medical and nursing requirements. The Nurse Unit Manager is in charge of bed allocation.

WARD VISITING TIMES:

10am – 1.30pm

and

2.30pm – 8pm

Please note we ask you to only have **2** visitors in the room at a time *during visiting hours*.

No visitors will be allowed into the ward *during rest period* (1:30-2:30pm). However, you are welcome to leave the ward and enjoy the lounge area on level 7 with your visitors if you are well enough to do so.

FOOD & BEVERAGES

KITCHEN FACILITIES

There is a patient kitchen on the ward for you and your visitors to use. You may make tea and coffee, and use the microwave and refrigerator.

Friends and family are welcome to bring in food or drinks for you to have, if approved by your medical team.

Please label all items you put into the fridge. Unfortunately the ward staff cannot take responsibility for any food placed in the fridge.

Please note that any meals that the hospital kitchen provides are not to be heated up in the microwave. If the meal you have received is too cold please tell your nurse.

WARD MEAL TIMES:

Meals will be delivered to your bedside at the following times (approximate times):

Meal	**Time**
Breakfast	7:45am
Morning Tea	10am
Lunch	12:30pm
Afternoon Tea	3:30pm
Dinner	5:15pm
Supper	7:00pm

HOSPITAL SERVICES

HOSPITAL CHAPEL

The Hospital Chapel and multi-faith prayer room is available for patients and visitors. Please ask staff for directions.

PARKING:

There are a number of parking options available at RPA. Prince Alfred car park parking lot is located off Carillon Avenue and entry via New Hospital Road. There is some metered parking on Missenden Road in surrounding streets. Please allow extra time to find suitable parking if needed.

Disabled parking spaces are available outside the main entrance to RPA on Missenden Road, the KGV Executive Building opposite the Main Entrance, the Women & Babies entrance on Johns Hopkins Drive and at the Gloucester Drive Entrance.

If you need to attend hospital regularly for appointments and you are experiencing financial difficulties you can apply for an access card to the hospital car park through the Social Work Department.

Patients can be dropped off or picked up at any of the timed drop off zones outside the main entrance points to the hospital.

TELEVISION

All beds have a television, which is available for hire. The rental services representative visits the ward twice a day to organise rentals. If you would like to hire the television, please speak to the ward staff and they will give you the rental form to complete. Hire costs are about $9/day but there are special long term rates available. Discounted rates apply for pensioners. Certain Private Health Insurance companies may cover this fee.

The hospital has its' own TV Channel (25) for your information and interest.

TELEPHONES

There is a public telephone on level 9 located near the lounge area. There are also public telephones located on level 5, near the enquiry counter. You can use both coins and telephone cards in these telephones.

All bedsides have a telephone for you to receive incoming calls. The direct number is above your bed. These incoming calls are free; however, if you would like to make outgoing calls from your bedside telephone you will need to purchase a phone card at the cashier's office which is located on level 5.

SECURITY

It is recommended you leave all valuables e.g. jewellery, computers, wallets at home. You are responsible for all items that you bring into hospital. Cash of more than $20 cannot be kept on the ward. The ward staff will contact security to come and collect additional cash or valuables. A receipt will be given to you and your valuables will be taken away and locked up in the security department. Other items can be temporarily locked away on the ward when you need to go for a procedure. Please inform the staff as soon as possible if you would like to have any of your valuables locked on the ward or sent to security.

The security office is opened 24hrs and is located on level 5. You are allowed access to your valuables anytime.

The Terrace CAFÉ

Located on level 4. There is seating outside.

Opening Hours: Monday – Friday: 7am – 2.30pm

Saturday – Sunday: Closed

Alfredo Deli CAFÉ

Located on Level 5. There is no outside seating.

Opening Hours: Monday – Friday: 7am - 11pm

Saturday – Sunday: 8am - 10pm

….The next section includes more about aspects of your recovery….

Keep reading

MANAGING YOUR PAIN

Before the operation:

You will likely experience some pain after your cytoreductive surgery. The Pain Management team at Royal Prince Alfred Hospital is dedicated to managing your pain.

Successful pain control requires your dedication as well. This starts before your operation.

I highly recommend that you purchase a book that will help you manage your pain in the short and long term – *Rewire Your Pain,* by Stephanie Davies. Just by reading it can help to change your pain.

Go to www.painaustralia.org.au and type in "*Rewire your Pain*" in the search field. The book is $30 to order.

Managing pain medications:

You may be taking pain medications already. Try not to make major changes to these before surgery unless guided by your General Practitioner or Specialist.

For those people taking opiates such as Targin, Endone, MS Contin or Oxycontin, discontinuing them, or reducing them will cause a withdrawal syndrome. This can occur before, during or after your hospital stay.

You will notice 1) more pain than you had before, 2) feeling grumpy and anxious, 3) sweating and 4) loose motions.

If you are taking medications for pain, your perioperative physician should review them before surgery. This is usually an anaesthetist who you meet in the preadmission clinic.

Always take your pain medications on the day of surgery so you are comfortable before your anaesthesia begins.

Fitness Program

This will help you to sleep better and therefore manage your pain better. It will also give you the opportunity to develop more physical and mental stamina to manage pain around the time of surgery.

The program should be within your abilities especially if you have conditions such as heart or lung disease that can make exercise dangerous. You may already have an alternate activity which you enjoy. The aim is to spend more time exercising intensively in the short time you have before surgery.

Some examples of a **daily** routine that you may choose include:

1) Walking briskly for 30 minutes. You may wish to build up to this over a number of weeks
2) Attending a Pilates class 2-3 times per week. If you are a beginner, try 1 on 1 with an instructor before attending a group class
3) Yoga classes 2-3 per week, with close supervision if this is the first time.
4) Cycling 30 minutes or more
5) Swimming laps for up to 30 minutes
6) Aqua-aerobic classes
7) Tai Chi classes

Mood and Tension

You may be feeling happy that you are about to have a curative operation. Some may be feeling less so in the context that the cancer has recurred. Major surgery is to others a great threat to their ability to cope. In this situation you may feel tense, anxious, tearful and less able to tolerate difficulty.

When this situation persists for long enough some people become depressed. You may have one or more of these signs below. There are other signs that are more subtle.

1) Feeling down or sad most of the time
2) Losing interest or pleasure in things

You may also have one or more of these signs below:

3) Altered sleep pattern. That is, less sleep than you would normally enjoy. You may be waking frequently with pain.
4) When you wake in the morning you do not feel refreshed.
5) A change in your appetite- more or less hungry with a change in your weight.
6) Feeling more agitated restless or wound up than usual
7) A change in the way you perceive the future. For example, less anticipation of happy events.
8) Thoughts of not wanting to live longer.

These suggest a major depression and require treatment before surgery. Consultation with your General Practitioner is required. A medication is recommended because this will help you to cope with your pain after the operation.

Other people may just feel anxious and not sad. Again, managing the anxiety effectively is important because, anxiety makes pain worse. Mindfulness and Meditation are important tools to manage anxiety and pain.

Mindfulness:

This is a technique aimed at staying in the present and sitting comfortably with unwanted thoughts. This is worth practicing for those moments in hospital when you are feeling overwhelmed. There are a number of helpful 'Apps' to get you started:

- 5 Minute Meditations-Easy to follow 28 day mindfulness course
- The Mindfulness App.

Planning Happy Moments

For the many days you spend in hospital, plan 1 happy event every day. For example-a favourite friend visiting on day 1, a hand massage, being out in a chair, carbonated water, or a new magazine.

On the day of surgery:

Make sure that you continue to take your prescribed medications and analgesics with water. Your surgeon and anaesthetist may alter which medications you take on the day.

Day one post-op:

Your pain will be managed with medications that run straight into your veins. You will have an opiate medication such as Fentanyl, Morphine or Hydromorphone.

The side effects of these are sleepiness, nausea, vomiting and itchiness.

Ketamine a pain-relieving drug may be used. This can have side effects of sleepiness, bad dreams and seeing strange things. Make sure that you report any bad effects from your drugs so that they can be reduced or discontinued.

If your surgeon allows, you may get out of bed into a chair. This will be uncomfortable but is a good goal. Movement encourages blood flow to the wound, which enhances healing. Also, being out of bed helps to limit loss of muscle, which is required for walking.

Subsequent days:

As your bowel starts to work, passing wind, your doctors will give you tablets for pain instead of injections.

It's important that you are out of bed in a chair or walking as much as possible. This will help your mood because you can change your view and develop hope that you will get out of hospital. Your pain will also be better controlled when you are walking.

Dark days:

After a number of days in hospital you will have received many visits by doctors, nurses and other staff. You will have had many nights with limited sleep. Your day will be endlessly interrupted with recordings, washing, dressing, stoma changes and trips to investigations.

Your pain control will not always be perfect.

In these moments, drawing on the preparation that you have made before surgery will be useful. For example, reminding yourself of your goals in the short and long term will be helpful. What are the special things that you have chosen to break up and enhance your day?

Reconnect with your mindfulness and meditation techniques.

Your team understands how tough things can get. Make sure that you tell them if you are feeling sad or flat. They may be able to adjust your care to give you more 'me' time. For example planning investigations or creating a 1-hour 'no go zone' in your room.

Going Home

When you go home you should be avoiding taking opiate (morphine-like) medication. You should be taking only the medications that are essential for your pain management.

Attendance at a rehabilitation facility is highly recommended. This will give you a head start in terms of redeveloping a physical and mental stamina that is difficult to do on your own.

To maintain your mental and physical health you will need to adhere to a health plan for a minimum of 6 months. This should include an exercise regimen- your physiotherapist will advise you and will link you into a physiotherapist close to your home.

Your diet will be assessed and planned for the future by your dietician.

Pain management long term will be arranged before discharge from hospital. Ideally, a Pain Medicine Specialist reviews you in your local area. We can advise and refer you before you leave hospital.

Alternatively, you can arrange to see a Pain Specialist in rooms around the time you see your surgeon.

Over the next 3 months your pain will gradually improve. There will be days and weeks when your pain is more intense but it should improve overall. Your General Practitioner or Surgeon should investigate an increase in your pain that does not go away.

All the best for a pain free future.

The Pain Management Service at The Royal Prince Alfred Hospital welcomes your feedback about your pain management.

Dr Charlotte Johnstone

MBChB, FANZCA, FFPMANZCA, FIPP

Staff Specialist Anaesthetist and Pain Medicine Specialist

Royal Prince Alfred Hospital

Missenden Road

NSW 2050

PHYSIOTHERAPY

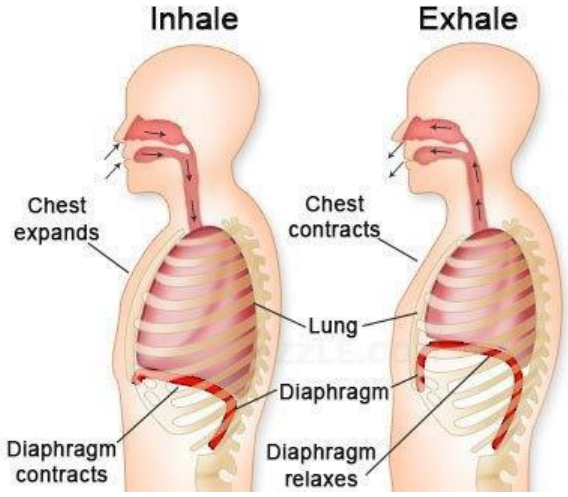
Physical Activity:

The physiotherapist will see you on the day after your operation to commence activities that include sitting out of bed and a gradual start to walking. It is very important to get you onto your feet as soon as possible to help your lungs recover from the effects of surgery. Walking can also help with circulation, bowel function and prevent blood clots. Attachments and drains will not prevent you from getting out of bed and walking. Your physiotherapist will work alongside the multidisciplinary team to optimise your pain relief before commencing activity.

The physiotherapist will help you to gradually increase the distance and the time you walk. By the time you are ready to go home you should aim to walk four times a day. You will also be given an individualised, goal orientated exercise program to improve your strength and endurance.

Lung Recovery:

The physiotherapist will also teach you how to perform breathing exercises to move air in and out of your lungs, prevent lung collapse and remove secretions (phlegm).



Deep Breathing Exercises:

You may perform the deep breathing exercises when you are sitting in a chair or in bed as regularly as possible.

- Take a long, slow, deep breath in through your nose with your shoulders relaxed. You should inhale deep so that your stomach walls move outwards.
- Hold the breath for 3 seconds.
- Breath out gently, exhaling in a relaxed manner like a sigh.
- Do this 5 times.

Huff:

Huff helps you to move secretions (phlegm) closer to your upper airways so that you can cough more effectively. To correctly perform a huff:

- Take a small to medium sized breath.
- Keep your mouth open.
- Breath out a forceful breath “huff” sound as if you were fogging up your glasses or a mirror.
- You will know you are doing a successful huff if you hear the phlegm crackle and move towards your throat ready to be cleared by a cough.

Cough:

It is important to cough and clear the phlegm from your lungs. Performing a cough will not open your incisions. You may place a clean folded towel across your stomach to provide added support.

- Take a deep breath in.
- Cough strongly to clear secretions.
- Do not keep coughing multiple times.
- Take a deep breath in / exhale after your cough.

This cycle is repeated until the huff is dry sounding and there does not appear to be any more phlegm.

After Discharge:

Your physiotherapist will meet you at the follow up clinic to discuss any problems you have related to weakness and physical activity.

- Continue walking when you return home and track your progress by keeping a walking and exercise diary.
- Walking up and down stairs will improve your exercise capacity.
- You should avoid strenuous activities and heavy lifting that puts pressure on your abdomen.
- Prevent back injuries by performing a squat to pick up objects from the floor by bending at the knees and keeping your back straight.
- Your physiotherapist is happy to be contacted for any further information you need.

The above recommendations are written for the patients undergoing a peritonectomy and should not be used for any other abdominal procedures. Written by Nazmeen Reddy (Senior Physiotherapist and Acute Care Team Leader) and Freya Rubie (Peritonectomy Physiotherapist) 2017.

DIET

Your nutrition is very important before and after your operation to help you recover from your surgery. It is common for your nutrition status to decrease during your hospital stay and soon after your discharge. For these reasons we must try and ensure you are eating well, before your surgery.

Why is nutrition important?

Prior to surgery you may experience symptoms such as nausea, vomiting or diarrhoea which can impact on your appetite. This can cause you to lose weight and put you at risk of malnutrition. After your surgery you have increased energy and protein requirements for wound healing and possible infection. The dietitian will work with you before, during and after your hospital admission to help meet your nutrition requirements which can help decrease post-operative complications and length of hospital stay.

How can I improve my nutrition?

When you first meet with the dietitian they will assess you to determine if you require nutrition support. Prior to surgery this might include:

1. Strategies to manage symptoms, such as nausea, poor appetite or vomiting
2. Tips and ideas on how to increase the energy and protein content of the food you are currently eating
3. Recommending the use of high energy and protein nutrition supplement drinks

Straight after your surgery the medical team will rest your gut and commence TPN. TPN is made up of carbohydrates, protein and fats and together with trace elements and vitamins, will meet all of your nutritional needs.

Once the medical team start you on a diet and you are eating adequate amounts of food the TPN will be weaned. The dietitian may also recommend high protein and energy snacks or nutrition supplement drinks during this time to help meet your nutrition requirements.

What happens after discharge?

Once you leave hospital the dietitian will review you if necessary. They will ask you to monitor your weight and continue to follow any dietary advice they have given you during your hospital stay.

If you have any questions about your nutrition, please call the RPAH Nutrition and Dietetics Department on (02) 9515 8053 and ask to speak with your dietitian.

STOMAL THERAPY

Having any operation can be an emotional experience. Patients who undergo formation of a stoma whether temporary or permanent may experience feelings including fear, anxiety, loss of control and disgust. Being well prepared can help you to know what to expect. If, as part of your Peritonectomy surgery you will require a stoma or stomas, you will be seen by a stomal therapy nurse who will educate to assist you in understanding how to adapt and manage your life with a stoma both before and after your operation.

A stoma is an opening on the abdomen that acts as an exit for body waste.

There are 2 main types of stomas you may receive: colostomy or ileostomy. The colostomy and ileostomy are both bowel stomas and will pass stool (faeces). All stomas require you to wear a pouch (this may also be called a bag or appliance) to collect the output.

Before your operation you will be seen by the stomal therapy nurse who will discuss the type of stoma you will be having and aspects of managing and living with a stoma. The stomal therapy nurse will also select a suitable position (site) on your abdomen (tummy) for your surgeon to consider when bringing the stoma out onto the skin. Ideally, we like to have the site on a flat skin surface that is free from abdominal creases and also visible to you so that you can manage your own stoma.

When selecting the appropriate site, the stomal therapy nurse will take into consideration a number of aspects including; the type of stoma you are having, where you may have skin creases and folds on your abdomen, or scars from previous abdominal surgery. Your abdomen is usually viewed whilst you are laying, sitting and standing. To help with the siting you may be asked a number of questions including any recent changes you may have experienced with your weight, what type of activities you do and the type of clothing you wear.

At the time of your operation, a post-operative pouch will be applied over the stoma. As you progress in your recovery you will be seen regularly by the stomal therapy nurse who will teach you how to manage your stoma. There are a large variety of stoma pouches available in Australia - you will be guided as to what is appropriate to meet your needs.

In Australia, residents are able to access free stoma supplies through the Stoma Appliance Scheme which is subsidised by the Australian Department of Health. To access these stoma supplies you are required to join a Stoma Association. Each state of Australia has these associations. There is a small membership fee charged to join the association. Whilst you are in hospital we will assist you with joining the association and where possible collect your first order for you to take home.

We are happy to also include your family members or support persons in any of the discussion or education sessions. Should you experience the postoperative complication of a wound breakdown your wound will be managed by your stomal therapist and the ward nursing staff attending to dressing changes to assist wound healing.

Following discharge from hospital, the RPAH Stomal Therapy Department has an outpatient clinic which is available should you be experiencing any problems with managing your stoma or if you would like to have your stoma periodically checked. You will be provided with details on how to access this clinic. If you are not from the Sydney region we will try, if possible, to refer you to a stomal therapy nurse closer to where you live.

For further information, please do not hesitate to call the RPAH Stomal Therapy Department on (02) 9515 7280.

PSYCHOLOGY AND YOUR RECOVERY

You can expect to have a range of emotions about your cancer journey and surgery. All these emotions are natural reactions to a significant life event:

Fear – receiving a cancer diagnosis and preparing for surgery can be frightening. Most people cope better when they know what to expect.

Worry – when things are uncertain, worry is a natural thing for us to do. However, worrying a lot about the future can make you feel more distressed. Try to focus on one thing at a time or discuss your worries with someone.

Anger – you may feel angry at others around you, or just at your situation. This is a normal part of dealing with something as challenging as going through surgery.

Sadness – it is natural to feel some sadness about the changes you are going through, like not being as active as you used to be. Many people feel sad at times.

Depression: Many people feel low leading up to, or after major surgery. There is a difference between feeling low and being *depressed*. You may be clinically depressed if you are in a low mood most of the time, not enjoying things you used to for 2 weeks or more. Tackling depression early can mean that you can deal with it quickly. There are different treatments available including medication and non-medication options.

Loneliness – you may feel lonely if you feel that nobody else understands what you're going through. Communicating this with someone may help you feel less isolated.

Disbelief – you may have trouble believing you have cancer, particularly if you had been feeling otherwise well, or not realising the extent of the surgery needed. It is natural for people to wonder 'why' these things have happened.

What to do about worries?

You may have worries about being in hospital, caring for children, accommodation for family members, sick leave; as well as pain, body image or sexuality.

If you are having trouble managing your worries please consider speaking to family and friends, a counsellor, or psychologist, or joining a support group. Remember it will take time to adjust to life after surgery.

A clinical psychologist can work with you to identify problems you are having and increase ways of coping. It might include practical strategies for communicating with others, focussing on the present, relaxation techniques, recognizing and challenging unhelpful thoughts.

Call **Cancer Council 13 11 20** to request information, or someone to talk to

Adapted from 'Emotions and Cancer' – Cancer Council Australia

PHYSICAL APPEARANCE/BODY IMAGE:

You will likely face changes to your physical appearance, or the way you feel about your appearance due to cancer treatment or surgery.

This could include – scarring, weight gain or weight loss, hair loss, or permanent stomas. It is normal to find these changes difficult to adapt to physically and mentally. Please consider speaking to a mental health professional or nurse if it is interfering with the way you want to lead your life. For example:

- Being too embarrassed to leave home
- Withdrawing from social activities
- Avoiding intimacy with a partner
- Low mood

You may find it helpful to:

- Speak to your psychologist during your stay, or another mental health professional after you return home
- Speak to your stomal therapy nurse for information and resources
- Consider an ostomy support group

Sexuality:

You will experience some changes in sexuality after your operation. Sexuality refers to sexual desire, preferences, arousal and function. Depending on the nature of your operation and psychological factors, such as the way you feel about your physical changes, there may be changes in any of these areas.

Both male and female patients experience changes in their libido (desire) and sexual function.

It is important to speak to your doctor about what changes you will experience. There may be treatments available for you in your recovery.

You may also find it helpful to:

- If you have a partner, speak to them about what you are experiencing
- Speak to your psychologist on the Peritonectomy team, or another mental health professional. You may be seeking emotional support, information or a referral to a specialist counsellor in this area
- Speak to other cancer survivors through the 'Cancer Council' NSW on 131120

CONTACT NUMBERS

Royal Prince Alfred Hospital	9515 6111
7 East 2 (Colorectal Ward) - call to speak to physiotherapist, psychologist or stomal therapy nurse	9515 7708 9515 7709
Colorectal Fellow / Registrar	9515 6111
Nutrition and Dietetics Department	9515 8053
Peritonectomy Clinical Nurse Consultant	9515 6660 0472 802 967
Green Intensive Care Unit	9515 7790
Blue Intensive Care Unit	9515 7786

WHO'S WHO

Nurse Unit Manager	Emma Travers
Peritonectomy Coordinator (Clinical Nurse Consultant, CNC)	Annie Tang
Pain Medicine Specialist	Dr Charlotte Johnstone
Dietitian	Sophie Lane
Physiotherapist	Freya Rubie
Clinical Psychologist	Amy Oswald
Occupational Therapist	Jaslyn Nash / Beverly Vale
Social Worker	Matthew Nutt
Stomal Therapy Nurses	Colleen Mendes / Betty Brown

USEFUL LINKS

Hospital Information

www.slhd.nsw.gov.au/rpa/ - RPA Hospital Website

Pain

www.aci.health.nsw.gov.au/chronic-pain - NSW Health pain resources and information

www.painmanagement.org.au – Australian Pain Management Association

Well-being and support

www.stomaltherapy.com/Ostomy_support_groups.php -stomal therapy support

www.beyondblue.org.au – mental health information and resources

www.cancercouncil.org.au – for cancer information and support

www.mindspot.org.au – access to online psychological assessment and treatment programs

www.mindfulness.org – mindfulness information and exercises

Notes