Enhanced Recovery After Surgery

ERAS

Hairmyres Hospital

Colorectal Surgery

Please bring this booklet with you for your admission to hospital

Last Update Jan 2021

Contents

Enhanced Recovery After Surgery (ERAS) Programme for Colorectal Surgery

You have decided with your Consultant Surgeon to undergo colorectal (bowel) surgery. We want you to feel supported before your surgery, during your recovery in hospital and when you are discharged home.

This booklet has been designed for patients who will be going through the *Enhanced Recovery After Surgery Programme (ERAS).*

This programme of care aims to help you recover quickly and safely and has been designed by your ERAS nurses and various other specialists (see back page) to ensure your surgical admission goes as smoothly as possible.

The information within this booklet supports the discussions you will have had with your Surgeon and other Healthcare staff.

The aim of the programme is to get you back to full health as quickly as possible after your surgery. Research suggests the earlier you get out of bed and start eating and drinking after bowel surgery the better. This will help speed up your recovery, making it less likely that complications will develop.

It is important that you understand all aspects of your recovery as you will play a key role in it. It is also important for us to manage your expectations. If we can help reduce anxiety, this in turn can have a positive impact on your recovery.

For more information please visit:

https://www.nhslanarkshire.scot.nhs.uk/services/eras/

Diseases of the Colon (Bowel) and Common Surgical Procedures

There are many conditions that affect the bowel such as:

- Inflammatory bowel disease (Ulcerative Colitis or Crohn's disease)
- Diverticulosis (wear and tear change in the bowel)
- Colorectal (bowel) cancer.

By now you will have consulted with your colorectal surgeon and will be aware of your own diagnosis and the reason as to why surgery is required. The reason for operating is different in every patient. The common reasons are:

- Failure of medication to control symptoms
- Development of complications relating to condition
- Removal of a tumour

Common operations that are performed include:

- Right hemicolectomy (removal of right side of large bowel)
- Left hemicolectomy (removal of left side of large bowel)
- Sigmoid colectomy (removal of sigmoid colon)
- Anterior resection (removal of rectum and part of left side of bowel)
- Abdomino-perineal resection (removal of rectum and anus)

In some cases the surgeon may require to bring out a stoma. This is when the bowel is brought out onto the abdominal wall into a bag. In some operations this will definitely be required and as such you will be informed of this in the clinic. In other cases the decision to create a stoma may only occur during your surgery, however this will be explained to you during the consent process with your surgeon.

These procedures can be performed by a keyhole technique (laparoscopic) or by a more traditional open technique. Laparoscopic surgery will involve 4 or 5 small wounds (all <1cm) and 1 slightly larger wound (usually in the lower abdomen) to remove the bowel through. Open surgery typically involves a larger wound vertically in the middle of your abdomen. Not everyone is suitable for a keyhole procedure and all keyhole procedures carry a risk of conversion to an open procedure. Your surgeon will explain all this when you see them. Recovery following laparoscopic surgery is typically faster compared to open surgery but the operations themselves are the same regardless of the incision.

Preparing for surgery.

Pre-assessment:

Once you have been put on the waiting list for your surgery you will receive an appointment to attend the Pre-assessment department. Sometimes it is necessary to complete the Pre-assessment before a final decision to proceed to surgery can be made.

Pre-assessment is an important part of the process in preparing you for your surgery. It is our opportunity to ensure you are as fit as possible before surgery. You will have some bloods tests performed, including blood grouping. An ECG (heart tracing) will also be done. If there are any issues identified at this time the Pre-assessment nurses will speak to an anaesthetist and further investigations may be arranged.

Some of your medications may need to be stopped prior to surgery, especially ones which 'thin' the blood, such as Warfarin or Clopidogrel. The Pre-assessment staff will explain which medication you need to stop and when. (See page 8)

If you are over 60 years old you may be asked to undertake a bicycle exercise test called a Cardiopulmonary Exercise Test – CPEX. This is another way of assessing your individual fitness for surgery. It allows us to accurately assess your risks for surgery and to plan more appropriately for your care after surgery.

CPEX

Pre-Habilitation

Surgery School

This is an important part of your preoperative preparation. It is designed to be educational and to motivate you prior to your surgery. At Surgery School you will meet some of the team who will be involved with your care when you are admitted for surgery. **Surgery School may not be available due to COVID-19*

There are a few things you should consider prior to your surgery, these are things you can do to help reduce the chances of post-operative complications:

Stop Smoking: This helps reduce your risk of breathing problems/chest infections post operatively. Wound healing can also be affected with patients who smoke. Do not smoke for at least 24hrs prior to your admission. Please note that we have a No Smoking Policy in Hairmyres Hospital which prevents you smoking anywhere on the hospital grounds.

Reduce alcohol intake: It is important to reduce/stop heavy alcohol intake prior to your surgery as you can experience alcohol withdrawal. Please see your GP about this or speak to a health care professional who can help. Do not drink alcohol for at least 48hrs prior to surgery.

Improve your diet: Reducing high fat/sugary foods can lead to weight loss and eating a healthy balanced diet can help reduce infection complications. If you are diabetic, please ensure you keep your blood sugar levels within their normal limits on the lead up to your surgery and after surgery.

Increase gentle exercise: Ensure you are having adequate exercise. Try to take regular walks when you can. This helps with your breathing and your general fitness. See page 5 for more advice on increasing your fitness levels.

There are some excellent resources & videos also available on www.prehab.nhs.scot

Exercise and your Upcoming Surgery – Advice from Physiotherapy

What you do in the time leading up to surgery can have a big impact on your recovery and long term health. Patients who are fitter and are able to improve their health and activity levels prior to surgery will see positive benefits following surgery. Fitter patients will recover quicker from surgery and experience fewer complications.

There are many changes you can make to reduce the risks related to surgery. One of these changes is increasing your daily physical activity.

To stay fit and healthy, national guidance is that you should complete at least 150 minutes of moderate physical activity a week or 75 minutes of vigorous physical activity a week (for ages 19-64 years old). This could be around 20 to 30 minutes a day. You should also aim to do strength and balance exercises at least 2 days per week also. We understand that if you are in the shielding category exercise is especially challenging, there is some information regarding home exercise programmes below.

Here are some helpful links and sources of information that we hope will support you to increase your activity levels and maximise your health.

Links and Sources of Information:

The Royal College of Anaesthetists' **Fitter Better Sooner** resources will provide you with the information you need to become fitter and better prepared for your operation.
https://cpoc.org.uk/patients/fitter-better-sooner-toolkit

The video below demonstrates a 10 minute home based warm up, exercise programme and cool down that can be completed in your home.
https://vimeo.com/424715286/b9dc442662

Macmillan Cancer Support YouTube channel contains some excellent home exercise tips and videos.
https://www.youtube.com/playlist?list=PL4YhGgVzlQXjhq6UYbX7idSDYcPX5PRy9

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Safefit is a self-referral scheme, available to anyone with cancer or suspicion of a cancer diagnosis, to be put in touch with a cancer exercise specialist during the Coronavirus crisis.
https://www.macmillan.org.uk/cancer-information-and-support/get-help/physical-help/safefit

If you have some experience with exercise the **NHS Fitness Studio** contains 24 instructor-led videos across aerobics exercise, strength and resistance and Pilates and yoga categories.
https://www.nhs.uk/conditions/nhs-fitness-studio/

If you struggle with physical activity or find beginning to exercise a bit daunting the links below offer a great starting point on your fitness journey. Age UK and NHS Greater Glasgow and Clyde offer a free seated exercise plan to help you get moving.

Age UK
https://www.ageuk.org.uk/scotland/information-advice/health-and-wellbeing/coronavirus/your-wellbeing/

NHS Greater Glasgow and Clyde
"Stay Active, Stay Steady" Low Level YouTube Exercise videos
https://www.youtube.com/playlist?list=PLmuRxztsS0Nz-LwjwLDvs98W324duuGpq

Physiotherapists have designed a set of six simple exercises that you can do from your own home. These are designed to improve your strength and balance.

Chartered Society of Physiotherapy "Stay Active At Home"https://www.csp.org.uk/public-patient/keeping-active-and-healthy/staying-healthy-you-age/staying-strong-you-age/strength?utm_source=Member%20services&utm_campaign=3446f93929-Coronavirus_Update_2020_26_march_2020_COPY_02&utm_medium=email&utm_term=0_2054000848-3446f93929-334200253

Exercise and your Upcoming Surgery – Advice from Physiotherapy (Continued)

Incentive spirometer exercises

An incentive spirometer is a device you will be provided with to use for deep breathing exercises. The device provides feedback and is a useful tool. You should be using the incentive spirometer at least 3 times a day before and after surgery.

https://www.youtube.com/watch?v=zrlfoP9VahM

- Place the mouthpiece in your mouth and seal your lips around the mouthpiece
- Breathe in slowly & deeply
- Remove the mouthpiece from your mouth & breathe out
- Do this exercise at least 4 x daily

Advice from the Occupational Therapy Team:

Once you are home from hospital you will still have some recovering to do. It is important to plan for home even prior to your admission to hospital.

- Ask relatives and or friends if they can help you out once you are home
- Get plenty of shopping in. Freeze meals, bread and milk for the first few days after you get home
- Think about who can do your shopping and heavy housework for you in the first few weeks
- Arrange someone to look after your pets
- Organise who will take you home from hospital

Most patients don't have any input from the Occupational Therapist, however they will meet you on the ward **if** you think you may have difficulty managing at home. They will discuss your home circumstances with you and will carry out an assessment of your ability to do everyday tasks. They will make sure you can manage to do the things that are important for your independence. The Occupational Therapist can offer practical advice on coping at home when you are discharged from hospital. Please ask your ward nurse to refer you if this is something you may require assistance with.

If you are a carer for a loved one at the moment it would be advisable to see if anyone in your family could help out while you are in hospital and recovering at home. You can also refer yourself to your Community Social Work Team as you may need some additional support to help look after your loved one while you are unable to.

You can speak to the Pre- assessment nurse, ERAS Nurse or Colorectal Nurse if there is any further advice you may need before you come into hospital.

CHECKLIST of things to bring into hospital:

- Incentive Spirometer
- Medications in proper packaging
- Loose, comfortable day clothes and pyjamas for night time
- Well fitting, comfortable shoes/slippers, not mule style
- This booklet, as a guide for your hospital journey
- Personal toiletries as required

DO NOT BRING ANY VALUABLES OR LARGE AMOUNTS OF MONEY INTO HOSPITAL

Use this space to record any other items you want to remember to bring in (eg Mobile + Charger):

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Admission for Surgery.

Day before Surgery:

Very few people are admitted the day before surgery but if your surgeon requests this you will be admitted through our Day Surgery Unit and be allocated a bed in a ward from there. You can eat and drink normally unless otherwise instructed prior to attending the hospital.

Admission and Fasting Instructions for Day of Surgery Admission:

You will be asked to check into our Day Surgery Ward (DSU) on the first floor (opposite Wards 7 & 8). Your admission letter will advise at what time to check in.

To fully prepare you for your admission to hospital, it is important that you read the following carefully. Failure to adhere to the guidelines below could result in your operation being cancelled on the day.

Do not have a heavy meal the night before your surgery. Think about having a light snack before you go to bed to reduce the period of time of fasting

- You must have **nothing** to eat for 6 hours before your admission time.
- You may have **water only** up until 2 hours before your admission time.

Specific Instructions for your medications

Please bring all medicines, inhalers and insulin injections with you on your admission to hospital and take all usual medications prior to admission unless otherwise instructed:

Do not take the following medication prior to admission:

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If you have been given RANITIDINE tablets by your Pre-Assessment Nurse, please take one the night before your admission at 10:00pm. Take the second tablet on the morning of your admission with your normal medications.

Remember:

- Do not take chewing gum or sweets on the morning of your operation
- Please remove all make up and nail polish before your admission to hospital
- If you are unwell in the days leading up to your operation you must inform your consultant's secretary. Even simple illnesses such as colds or urinary tract infections may require treatment

Carbohydrate Drinks (PRELOAD™)

As part of our Enhanced Recovery Programme you will be a given carbohydrate drink called PRELOAD™ to take before your surgery. **You will not get Preload™ if you are Diabetic.**

You will make up 3 sachets of Preload™ individually each with 400mls of water. We try to ensure the last sachet is taken 2 hours prior to your surgery. Please take the Preload™ at the times below, noting what time you are being admitted to the hospital.

- Please take one sachet at 18:00 (evening prior to surgery)
- Please take one sachet at 22:00 (evening prior to surgery)
- Please take one sachet at 06:30 (morning of surgery if you are admitted to hospital at 7:30am)
- Please take one sachet at 10:00 (morning of surgery if you are admitted at 11:00am)

These have a positive benefit on your metabolism following surgery and have been shown to aid your recovery. There is also evidence to say they:

- Give you energy to aid your recovery
- Reduce the risk of nausea (sickness)
- Help your wounds to heal
- Reduce the risks of infection

Bowel Preparation

You may also be asked to take **bowel preparation,** this is medication (in a drink form called Moviprep® or Plenvu®) given to clean out your bowel prior to surgery. Not all patients require bowel preparation. We will let you know if you will be getting this.

You should take your Preload™ along with this but in this case you should take 2 sachets of Preload™ together in 1 x 500mls of water in between the 2 doses of Moviprep®/Plenvu®. This 500mls of Preload™ should replace the 500mls of water you are asked to take in between the 2 doses of Moviprep®/Plenvu®. If you need any clarification of this instruction please speak with the ERAS Nurse.

You may require an enema prior to surgery and possibly a blood test on the morning of surgery.

Anaesthesia and Pain Control

You will meet your Anaesthetist on the morning of your operation. They are responsible for your care during your operation and for ensuring that an appropriate plan is made for post-operative pain control. During their pre-op visit they will ask you questions about your health and also discuss your anaesthetic options.

There are several different types of anaesthetic available for your operation. Your Anaesthetist will discuss your options and suggest their preferred method for the operation. Your preferences are important. Nothing will happen to you until you understand and agree with what is planned for you.

What is a General Anaesthetic?

All bowel operations are done under general anaesthetic. During a general anaesthetic you are made fully unconscious during which you feel nothing. Once you are unconscious, a breathing tube is placed through your mouth and into your throat to help with your breathing. A general anaesthetic alone does not provide pain relief. You will need strong pain relieving drugs after your operation. Your Anaesthetist may also offer you a local anaesthetic nerve block to help with your pain control.

What is a Spinal Anaesthetic?

A spinal anaesthetic involves an injection into your lower back of local anaesthetic and usually a long acting pain killer. This makes your legs 'go to sleep' and numb from the waist down. This can be used in addition to a general anaesthetic to provide more prolonged pain relief following particularly key-hole or laparoscopic surgery. However, a spinal anaesthetic is not suitable for all patients.

Are there any complications?

Spinal Anaesthetics are a very safe method of anaesthesia however as with any procedure there are potential complications.

- Headache – less than 1%
- Nerve damage – less than 1 in 24 000
- Permanent paralysis – less than 1 in 55 000

What is an Epidural?

An epidural is performed by your anaesthetist, usually before your operation and designed to numb the nerves coming from your spine that supply your tummy wall. It is a technique that is used less frequently nowadays and only for patients who are having open bowel surgery with larger wounds. However, it can be a very effective method of relieving pain after this type of surgery. The technique is similar to a spinal anaesthetic from the patient's point of view, but the injection is often higher in the back and a small plastic tube is left in place to allow a continuous infusion of pain killers and local anaesthetic. We usually aim to keep epidurals in place for 72 hours after surgery and all patients with an epidural are routinely looked after in our High Dependency Unit.

Are there any complications?

- Itch, leg weakness, backache
- Headache – less than 1%
- Low Blood Pressure - 1 in 30
- Respiratory depression (slow breathing/sedation) - 1 in 400

Serious complications like nerve injury, infection and blood clots are rare - 1 in 12,000

What is a Nerve Block?

This is an injection of local anaesthetic into your tummy aimed at numbing the nerves which supply sensation to your tummy wall. Sometimes, plastic tubes will be left in your tummy wall through which more local anaesthetic can be injected to continue the pain relief for the first couple of days following surgery.

Pain Management/What is Pain?

Following an operation, tiny cells send pain messages along nerves into your spinal cord and on to your brain. Pain management or pain relief can stop these messages or reduce their effect.

Pain is **not** something 'you have to put up with'.

Your doctor and nurses can do a lot to relieve any pain that you may experience.

Why treat Pain?

Pain control is not only important for your comfort, but also your recovery. Good pain control allows you to start your rehabilitation early and effectively, this can help avoid other problems after your operation, for example: blood clots, chest infections and heart attacks.

Pain Relief, What can we do?

There are both drug and non-drug treatments that can help to control your pain. Some of which have already been mentioned above. We can tailor these treatments to the type of pain or operation you are having. We can also use a combination of both to improve pain relief.

Drug Treatments

- Oral painkillers: These are tablets or liquid medicine taken by mouth. We give these if you are drinking normally and not feeling sick. They can be used alone or in combination with a PCA (see below) or other forms of nerve block.
- Patient Controlled Analgesia (PCA): This is a painkiller given into a vein in your arm from a pump, which you control. When you are sore, you press a button to get a safe amount of the painkiller. This pump is set to give only a small amount of painkiller at timed intervals. This is commonly used following bowel surgery.

How long will I have the PCA?

On average patients use the PCA for 24 hours. During this time the amount of pain killer you need will gradually decrease. As you begin to feel better you will press the button less often.

What are the advantages of the PCA?

The main advantage is control. You control the relief of the pain and do not have to wait on a nurse preparing an injection. Another advantage is, as the painkiller goes directly into your blood stream, you should notice the effect within minutes.

What are the side effects?

- Nausea (feeling sick) and vomiting (being sick)
- Itching
- Over sedation (too sleepy)
- Constipation
- Respiratory depression (slow breathing)

How to get the best effect from the PCA

Press the button when the pain is uncomfortable. Do not wait until it gets sore.

- Press the button before moving up the bed, getting out of bed, and so on.
- Press the button before coughing *(if you have additional pain)*.

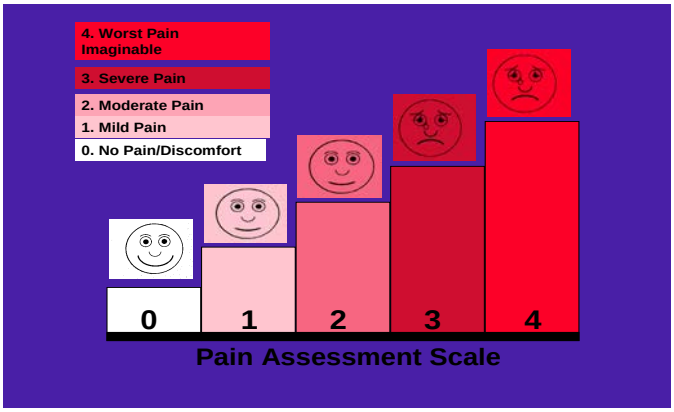
Additional Painkillers

It is quite normal for your doctor to prescribe other painkillers while on your PCA.

To make sure that the painkillers are working well, the nurses will ask you on a regular basis to look at a pain scoring scale and score your pain from number 0 meaning no pain, to number 4 meaning the worst pain you can think of. Pain is measured on movement such as repositioning in bed or a deep cough, **not at rest**.

Pain assessment Chart:

Measuring pain improves awareness and treatment.



Non-drug treatments

- Repositioning, making yourself more comfortable
- Taking your mind off the pain such as relaxing music, television or doing something which you enjoy
- Gentle exercise and movement can also help
- Hot or cold packs to help with pain and/or reduce swelling

Remember, it is important to tell the nurses and doctors how sore you are and don't feel embarrassed by doing so.

If you feel sick or drowsy or your skin feels itchy, tell your nurse or doctor and they will give you something to make you feel more comfortable.

Theatres:

Following your anaesthetic you will be brought into the operating theatre. All operations are performed in sterile theatres to try and minimise the incidence of infection. In addition to this everyone is given antibiotics at the start of surgery. Precautions are taken to prevent your temperature from falling while you are asleep and to prevent you developing clots in the veins of your legs. We will keep you safe as well as minimising the impact of surgery as much as possible.

When your operation is finished you will be woken up in the recovery room. While in the recovery room, anaesthetic and nursing staff will ensure you are comfortable and regularly monitor your temperature, pulse, blood pressure and level of oxygen in your blood.

When the recovery staff are happy with your progress you will be transferred to a ward or one of our high dependency units.

Potential Complications of Surgery

As with all types of surgery, there are some associated risks. Every effort is made to minimise these but they cannot be eliminated.

Some complications are related to any sort of surgery and include:

- Bleeding
- Infection (wound, chest, urine or intra-abdominal)
- DVT or pulmonary embolus (blood clots in the legs or lungs)
- Myocardial infarction (heart attack)
- Renal failure (kidney failure)
- Wound healing problems

Other complications are specifically related to the type of surgery undertaken. Your surgeon will go over these with you prior to surgery but include:

- Anastomotic leak (failure of the join in the bowel to heal)
- Paralytic ileus (bowel doesn't work properly following surgery for a few days)
- Abscesses (inside the abdomen)
- Stoma problems (poor blood supply to stoma, retraction of stoma into abdomen, narrowing of stoma)
- Bowel obstruction

Reducing your risk of blood clots

What are blood clots?

A 'blood clot' or Deep Vein Thrombosis (DVT) usually forms in the veins within the legs.

If the clot moves, or a piece breaks off and travels to the lung, it is called a Pulmonary Embolism (PE). A PE is a serious condition that may result in serious illness, long term disability or even death.

Help us reduce your risk.

You will be prescribed a small injection daily following surgery. This will be given in the evening and will be given into your stomach.

You will also be given compression stockings (white elastic knee length stockings) called TEDs to use during your hospital stay and encouraged to mobilise as soon as

possible. It is also important to keep well hydrated and you will be encouraged to drink freely.

Am I still at risk when I leave the hospital?

As long as you are fully mobile, ongoing treatment will not be necessary, however certain high risk patients may need to continue some or all of these interventions.

Advice from the Dietetic Team

Before Surgery 'Improve your diet': Good nutrition prior to surgery is important to aid recovery, shorten hospital stays and reduce post-operative complications. If you require to lose weight prior to surgery aim to do this in a realistic and healthy way. If you have had unintentional weight loss and/or a poor appetite on the lead up to your surgery healthy eating is not appropriate. Aim to eat little and often throughout the day and choose high energy foods such as cheese, ice-cream, biscuits. Add extra butter, oil, cheese and cream to your foods. You can also purchase Meritine or Complan from the supermarket or local pharmacy to have in addition to this. If you are still losing weight speak to your consultant, GP, colorectal or ERAS nurse who can refer you to a Dietitian for further advice and support. If you are diabetic please ensure you keep your blood sugar levels within their normal limits on the lead up to your surgery and after.

After surgery some patients may notice that their diet struggles to return to normal. If this happens, aim to have 5-6 small meals per day. The hospital can provide additional snacks to help you achieve this. You and/or your family are encouraged to bring in your own snacks e.g. biscuits, cakes, rice pudding, custard pots and store these in the bedside locker. Please refer to the 'Food and Drink in Hospital' leaflet if you have any questions regarding suitable products. Participating in daily exercise and sitting out of bed will also help to stimulate your appetite.

Advice from the Stoma Team

If a Stoma is planned then you will meet the stoma care nurses before your surgery. They will explain everything involved to you as well as giving practical demonstrations on stoma care.

Sometimes, stomas are not planned but necessary at the time of surgery. In this event, the stoma nurses will provide the same level of input prior to your discharge.

Some stomas are reversible and some are permanent. Your surgeon will advise you about whether a further procedure is appropriate or possible in the future to reverse the stoma.

Advice from the Physiotherapy Team: Physiotherapy after Surgery

What to Expect

The majority of people will not need to see a physiotherapist after surgery. Your nurse will assist you out of bed and help you to start walking as early as possible following your surgery.

It is important to get up out of bed and walking again as soon as possible as it can help reduced the risk of other complications, for example: chest infections and deep vein thrombosis (DVT).

Day 0 (day of your surgery)

The nurses on the ward will let you know if you can mobilise when you return to the ward. They will assist you to get out of bed and sit up in a chair. You can also do some simple exercises in your bed and when in a chair.

Day 1

You should try and sit up for multiple periods during the day. Take short regular walks. Getting moving early will help avoid possible respiratory (breathing) problems and aid you to return to your normal mobility as quickly as possible.

Day 2

On day 2, you should aim to increase the distance you are walking. Aim to walk the length of the ward. Please space this out through the day so you are managing frequent, regular walks – aim 3-4 times a day.

After Day 2

At this point, you should be aiming to achieve the level of everyday activity walking you were doing before your surgery. Make sure to walk about the ward/corridors regularly during the day.

Exercises

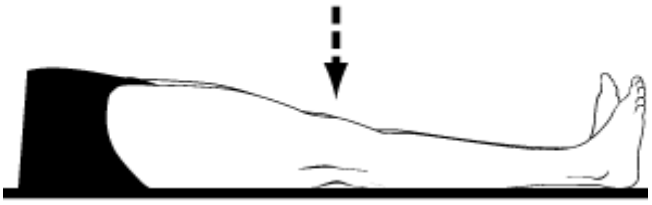
Leg exercises

After surgery you can start your muscles working as soon as possible, even while you are still in bed.

Exercise 1: Point your feet away from you, then pull them up towards you. Repeat 10 times

Exercise 2: With your leg straight in front of you. Use your leg muscles to push the back of your knee into the bed. Hold for 5 seconds, and then relax. Repeat 10 times.

These can be done every 30 to 60 minutes. They will help with your circulation, helping to prevent further problems.



Breathing exercises/iCOUGH

Following your surgery it is very important that you follow the principles of **iCOUGH**. iCOUGH is an acronym Physiotherapy use to guide on best practice following surgery. You will be asked to get out of bed very soon after your procedure. This is a normal part of the recovery process as early mobilisation is essential for healing and recovery. Whilst professionals will offer some advice, we would like you to take a lead role in your recovery journey. Below are the iCOUGH headings plus links to informative videos.

Remember to bring in your Incentive Spirometer to help with these exercises

I Incentive spirometer exercises

An incentive spirometer is a device you will be provided with to use for deep breathing exercises. The device provides feedback and is a useful tool. You should be using the incentive spirometer at least 3 times a day before and after surgery.

https://www.youtube.com/watch?v=zrlfoP9VahM

C Cough & deep breathing

After surgery taking deep breaths and coughing, as needed, helps to clear your lungs and help clear any phlegm you may have. This helps the lungs do the vital job of delivering oxygen to the tissues in your body. Supporting your wound with a folded towel will give you confidence and physical support to cough.

O Oral Care

Good mouth care reduces the risk of lung complications after surgery.

Brush your teeth twice a day for 2 minutes, use dental floss and consider mouth wash twice daily.

https://www.youtube.com/watch?v=X7dl4kVmLEU

U Understanding iCOUGH

It is important for you and your family to take an active part in your recovery after surgery and to understand why we are asking you to participate in these activities. It is essential that you have good pain control in order to be able to carry out your breathing exercises, get out of bed, sit in a chair and walk around.

G Get out of bed

Getting out of bed and mobilising early after surgery is extremely important and will help prevent numerous complications.

It will help clear secretions from your lungs and reduce your risk of lung/chest infection.

It will improve your circulation so that you may regain your strength and improve your gut's function.

https://www.youtube.com/watch?v=eRs7X8FzSWQ

H Head of bed elevated

Do not slump in bed. Sitting upright is better for your breathing.

Sit up in bed or out in a chair as soon as you are able.

If there are any issues with your mobility following your surgery you will be referred to a member of the physiotherapy team for assessment.

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After your surgery:

Day 0 - The day of your surgery:

Fluids: We allow you to drink fluids and high calorie protein drinks called 'ENSURE' once you are awake enough. These can help with wound healing and assist your bowel function to return quicker after the surgery.

Mobility/Blood clot prevention: The quicker you begin to start moving around, the quicker you may leave hospital. Your recovery starts immediately after your surgery and you should aim to start these exercises straight away after your surgery every hour that you are awake. You can do them in bed or in the chair. (See pg14)

You may be able to get out of bed in the evening following your operation. This may depend on your pain level or your blood pressure. The nurses will let you know if you can begin to mobilise today and sit in the chair. We aim to mobilise you as quickly as possible as this can help reduce complications. It can help reduce your risk of Deep Vein Thrombosis (DVT or Blood Clot) which can occur as you have had an anaesthetic and are less mobile than normal. It can help reduce your risk of a chest infection and breathing problems associated with abdominal surgery and anaesthesia.

Wear your TEDs stockings (knee high white elastic stockings). We may also ask you to wear inflatable leg pumps that help keep the blood circulating round your body within the first 24hours after surgery.

Chest Infection Precautions: We ask that you do deep breathing exercises a minimum of every hour while you are awake, try to do them as often as possible (see pg15)

This is extremely important after an anaesthetic and after abdominal surgery. The nurses will remind you about this.

Intravenous (IV) infusion Drips: You will be given fluids through the IV drip in your arm to prevent dehydration following your operation. We will stop this once you are drinking enough fluids.

Urinary Catheter: You will have a catheter tube inserted into your bladder to help you pass urine throughout your surgery. This is sometimes removed at the end of surgery or removed in the morning after your operation. Very occasionally patients struggle to pass urine once it is removed and you may need it back in for a further day or so. If you have an epidural you may need to keep the catheter in while the epidural is running as this can reduce the sensation to pass urine.

Oxygen: You will require oxygen therapy through a mask (which goes over your mouth and nose) initially, then it can be changed to a small tube in your nose. You may find the oxygen will make your mouth feel dry. You should take regular fluids to help with this.

We will monitor your heart rate, blood pressure and oxygen levels regularly. If you are in the High Dependency Unit you will be attached to a monitor for a couple of days. However, we are able to disconnect you from your monitoring, drips and oxygen while walking/washing etc.

Wound: If your dressing looks clean then the nurses may leave this until day two before your wound dressing is changed. They may redress your wound or leave it exposed if is dry and clean.

'Open surgery'- you will have one wound in the middle of your abdomen which can be closed with clips (staples), dissolving sutures (stitches) or glue.

'Key hole' surgery- you may have a few smaller wounds and one slightly bigger wound which may be closed with clips or subcutaneous sutures (dissolving stitches).

Pain: If you have an epidural this will continue for 3 days. It is important to take the oral painkillers as well as they work well together. If you have a Patient Controlled Analgesia (PCA) button then press this as you need to. It is important your pain is well controlled as this makes mobilising easier.

Day 1 - After Surgery:

Eating and Drinking: We will aim for you to take 3 Ensure® drinks every day. You should also be allowed to eat and drink normally. Returning to your regular diet after surgery will help your bowel function return quicker.

Eating and drinking can also help with your energy levels and wound healing after surgery.

It is good practice to try and eat whilst sitting in your chair rather than in the bed as this can prevent nausea and feeling bloated. If you are drinking enough we will take down your drip.

Pain: If you have an epidural this will continue today. It is important to take the oral painkillers also as they work well together. Your PCA may be stopped today and you will be changed onto strong oral painkillers. You may need to ask for these more often but please do so as you need to keep your pain well controlled.

Mobility: Be careful getting in and out of bed, ask the nurses to show you the best way to do this. You should try and sit up throughout the day and take regular walks. Aim for at least three walks, you will be assisted with these, normally around 20 metres each time, more if you can. Your mobility is not affected by your surgery so you will manage walking the way you normally do. You will feel more tired if you lie in bed as the painkillers can make you feel sleepy and the effects of the anaesthetic may still be in your system. Continue with your leg and breathing exercises every hour.

Nausea/Vomiting: You may feel sick or vomit for a number of reasons after your surgery. We can give you anti-sickness medicine through your IV drip.

Day 2 - After Surgery:

Eating and Drinking: Same as day one for diet and fluids. If you are struggling to eat normally try eating smaller portions more often and try to take the Ensure® drinks. Hopefully your drip will be down by now.

Pain: Your PCA or Epidural may be changed to strong oral painkillers. You may need to ask for these more often but please do so as you need to keep your pain well controlled.

Mobility: Increase the time you are sitting in the chair. Each day you should increase how far you walk and remember to do your leg and deep breathing exercises.

Nausea/Vomiting: If you feel sick remember to let the nurse know so they can give you something to help.

Bowels/Stoma: The nurses will ask you if you are passing wind and if your bowels are moving. They can move frequently after surgery and for some patients it can take quite a few days before there is any movement. If you have a stoma, it is important at this stage you begin to empty/change the bag. We will show you how to do this and you will be visited by the stoma nurse. We understand this can sometimes be difficult for you at this stage but the nurses are here to support you.

Wound: The nurse will take off the dressing and check if needs to be redressed.

If you meet your discharge goals today you can go home!

Day 3 - After Surgery:

We would hope that by today you should be free from any remaining tubes/drips and are able to mobilise independently.

If you have a stoma you should be working with the nurses to empty and change the bag.

If your bowels begin to move please inform your nurse.

If you meet your discharge goals today you can go home!

Day 4 /Day 5 onwards..... After Surgery:

Continue as above, we will be planning for your discharge. If things are not quite as planned and we feel there are any problems we will let you know.

Patient Discharge Goals:

Length of Stay Aim:

- Laparoscopic "Key Hole" Surgery 3–5 Days
- Laparotomy "Open" Surgery 5–7 Days

You will be discharged home when you reach the following targets:

- Medical staff are satisfied with your blood tests
- You are not requiring intravenous (via drip) fluids or antibiotics
- Your catheter is removed and you are passing urine (If you still require a catheter, referral for ongoing support will be arranged)
- You are eating and drinking without ongoing nausea or vomiting
- You are passing wind; your bowels do not need to move prior to going home
- You are independent with your stoma if required
- You can walk freely around ward
- You are happy with your pain control and pain killers
- There is a plan for your wound to be checked by District Nurse or Practice Nurse if required
- You and your family are happy for you to be discharged home
- Telephone and Surgical follow up will be arranged

Discharge from Hospital:

If you are in hospital for a week or less the ERAS Nurse will aim to call you within 24-72hrs to see how you have been at home. If things are well, she will then call you after 7 days, then again at 30 days. In between these times you will be able to contact her if there are any issues. If you have a longer stay in hospital than planned you will be telephoned at 30 days post discharge and you should contact her if there are any problems.

General issues after surgery:

Diet and fluids:

You may notice that you need to make some changes to your diet after your surgery until your bowel habit returns to normal. Some patients find certain foods exacerbate their symptoms. If this happens avoid these foods initially and continue to follow a balanced diet. Have regular meals and snacks if required throughout the day.

Eat plenty of bread, pasta, rice, potatoes and cereals as these are your main source of energy. Aim to have one source at each meal time. Some people may find low fibre options are better tolerated initially after surgery.

Continue to aim for 5 portions of fruit and vegetables in your diet to provide your body with the vitamins and minerals it requires. Lower fibre options may be best tolerated initially (if you need any help with food choices please speak to the ERAS nurse).

Make sure to have your protein foods, 2-3 servings/day which include: meat, fish, egg, pulses, lentils and beans to help promote wound healing and return of muscle function.

Regular intake of dairy foods is important to provide adequate calcium for your bones but it is also a good source of protein e.g. milk (if you enjoy milk please drink plenty of this), cheese and yoghurts.

Drink plenty of fluid (8-10 cups/day) e.g. water, milk, tea, coffee, fruit juice and squash. If you experience loose stools ensure you are drinking plenty to keep well hydrated.

If you continue to struggle with your diet on discharge and are not seeing a dietician, please speak to your ERAS nurse or GP and a referral to the dietician will be made if necessary.

Pain: You may still be sore from your surgery, this is not anything to worry about, keep taking the painkillers you have been given on discharge as prescribed. You can see your GP if you feel you need something else. You may suffer from intermittent spasmodic pain; this is quite normal and will settle down.

General issues after surgery- (Continued)

If you have severe pain which lasts more than 2 hours you should call the ERAS nurse or the ward you were discharged from. You may be advised to see your GP, attend a clinic appointment or go to your local A&E if they are concerned.

Nausea/Vomiting: You may feel a little sick and occasionally vomit; if this happens and you are not managing to eat and drink properly you can see your GP to discuss this, they may be able to prescribe some anti-sickness medication.

If you are not keeping anything down, call the ERAS nurse, the ward you were discharged from or your GP.

Wound: Your wound may be slightly red and swollen but this is part of the healing process. If you have had clips to close the wound, they will be removed around day 10 by your District Nurse or Practice Nurse. If your wound is very inflamed, painful or leaking you should call the ERAS nurse, the ward you were discharged from or your GP.

Bowels: It is normal for your bowel habit to be different after the surgery as part of your bowel has been removed. Depending on your surgery, you may have loose stools or be constipated. You must remember to drink adequately in both instances. Small meals often can be better.

Exercise: It is important to take regular walks and increase this every week.

Patients who have had an "open" operation: Do not lift anything heavier than a kettle full of water for 6 weeks after your surgery. Please do not vacuum within this time either.

Patients who have had "key hole" surgery can get back to normal day to day things sooner, however please be cautious, please discuss this with your consultant.

Tiredness: It is normal to feel tired in the first few weeks. You will need to rest and relax at times but it is very important that you try to get back to your normal everyday life as much as possible. Get up and get dressed every day.

Driving: You should not drive until you can do an emergency stop safely. Discuss this with your insurance company. Wait around four to six weeks after the surgery (Perhaps less if you have had "key hole Surgery").

Work: Discuss this with your employer and your GP. Your Surgeon will often advise you when he/she feels it would be suitable.

Follow Up: You may be reviewed two to six weeks after your surgery in your Consultants clinic. If this has not happened please call your consultants secretary.

If you have a stoma, you will be seen by the Stoma nurse also after discharge.

We want you to feel supported throughout this whole process. We ask that you play an active role in your own recovery: by getting up out of bed, mobilising around the ward and eating and drinking when you can. We are here to help so please ask if there is anything you are worried about.

Contact Numbers/Visiting times.

Enhanced Recovery (ERAS) Nurses: Approx Hours 8am-4pm (Monday – Friday)

Susan Johnson	01355 584994
Louise Peterson	01355 584517

Outside of these hours contact the ward you were discharged from and ask to speak to a Staff Nurse or the Nurse in Charge.

Wards	Phone Numbers
Ward 4:	01355 585040/1
Ward 4 (Level 1 HDU):	01355 585045
Ward 5	01355 585050/1
Ward 6:	01355 585060/1
Ward 8	01355 585080/1
HDU/ICU:	01355 585661/2

Contact & Visiting Information (During COVID-19)

Please phone each individual ward to book a 45 minute visiting slot

Please wear a face mask for the entire visit & gel your hands on entering and leaving the hospital

Please avoid visiting at mealtimes 12:00 – 13:00 & 17:00 – 18:00

Please either contact your relative directly via mobile or nominate one family member to phone for updates.

Useful Contact Numbers:

Hairmyres Switchboard	01355 585000
Stoma Nurses	01355 584404
Colorectal Nurses	01355 584680/585629
Hairmyres Pre Assessment	01355 584560
Physiotherapy Department	01355 585420
Occupational Therapy	01355 585434
Day Surgery Unit	01355 585630
Stop Smoking Service	01355 585502
Community Social Work Team	01355 807000
NHS 24	111

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