

# Enhanced Recovery After Surgery (ERAS)

Pancreatoduodenectomy (Whipple's procedure)  
Information for patients





## What is Enhanced Recovery?

Enhanced Recovery is a new way of improving the experience and wellbeing of people who need major surgery. It can help you to recover sooner, so that life can return to normal as quickly as possible. The programme focuses on making sure you are actively involved in your recovery.

There are four main stages:

- planning and preparation before admission (including improving your nutrition and physical fitness before surgery)
- reducing the physical stress of the operation
- a structured approach to the pre-operative (before surgery), intra-operative (during surgery) and post-operative (after surgery) management, including pain relief and early nutrition
- early mobilisation (getting you moving as soon as possible).

Research has shown that taking carbohydrate drinks up to two hours before surgery, as part of an Enhanced Recovery programme, can reduce the stress of the operation on your body. We may give you some carbohydrate drinks to take in the hours before your surgery.

We will also give you an early mobilisation plan. The purpose of this plan is to get you moving as soon as possible and will involve getting you out of bed the day after your surgery and assisting you to walk increasing distances on the ward every day until you are discharged home. If you have problems walking, we will develop a personalised, realistic mobility plan with you during your recovery.

The Enhanced Recovery programme is a guideline for all the professionals involved in looking after you (the multidisciplinary care team). The programme may not be suitable for everyone. If this is the case for you, the team looking after you can make changes, making sure the care you receive is not only of the highest quality, but is also designed around your specific needs.

We will give you a patient diary to record your thoughts and feelings and to note down your progress during your time in hospital after your operation. Whilst we hope you will complete this, it will not affect your care if you choose not to.

## What to expect

### **Planning and preparation before admission**

You will be seen in an outpatient clinic to discuss what is planned for your surgery. You will have the operation explained to you, including the risks and benefits, and you will have the opportunity to sign a consent form.

You will have an appointment at the Pre-operative Assessment Clinic before the date of your surgery. This is to make sure that you are fit for an anaesthetic and surgery.

You will see a nurse, who will check your general health and do tests such as blood tests. You may see an anaesthetist, to discuss the anaesthetic you will have for the operation. They will also talk with you about the pain relief you will need after the operation. You will have the opportunity to ask any questions you may have.

Please bring along a list of all your regular medications (it may be easier to bring your repeat prescription with you).

We will use the information we gather to plan your care in hospital and to deal with any problems at an early stage.

On the day of your surgery, you will come into hospital as a Theatre Direct Admission (TDA). This means you will be transferred to a bed on the relevant ward after your surgery.

## **Stopping smoking**

It cannot be emphasised enough that it is in your best interests to stop smoking as soon as possible before any major surgery. The longer you are smoke free before your operation the better.

Continuing to smoke before surgery can increase the risk of complications involving your heart, lungs and surgical wounds, all of which may result in you having a slower recovery and a longer stay in hospital.

There are several places where you can find information about stopping smoking:

- Make an appointment at your GP practice or health centre. There is at least one Stop Smoking Advisor in every GP practice in Oxfordshire. They can give you advice about stopping smoking and prescribe medication, including Nicotine Replacement Therapy, to help you quit. If you do not live in Oxfordshire, call the National Smoking Helpline number listed below to find out where your nearest support is available.
- Make an appointment at your local pharmacy. Some retail pharmacies in Oxfordshire have fully trained Stop Smoking Advisers who can also help you quit. Call the Smokefreelife Oxfordshire service to find one near you.
- **Smokefreelife Oxfordshire**  
Tel: 0800 246 1072
- **National Smoking Helpline**  
Tel: 0300 123 1044

Further information can be found in the following patient information booklets. These will be given to you at the Pre-operative Assessment Clinic or can be found on our website: [www.ouh.nhs.uk/patientinformation](http://www.ouh.nhs.uk/patientinformation)

- Preparation for your operation and Theatre Direct Admission
- Preventing blood clots while in hospital
- Hepatobiliary and Pancreatic Surgery: General advice following Hepatobiliary and Pancreatic Surgery

## **Keeping active**

To help you prepare physically for your operation and recovery, it is important to keep as active as you can and, where possible, increase your activity levels. The current recommendation is 150 minutes of 'moderate' intensity exercise a week, in at least 10 minute sessions. Improving your fitness could be achieved through simple changes to your routine, such as increasing the speed and frequency of walking.

## **Here for Health – Health Improvement Advice Centre**

Oxford University Hospital drop-in centre for advice and support on healthy living, including physical activity, diet, smoking, alcohol and emotional wellbeing.

Tel: **01865 221 429**

(9.00am to 5.00pm, Monday to Friday)

Email: **hereforhealth@ouh.nhs.uk**

Website: **www.ouh.nhs.uk/HereforHealth**

## **Oral care**

Research suggests that a build up of bacteria in your mouth can increase the risk of infection in your lungs following major surgery. Practicing good oral care can reduce this bacteria and help towards your recovery after surgery.

Before you come into hospital, we recommend that:

- you brush your teeth or dentures twice a day, using a fluoride toothpaste
- you rinse your mouth with an alcohol-free, antiseptic mouthwash 15 minutes after brushing
- you visit your dentist or dental hygienist as part of your routine check-up, to manage any existing dental health problems.

Bring your toothpaste, toothbrush and mouthwash with you when you come into hospital, to continue with your oral care after surgery. Continue with your oral care for four to six weeks after your discharge from hospital, as part of your recovery.

# Reducing the physical stress of the operation

## **Nutrition**

You may be given some carbohydrate drinks by your pre-operative assessment nurse. These are special drinks designed for people undergoing surgery. They are clear, still drinks, that contain carbohydrates and minerals. They are easy to digest, so you can still take these **up to two hours** before your surgery. Please take these drinks according to the instructions given to you at the Pre-operative Assessment Clinic.

**Evening before your surgery:** take two carbohydrate drinks.

**Morning of your surgery:** take two carbohydrate drinks, to be finished **at least two hours** before your admission time.

**Carbohydrate drinks are not suitable for people with diabetes, suspected diabetes or slow stomach emptying.**

Carbohydrate drinks are gluten, lactose and fibre free. You may prefer to drink these drinks chilled.

**If you are taking nutritional supplement drinks, such as Ensure Plus or Complan Shake, please note:**

These drinks are different from the carbohydrate drinks and take longer to empty from your stomach. They should only be taken whilst you are still allowed to eat food before your operation.

If you usually take pancreatic enzymes, such as Creon, **do not** take these with the carbohydrate drinks.

You may have been seen and assessed by a Specialist Dietitian at your outpatient clinic appointment. If you haven't, and have unintentionally lost weight or are struggling to eat and drink, please tell your Specialist Nurse or pre-operative assessment nurse. They will refer you to the Specialist Dietitian, if required. It is important that you are as well nourished as possible before your operation.

If you have any further questions, please speak to your pre-operative assessment nurse.

## What happens after the operation?

### **Intra-operative (during surgery) and post-operative (after surgery) management, including pain relief and early nutrition**

You are likely to have several tubes attached to you after your surgery. These will include:

- a narrow tube called a 'catheter' for giving you pain medication infusions either into your back (epidural) or into your wound (local anaesthetic infusion)
- a urinary catheter (to drain and measure your urine)
- drains in your abdomen (to allow fluid to drain away)
- a tube up your nose (to allow your stomach contents to drain away and to give you a special liquid feed, if needed)
- a tube in your neck (to help us give you intravenous medications (into your bloodstream) and fluids).

These tubes and attachments will be removed when it is safe to do so, usually from day 3 onwards.

Below is an example of what to expect after your operation:

#### **Day of surgery to post-operative day 1**

The doctors and nurses will stabilise your condition on the Churchill Overnight Recovery Unit (CORU) after surgery. You will be transferred to the Upper GI ward the day after surgery. You will be helped to sit out of bed and go for a walk with assistance. You will be allowed to have some water to drink.

#### **Post-operative day 2**

You will sit in the chair on two occasions. You will go for two walks with assistance. You may be allowed to have a cup of tea/coffee, a nutritional supplement drink and smooth soups and puddings. You must take your pancreatic enzyme tablets with your nutritional supplements and food, to help you digest your food.



### **Post-operative day 3**

You will sit in the chair on two occasions. You will go for two walks. You may be allowed something soft to eat. Remember to take your pancreatic enzyme tablets with any food you eat.

### **Post-operative day 4**

You will sit in the chair on two occasions. You will go for three walks. You may be allowed something soft to eat. Remember to take your pancreatic enzyme tablets with any food you eat.

### **Post-operative day 5**

You will sit in the chair for most of the day and go for walks independently. You may be allowed something more solid to eat. Remember to take your pancreatic enzyme tablets with any food you eat.

You will be given a patient diary before your operation, which explains what we will do and what to expect after the operation. It includes goals for you to achieve during your hospital stay and to prepare for leaving hospital.

Further information can be found in the following patient information booklets. These will be given to you by the specialist nurse or in the Pre-operative Assessment Clinic. They can also be found on our website: [www.ouh.nhs.uk/patientinformation](http://www.ouh.nhs.uk/patientinformation)

- Anaesthesia explained
- Managing your pain after your operation
- Early mobilisation in hospital, a guide to help your recovery

## Early mobilisation

You will need to get moving (mobilise) soon after your surgery. This is one of the most important parts of the Enhanced Recovery programme. It can help to prevent complications, such as chest infections, pneumonia and developing blood clots (e.g. deep vein thrombosis (DVT) or pulmonary embolism (PE)).

Moving around will also get your bowels and gut working, which will help to stop you from feeling sick. This means you will be able to eat and drink sooner, giving your body the energy to recover.

Details of how we are going to help you mobilise are written in your patient diary. It will involve sitting out of bed for increasing lengths of time and walking increasing distances. We will also help you to meet the goals in your personalised mobility plan, if you have problems walking.

### **Preventing blood clots after surgery**

You may need to have a course of blood-thinning injections (dalteparin) after you have been discharged from hospital. This is to reduce the risk of you getting a blood clot in your leg or lung after your surgery.

These are once daily injections, which you will need to give yourself until the course has finished. You will be taught how to inject yourself and will have the chance to practice before you go home. This course of injections is started whilst you are in hospital and continues until 28 days after your surgery.

## During the day

After the majority of your drips and drains have been removed, you will be encouraged to dress in your usual clothes during the day and nightwear during the night only. Please make sure you have some clean clothes with you and that the clothing is suitable, e.g. loose fitting and comfortable.

## Leaving hospital

After your operation you are likely to be in hospital for between 7 and 10 days. The Enhanced Recovery After Surgery (ERAS) programme sets out goals and targets to achieve at set days after your operation. Your discharge from hospital is also based on you reaching set goals. When you have achieved these, you will be discharged. These goals are:

- for staff to assess you are medically fit for discharge
- to be controlling your pain effectively with oral analgesics (painkillers)
- to be eating and drinking, with no vomiting (nausea should be controlled with anti-sickness medication, if required)
- understand pancreatic enzyme dosing and able to dose according to what has been eaten/drunk
- bowels well controlled (no excessive diarrhoea or constipation)
- to be independently mobile (able to get yourself out of bed and on/off the toilet)
- to be competent with dalteparin self-administration (if applicable), or have an alternative option in place.

You will need to make your own arrangements for discharge, including transport and ensuring you have adequate support at home.

Please make sure you have a supply of paracetamol at home, ready for your discharge from hospital. These can be purchased cheaply from your local pharmacy or supermarket. If you have any questions or concerns about leaving hospital, please speak to your ward nurse.

Further information about leaving hospital can be found in the following patient information booklet. This is available on the ward (ask your ward nurse if you have not received it) or can be found on our website: [www.ouh.nhs.uk/patientinformation](http://www.ouh.nhs.uk/patientinformation)

- Planning your discharge – making preparations for your return home

## Follow-up after discharge

You may be a little worried about returning home when you have been discharged from hospital after an operation. However, all the professionals involved in looking after you will have decided that you are well enough to leave hospital. When you leave hospital you will still need time to recover – this may take some weeks or months.

You will be seen in the Outpatients department at the Churchill Hospital, Oxford, approximately two weeks after your discharge from hospital.

If you require urgent advice or have a problem after you have left hospital, please follow the information in the next section.

## Problems after discharge

If your question is non-urgent and does not need responding to immediately, within office hours, please contact your Consultant Surgeon's secretary, the Hepatopancreatobiliary Specialist Nurse or Dietitian on the following telephone numbers. You can also contact your GP's surgery for advice.

### **Consultant Surgeons' secretaries**

Tel: **01865 235 668**

**01865 235 124**

(8.00am to 4.30pm, Monday to Friday)

### **Specialist Hepatopancreatobiliary Cancer Team (including the Macmillan Hepatopancreatobiliary Cancer Dietitian)**

Tel: **01865 235 130**

Or call **0300 304 7777** and ask for bleep 1386 or 1891

(9.00am to 5.00pm, Monday to Friday)

**If your question requires an urgent response or is outside of office hours**, please contact your GP's surgery or out-of-hours GP's service (including NHS 111 – call 111 free from any landline or mobile). They can assess you and decide what further action needs to be taken.

If you require an urgent review, you may be asked to visit the Surgical Emergency Unit at the John Radcliffe Hospital for further tests and investigations.

In an emergency or life-threatening situation, call 999 or go to your nearest Emergency Department.

## Research studies

Many research studies are carried out at the Oxford University Hospitals and you may be eligible to take part in one.

During your visit you may be approached about research studies. If you would like further information, please ask your healthcare professional.

## Useful resources

**[www.smokefree.nhs.uk](http://www.smokefree.nhs.uk)**

(NHS stop smoking advice)

**[www.macmillan.org.uk](http://www.macmillan.org.uk)**

(Cancer care and support charity)

**[www.maggiescentres.org](http://www.maggiescentres.org)**

(Maggie's cancer caring centres)

**[www.maggiescentres.org/cancerlinks](http://www.maggiescentres.org/cancerlinks)**

(Information and support for people with cancer)

**[www.cancerresearchuk.org](http://www.cancerresearchuk.org)**

(Information on up-to-date cancer research)

**[www.ouh.nhs.uk](http://www.ouh.nhs.uk)**

(Oxford University Hospitals NHS Foundation Trust)

**[www.britishpainsociety.org](http://www.britishpainsociety.org)**

(The British Pain Society)

**[www.rcoa.ac.uk](http://www.rcoa.ac.uk)**

(Royal College of Anaesthetists)



If you have a specific requirement, need an interpreter, a document in Easy Read, another language, large print, Braille or audio version, please call **01865 221 473** or email **PALS@ouh.nhs.uk**

Authors: Elaine Tustian and Hamira Ghafoor,  
Enhanced Recovery Programme Facilitators  
September 2018  
Review: September 2021  
Oxford University Hospitals NHS Foundation Trust  
[www.ouh.nhs.uk/information](http://www.ouh.nhs.uk/information)

