Enhanced Recovery After Colorectal Surgery (ERAS+)
An information guide
Enhanced Recovery After Colorectal Surgery (ERAS+)

The ERAS+ programme aims to prepare your body for major surgery and get you back to full health as quickly as possible afterwards.

In the weeks leading up to your operation you will be encouraged to increase your physical activity, improve your diet and oral health and reduce stress. The stronger and fitter you are before your operation the less likely you are to develop complications such as chest infection and pneumonia afterwards.

We expect you to be in hospital for 3-7 days but this can only be achieved if you are motivated and participate in your recovery. This includes sitting out of bed on the day of surgery, taking short walks, regular breathing and coughing exercises and eating and drinking.

Most patients will have had laparoscopic (keyhole) surgery, which is done using small cuts on the abdominal wall and removing a part of the bowel using precision equipment.

If you have been told you are not suitable for keyhole surgery and require a laparotomy (open surgery) you will still be able to achieve many elements of the enhanced recovery programme.
The benefits of enhanced recovery include:

- Reduced risk of chest infection, blood clots and muscle weakness as you will be out of bed and moving around shortly after surgery.
- The bowel starts to work quicker as you will be eating and drinking soon after surgery.
- Decreased dehydration, hunger and weakness due to taking carbohydrate drinks before surgery and avoiding long periods of fasting before and after surgery.
- Less nausea and vomiting due to good pain relief and a reduction of morphine.
- Less pain due to smaller cuts on the abdomen.
- Shorter length of stay.

The Colorectal Team

Consultant Colorectal Surgeon - They will explain why an operation has been recommended and discuss with you the risks and side effects of surgery and what to expect when you come back from the operating theatre.

Colorectal Nurse Specialist - They will be available to discuss your operation and continue to provide information, advice and support to you and your family throughout your treatment. There may be a number of different people involved in your care but your colorectal nurse will be your keyworker and your main point of contact.

Stoma Care Nurse - They will contact you if your operation is likely to involve a stoma and arrange an appointment with you either at home or in hospital to prepare you for a stoma.
The Colon and Rectum

The bowel is part of the digestive system and is divided into two parts, the small bowel and the large bowel. The large bowel is made up of the colon and rectum. The colon is the upper 120cm (4 feet) of the large bowel and the rectum is the last 16-20cms (6-8 ins).

Once food is swallowed it passes down the gullet (oesophagus) to the stomach where digestion begins. It then passes through the small bowel where essential nutrients are taken into the body. The digested food then moves into the colon where water is absorbed. After the colon the remaining waste matter is held in the rectum until it is passed through the anus as a bowel motion (stool).

Types of surgery

The aim of surgery is to remove a tumour or diseased part of the bowel along with normal tissue around it, making sure that the remaining bowel still has a good blood supply. Sometimes quite a large section of bowel is removed to achieve this. Lymph nodes in the area are also removed to check for any abnormal cells.

Once the section of bowel is removed the two open ends are then joined together using dissolving stitches or tiny staples. This join is called an anastomosis. Sometimes this join needs time to heal and a stoma is formed to divert the flow of the stools. This may be temporary or permanent.

Depending on your surgery and general health it is not always possible to re-join the two cut-ends and a permanent stoma may be formed. This will have already been discussed with your surgeon and stoma nurse.
Before your operation

Surgery school

This is an opportunity for you and your family to meet the team who will be looking after you for advice and information on how you can improve your health and prepare for surgery. Surgery school will help you understand what to expect on the ERAS + programme and your role in it. This will be held every Friday alternating between The Royal Oldham Hospital and North Manchester General Hospital.

Pre-operative assessment clinic

Before your operation, you will attend the pre-operative assessment clinic to assess your overall health before having a general anaesthetic; this usually takes between 60 and 90 minutes. If your consultant would like you to see an anaesthetist or undergo certain tests this will also take place at the pre-operative assessment clinic.

The aims of the enhanced recovery programme will be discussed with you so that you understand the importance of moving around and eating and drinking after your operation. The colorectal nurse specialist is usually available to discuss your diagnosis and treatment plan. The stoma nurse is also available if you have any questions or concerns. Most patients are admitted into hospital the day before surgery and the nurse will discuss the admission procedure with you.

The pre-operative assessment clinic gives you the opportunity to ask any questions about your admission and prepare you for your operation and discharge home. Written information will be provided to help you understand important aspects of your operation, including infection prevention, epidural pain relief and prevention of blood clots.
**Bowel preparation**

You may be asked to take laxatives to clean your bowel out before surgery or be given enemas on the ward depending on the type of surgery you are having. This will be discussed with you by a member of the colorectal team at your out-patient appointment.

**Dietary supplements**

At the pre-operative assessment clinic you will be given 3 carbohydrate energy drinks called Preload (unless you are diabetic). You need to bring these drinks back with you on the day you are admitted to the ward. Instructions on when to take these will be given to you by the ward nurse. These nourishing drinks are an important part of the enhanced recovery programme as they help your body cope better with surgery.

**Stoma patients**

If you have been told that you may need a stoma you will be seen by a stoma nurse either at home or in hospital shortly before your operation to teach you about caring for your stoma.

Before your operation a stoma nurse will see you on the ward to discuss the best position to site your stoma. Once this has been agreed with you, a mark will be drawn onto your abdomen. Soon after surgery you will be encouraged to care for your stoma with the help of the stoma and ward nurses.

You are expected to participate in daily bag changes so that you can confidently look after your stoma when you go home. The stoma nurse will ensure you have adequate supplies of stock for discharge and refer you to the community stoma nurse for continued support.
After the operation

You will have close monitoring of your blood pressure, pulse, breathing rate, fluid balance and temperature throughout your enhanced recovery. These vital signs are important and will alert the nurses to any problems with your heart, lungs, signs of infection and blood clots. The sooner potential complications are detected, the quicker they can be avoided or treated.

Pain relief

It is important that you have good pain relief; you should be able to breathe deeply, cough and walk around comfortably. Epidurals and patient-controlled analgesia (PCA) are usually removed the day after your surgery and replaced with oral pain relieving medication. Please tell your nurse if you are in pain as this will delay your recovery.

Eating and drinking

You will be encouraged to start eating and drinking. Most people find that small meals and bland, low fibre foods are easier to digest to start with. High protein supplement drinks are also available from the drinks trolley to supplement your dietary intake.

Moving around

You will be assisted to sit up in bed and to start deep breathing and leg exercises as soon as you can after the operation. These exercises are important to help reduce the risk of developing a chest infection and blood clots:

- Sit up in bed, place your hands on your stomach and take a deep breath in through the nose until your lungs feel full of air and your stomach pushes against your hands.
- Blow the air out slowly through pursed lips in one long slow breath.
- Take another deep breath and hold for 3 seconds and huff out 3 times (huffing is a short pant). Imagine you are trying to mist
up a window, on the 3rd huff cough from the lungs not the throat.
• Circle your ankles and point your feet up and down whilst you are in bed.

Repeat these exercises 5 times every hour until you are walking.

A physiotherapist will aim to see you shortly after your operation to make sure you are moving around satisfactorily.

Preventing blood clots

Because you will be lying still for a while, the circulation in your legs becomes sluggish and the blood can clot - this is called a deep vein thrombosis (DVT). Occasionally a clot can become dislodged and travel to the lungs causing a blockage (pulmonary embolism).

To help prevent clots you will be given compression stockings to wear. These can be removed before you go home.

You will also require blood thinning injections called clexane for 28 days following your surgery. Whilst you are in hospital you or a family member will be taught how to administer these injections once you go home. If you prefer, we can arrange for a district nurse to do this for you.

Tubes and drips

Catheter - during the operation a catheter will be placed into your bladder so that we can monitor how much urine you produce, this is usually removed within 48 hours.

Intravenous fluids - These are usually stopped the day after your surgery if you are drinking enough.

Oxygen – You will be given extra oxygen to breathe until you are out of bed.

Drains - you may have a drain into your abdomen to collect fluid; this is usually removed within 72 hours.
Sickness
You may feel nauseous after the operation, this is usually caused by the anaesthetic drugs. Anti-sickness medication will be given to relieve nausea quickly to aid your recovery.

Wounds
Depending on your operation your wounds will be closed with either staples, soluble stitches or glue. The nurses will monitor your wounds for signs of infection and arrange community follow-up if any staples need removing (usually 8-9 days after the operation).

Complications of surgery
Undergoing major surgery is not without risk and sometimes complications can occur. Being on the enhanced recovery programme will considerably reduce the risk of developing complications, however they can still occur. It is important that you understand the most common complications associated with colorectal surgery.

Infections
Chest, urinary and wound infection are the most common. You will be given antibiotics to help prevent infection. The nurses and doctors looking after you will take great care when attending to any dressings and procedures.

Injury to internal organs
There is a risk of damage to other abdominal structures from the surgical instruments, although this is very rare.
Cardiovascular problems
Having an operation causes a stress response in the body which in turn can put undue stress on the heart leading to heart attack or stroke. Stopping smoking can reduce the risk of these.

Ileus
This term describes a bowel which is not functioning and can occur after bowel surgery. Usually the bowel is continuously moving, allowing fluids and solids to pass through. If this movement stops, nothing can pass through, resulting in bloating and vomiting. This condition usually resolves itself with a period of rest. If it continues you may need a tube inserting that passes down your nose and into your stomach (nasogastric tube) to remove fluid from the stomach to prevent you from feeling sick. This is usually taken out within a few days.

Anastomotic leak
This is a rare but serious complication which occurs when the join in the bowel (anastomosis) breaks down and leaks. If this happens you may require a further operation to repair the bowel.

Internal bleeding
This is another rare complication and may require further surgery to stop the bleeding.

Sexual dysfunction
Sometimes surgery can cause damage to the nerves that go to the sexual organs, leading to ejaculation and erection problems for men and changes in sexual function for women. Sexual dysfunction should improve over time. However, it is important to discuss any problems with your surgeon or keyworker so that you can be referred for treatment.
Bladder dysfunction

Occasionally when the catheter is removed some patients are unable to pass urine. If this happens a catheter may be re-inserted and left in for a few weeks to give the nerves or the bladder a chance to heal. You will be shown how to care for your catheter at home and arrangements will be made to remove the catheter and see if you can pass urine normally. You may be referred to a urologist for further investigations.

Going home

Please contact the ward or specialist nurse immediately if you develop any of the following symptoms in the first 48 hours following discharge.

- High temperature or you feel feverish.
- Severe abdominal pain which is not relieved by pain medication.
- Persistent diarrhoea and/or nausea and vomiting.
- Your wound becomes red, warm to touch or you develop a discharge.
- Swelling or pain in your calf.
- Shortness of breath.

You will be given a separate patient information booklet with further information on recovering from bowel surgery.
To improve our care environment for Patients, Visitors and Staff, Northern Care Alliance NHS Group is Smoke Free including buildings, grounds & car parks.

For advice on stopping smoking contact the Specialist Stop Smoking Service on 01706 517 522

For general enquiries please contact the Patient Advice and Liaison Service (PALS) on 0161 604 5897

For enquiries regarding clinic appointments, clinical care and treatment please contact 0161 624 0420 and the Switchboard Operator will put you through to the correct department / service

The Northern Care Alliance NHS Group (NCA) is one of the largest NHS organisations in the country, employing 17,000 staff and providing a range of hospital and community healthcare services to around 1 million people across Salford, Oldham, Bury, Rochdale and surrounding areas. Our Care Organisations are responsible for providing our services, delivering safe, high quality and reliable care to the local communities they serve.

The NCA brings together Salford Royal NHS Foundation Trust and the hospitals and community services of The Royal Oldham Hospital, Fairfield General Hospital in Bury, and Rochdale Infirmary (currently part of The Pennine Acute Hospitals NHS Trust).

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