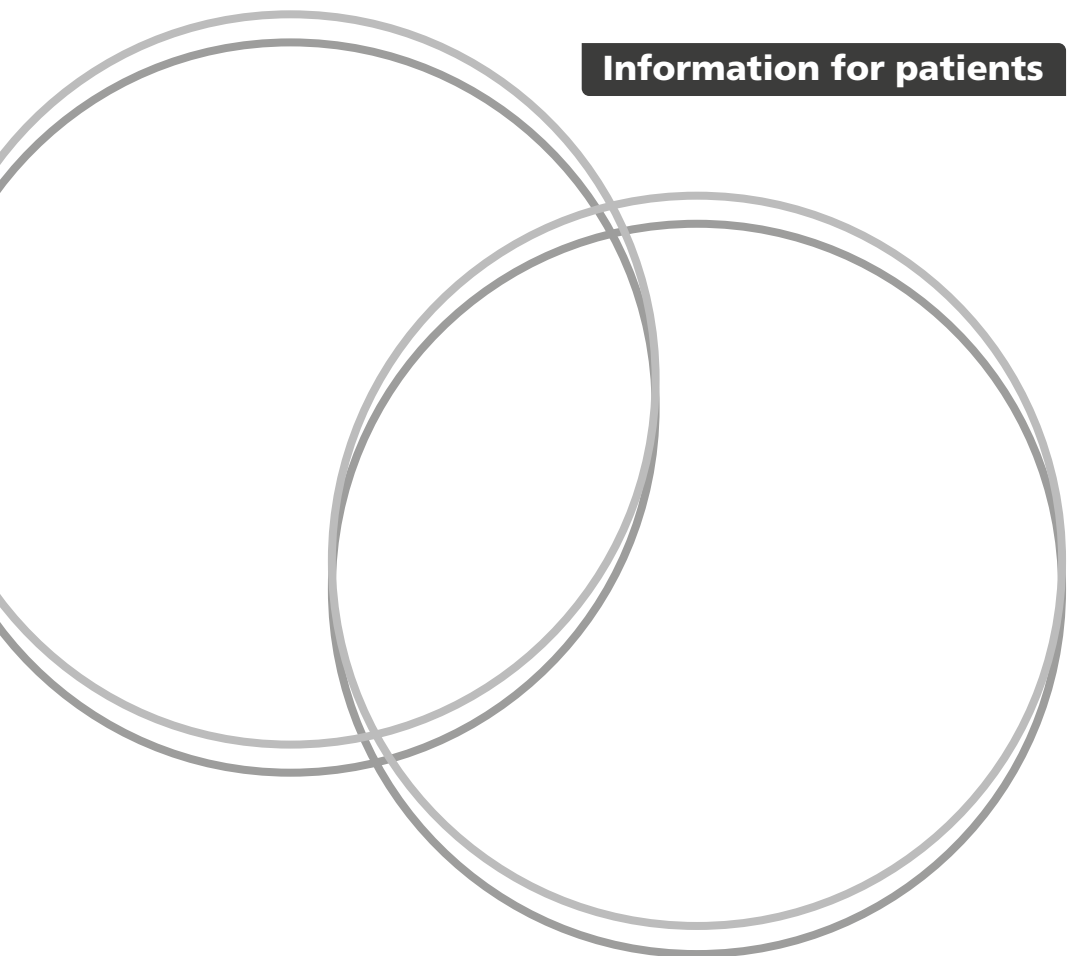


Enhanced Recovery After Surgery (ERAS)

Nephrectomy (complete or partial kidney removal)

Information for patients



What is Enhanced Recovery?

Enhanced recovery is a way of improving the experience and wellbeing of people who need major surgery. The programme focuses on making sure that you are actively involved in your recovery, recover quicker and aims of getting you home sooner.

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 surgery
- 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).

We may give you some carbohydrate drinks to take in the hours before your surgery. 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. Carbohydrate drinks are not suitable if you have diabetes, suspected diabetes or slow gastric emptying.

We will also give you an early mobilisation plan. The purpose of this plan is to get you moving as soon as possible of surgery and involves getting you out of bed the day of 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 that 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 and have the operation explained to you, including the risks and benefits.

It is important that you tell us as early as possible if you have any concerns about managing your daily recovery at home following your discharge from hospital or your circumstances change during your admission.

You will be seen at the Pre-Operative Assessment Clinic before the day of your surgery. This will make sure that you are fit for an anaesthetic and surgery.

You may see an anaesthetist, to discuss the anaesthetic you will have for the operation. You will see a nurse, who will check your general health and do tests such as blood tests and Electrocardiogram (ECG), if you are over 50 years old. 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 might 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 plan for any adjustments at an early stage.

We advise that you have a shower and wash your hair the evening before or the morning of your surgery. This helps towards reducing the risk of developing an infection.

On the day of your surgery, you will come into hospital as a Theatre Direct Admission (TDA) and will be seen by the surgeon and anaesthetist to sign the consent form. After your surgery, you will be transferred to a bed on the relevant ward.

What can I do to prepare for my surgery?

Being active

Your heart and lungs have to work harder after an operation to help the body to heal. If you are already active and do regular physical exercises, you will be used to your heart and lungs working harder.

Improving your health and activity levels, means that you are more likely you have a short recovery and less complications. Even small changes can make a big difference. Regardless of your general health condition, there may be changes you can make to reduce the risk of complications from the operation. Aim to do any activity that can make you feel out of breath at least three times per week. Check with your doctor before starting any new activity. Examples of some activities are brisk walking, swimming, cycling, gardening or playing with your children or grandchildren. Activities that improve your strength and balance will also be useful for your recovery such as yoga and thai chi.

Further information can be found on the website for Royal College of Anaesthetists:

Website: www.rcoa.ac.uk/patient-information/preparing-surgery-fitter-better-sooner

Stopping smoking

It is extremely important 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 having a slower recovery and a longer stay in hospital.

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

Here for Health - Health Improvement Advice Centre
(hospital based)

Oxford University Hospitals' health improvement advice centre offers a range of tailored support for healthy living and wellbeing including stopping smoking, reducing alcohol, becoming more active, eating healthily and self-care for general wellbeing.

Please ask your surgical team about a referral, or contact the Here For Health team directly by telephone or email.

Telephone: **01865 221 429**

Email: [**hereforhealth@ouh.nhs.uk**](mailto:hereforhealth@ouh.nhs.uk)

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

Open 9.00am to 5.00pm, Monday to Friday

Stop For Life Oxon (community based)

Community-based behavioural support and nicotine replacement products.

Telephone: **0800 122 3790**

Text: **STOPOXFORD** to **60777**

Website: [**www.stopforlifeoxon.org**](http://www.stopforlifeoxon.org)

Outside of Oxfordshire:

Call the National Smoking Helpline number listed below to find out where your nearest support is available.

Telephone: **0300 123 1044**

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

Oral care

Research suggests that a buildup 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 and clean your tongue, using a fluoride toothpaste.
- You rinse your mouth with an alcohol-free, antiseptic mouthwash 30 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 and for four to six weeks after your discharge from hospital, as part of your recovery.

Keeping hydrated

Keeping hydrated by drinking well is vital for good health. Early signs of dehydration can include feeling a lack of concentration, headaches and light headedness. If you are dehydrated over a long period of time, it can start affecting your kidney function and can cause problems like urine infections and constipation.

The amount of fluid you individually need can vary and different things can affect how much fluid you require, including the weather and temperature, exercise and how much you sweat.

Advice for an average adult is to aim to drink between 1.5 to 2 litres of fluid a day. This is equivalent to six to eight mugs of fluid.

There are some conditions that may require individuals to follow a fluid restriction. If this applies to you, please follow the advice given by your specialist doctor.

If you have not been advised of any fluid restrictions and you are feeling thirsty it is important to have a drink. Taking note of the colour of your urine is a good way to check how hydrated you are. Your urine should be pale yellow to clear colour.

What type of drinks should I have?

Drinking water is the best way of hydrating and you can add sugar free squash for flavour or slices of fruit to make drinking water more interesting.

Sugar free fizzy drinks, tea and coffee do also count, although we advise avoid drinking them in large quantities. Fruit juices are a good source of vitamins and minerals but limit them to one glass a day as they also contain sugar. Milk counts as fluid also, choose full fat (blue top) milk if you are wanting to gain weight or skimmed milk (red top) if you are wanting to manage your weight.

Alcohol does not count towards your daily fluid needs.

If you find it difficult to drink enough fluids, try adding foods such as cereal with milk, soup, smoothies, milk shakes, ice cream, ice lollies and jelly which will also contribute to your daily fluid intake.

Nutrition support before your surgery

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 carbohydrate and minerals. These are easy to digest, so you can still take them **up to two hours** before your surgery.

Please take these drinks according to the specific instructions given to you at the Pre-operative Assessment Clinic.

- **Evening before your surgery:** take carbohydrate drinks.
- **Morning of your surgery:** take carbohydrate drink(s), to be finished **at least two hours** before your admission time.

Carbohydrate drinks are not suitable for people with diabetes, suspected diabetes or slow gastric 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 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.

You may have been seen and assessed by a specialist dietitian at your outpatient clinic appointment. If you have not, and you have recently unintentionally lost weight or are struggling to eat and drink, please speak to your specialist nurse or doctor. It is important that you are as well-nourished as possible before your surgery.

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

What happens after my surgery?

You may have the following tubes attached to you after the surgery:

- A urinary catheter (hollow tube) in your bladder to collect and measure your urine.
- A wound drain into the side your tummy to allow excess fluid to drain away from the wound area.
- An intravenous drip in a vein in your arm or through a small tube in your neck to give your body fluids to help hydrate you until you are eating and drinking.
- An oxygen mask or oxygen through small plastic tubes in your nose to help you recover from the anaesthetic.

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

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

Day of surgery

Your initial recovery will take place in either the Urology ward or the Churchill Overnight Stay Unit (CORU), depending on your needs. You will be helped to sit up in bed or sit out in the chair (if you are able to) and can have something to eat and drink.

Post-operative day 1 onwards

You will be encouraged to sit in the chair for longer periods, go for regular walks and have something to eat and drink.

You will be given a patient diary before your operation, which explains what we will do and what we expect of you. It includes goals for you to achieve during your hospital stay and to prepare for leaving hospital. Whilst we hope you will complete this, it will not affect your care if you chose not to.

Further information can be found in the following patient information booklets; which will be given to you by the specialist nurse or in the Pre-operative Assessment Clinic.

This leaflet can also be found on our website:

[www.ouh.nhs.uk/patient information](http://www.ouh.nhs.uk/patient-information)

- Pre-operative assessment: Preparation for your operation and Theatre Direct Admission.

Early mobilisation

Getting up and moving after your operation is important for your recovery. This means getting out of bed from the day of your operation and walking greater distances on the ward every day until you are discharged home. 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 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 energy to recover.

Details of how we are going to help you to mobilise are written in your patient diary. It will involve sitting out of bed for increasing lengths of time and walking increasing distances. Your ward team also will give you the 'Physiotherapy advice after abdominal surgery' leaflet to help with your recovery goals. We will help you to meet the goals in your personalised mobility plan if you have problems walking.

Managing your pain after surgery

It is important your pain is well managed after your surgery to help you take deep breaths, cough effectively and meet your mobility goals.

Please do let your nurse or doctor know if your pain is not being effectively managed with the pain relief given or if you are experiencing any side-effects from the painkillers (such as nausea or vomiting, hallucinations, vivid dreams or itching) so additional or alternative pain relief can be considered for you.

Your ward team may arrange a review by our Pain Service whilst you are in hospital if required for your care.

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 for 28 days in total after your surgery.

Blood thinning medication is not normally given to patients who have had a nephrectomy for reasons other than cancer once they go home.

If you are already on blood-thinning medication before surgery your surgical team will make a plan for resuming your medications. If you have any further queries related to your medication, please discuss these with your specialist team.

During your stay in hospital

After most of your tubes and drain 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, loose-fitting clothing with you and well-fitting slippers with good grip.

Rest breaks

Your energy levels can fluctuate after surgery and you could feel tired more easily than normal. To manage any tiredness it can be helpful to plan rest breaks or a short nap during the day. We advice planning your nap for the middle of your day to avoid disruption to your sleep routine.

Sleep

Sleep plays an important role in your body healing and recovering after surgery and in supporting your emotional wellbeing. It is not always easy to adjust to sleeping in a new environment.

The following tips could help you to sleep better whilst in hospital:

- Bringing in an eye mask and ear plugs to use to help reduce noise and light.
- Avoid looking at phone screens for an hour before sleep. The blue light emitted from phone screens can affect your natural sleep cycle and make you feel more awake. Opting for decaffeinated drinks in the evening. Caffeine can keep some people awake.
- Letting your nurse know if you are hot, cold, worried, uncomfortable or in pain at any point during the night.

If the above tips don't help with your sleep, do speak with your ward team to discuss alternative solutions.

Leaving hospital

You are likely to be in hospital for 1 to 2 days if you have had laparoscopic (keyhole) surgery; 2 days following robotic surgery or 4 to 5 days if you have had open surgery.

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 include:

- staff assessing you to be medically fit for discharge.
- your pain to be controlled effectively with oral analgesia (pain killers)
- eating and drinking, with no nausea or vomiting
- to be independently mobile (or back to your level of independence); able to get yourself out of bed and on/off the toilet
- passing wind or have opened your bowels
- to be competent with dalteparin self-administration (if applicable) or have an alternative option in place
- **if you have had nephroureterectomy surgery (involving your kidney, ureter and bladder)** you will be discharged home with a urinary catheter in place. The ward nursing team will provide you with catheter care advice and a catheter care pack before your discharge and details on who to contact if you need support.

You will need to make your own arrangements for discharge including transport and ensuring that you have adequate support at home. Please make sure you have a supply of paracetamol 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 or doctor.

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

- Planning for your discharge – making preparations for your return home.

Follow-up after discharge

You will receive an outpatient appointment to be seen in hospital for a follow up around six weeks after your discharge from hospital.

If you require urgent advice or have a question after your discharge from hospital, please follow the information in the next section.

If you have had nephroureterectomy surgery, you will receive an appointment to return to hospital in two weeks to have a cystogram (X-ray of your bladder) to check your catheter can safely be removed on the same day in Urology Triage.

Recovery 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. It is important to continue with your recovery after discharge to help you to return to your normal activities sooner. We have answered some commonly asked questions over the next few pages to help aid your recovery. However, this is a general guide, for questions related to your specific needs please speak to a member of your clinic team.

How do I manage my pain after discharge?

You will be given painkillers to take home along with advice on how to take them and how long for when you are discharged from hospital. For most patients, pain reduces over a short period of time, but you may need to continue to use pain killers when you return home. Most patients do not need stronger painkillers after a week. The painkillers should be reduced and gradually stopped as your pain settles.

Do I follow a special diet after the surgery?

You can eat and drink straight away after your surgery, but some patients can experience symptoms of bloating and nausea as the surgery can slow down your bowel movements. We recommend a light diet (which includes foods such as cornflakes, white bread or toast, eggs, soup, chicken, mashed potato, cheese, puddings) for the first day of your surgery and build up to a normal diet from the second day of surgery onwards.

Eating regular meals and having a balanced and varied diet can help you to get the right nutrients to help you heal and recover after surgery. Including foods rich in protein in your meals can help towards wound healing. This includes foods such as eggs, meat, fish, pulses (such as beans, lentils, chickpeas), cheese, milk and milk puddings.

If your appetite is reduced or your portion sizes are smaller than normal you could try having five or six smaller meals, snacks or nourishing drinks during the day.

To avoid constipation, include foods rich in fibre such as fresh fruit, vegetables, beans and pulses, porridge, wholemeal bread and cereals.

Aim to drink 1.5 to 2 litres of a variety of fluids each day to help keep you well hydrated and prevent constipation. Fluids can include water, flavoured water or diluted squash, tea, herbal tea, coffee, malted drinks, hot chocolate and milk. Foods containing fluid can also help you to maintain your hydration and include soup, ice lollies, jelly, yoghurt and milk puddings.

What do I do if I become constipated?

You will usually have started passing wind before discharge from the hospital but may not open your bowels for a few days. If you have not opened your bowels within three to four days of your surgery, we would recommend starting some gentle laxatives given to you in your discharge medication pack until your bowels open. If you are taking stronger painkillers at home these can also make you more likely to be constipated. It is important to continue to move around and be gently active such as walking when you are home to help keep your gut working.

When can I start exercising again?

Please request the 'Physiotherapy advice after abdominal surgery' leaflet from the ward which helps outline guidance on recovery and exercise after your surgery. We encourage light walking after your surgery and building up your activities goals each week as advised in the physiotherapy leaflet. You can resume more strenuous activities such as jogging, aerobic exercise and heavy lifting if you are feeling well enough to do so six weeks after your surgery.

How long do my wound dressing(s) stay on after surgery?

We would expect your wound dressings to stay on for the initial two days after your surgery. After this the tummy wound(s) can be left uncovered to continue to help with healing. If your wound(s) still require dressing, the ward team will advise you on caring for your wound(s) and provide you with spare dressings.

Can I shower or bath with my wound(s)?

We recommend you take a shower after your surgery rather than having a bath. The stitches in your tummy are either dissolvable or waterproof clips. You can use soap or shower gel to wash your body, but it is important that you do not rub any soap or shower gel directly onto your wounds. It is important to rinse the soap thoroughly from your body to avoid it irritating your wounds and to gently pat your wounds dry with a clean towel.

Swimming or bathing should be avoided until at least four weeks after surgery or until your wounds have completely healed.

When can I drive?

You can drive when you are comfortable to do so and when you are able to confidently perform an emergency stop. This is generally four to six weeks after your surgery. Please also check with your insurance company before returning to driving.

When can I have sex again?

This will depend on when both you and your partner feel comfortable, but it is safe after four to six weeks.

When should I return to work?

Please allow a couple of weeks recuperation before returning to work. The amount of time required will depend on the nature of your work. If you require a fit note for your work or your work involves lifting, please speak to your doctor before leaving hospital.

What else should I look out for?

You should monitor the healing of your wounds, look out for any sudden changes in your overall recovery, for any signs of infection or a new cough.

Contact your GP or Urology triage if you:

- feel feverish or generally unwell
- have increased redness, throbbing pain or pus-like discharge from your wound(s)
- increasing abdominal pain, not controlled with painkiller
- new productive cough that is not getting better
- if you develop significant blood in your urine (following a partial nephrectomy surgery).

Very occasionally following surgery serious complications can develop. Please attend your nearest Emergency Department if you:

- start vomiting and are unable to keep fluids down
- have worsening shortness of breath
- develop chest pain or a painful swollen leg.

Support after discharge

If you are unsure on any aspects of your care, please do not hesitate to contact us.

For advice during office hours, please contact your consultant surgeon's secretary or your specialist nurse on the telephone numbers listed below. If you are unable to contact a member of the team, please contact your GP or the Urology Ward.

Consultant Surgeon's Secretaries

Telephone: **01865 234 444**

Please select option [3] to talk to the consultant's secretaries.
(8.00am to 5.00pm, Monday to Friday)

Uro-oncology Specialist Nurse

Telephone: **01865 572 374**

(8.00am to 4.00pm, Monday to Friday)

Urology Ward

Telephone: **01865 572 332** or **01865 572 333** (24 hours)

Urology Triage

Telephone: **01865 227 205** (24 hours)

If the ward is unavailable, your question needs an urgent response or it 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 Urology Triage at the Churchill (Level 2 of the Cancer Centre) for further tests and investigations.

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

Useful resources

Maggie's Cancer Caring Centre

(based at the Churchill Hospital)

Telephone: **01865 751 882**

Website: www.maggiescentres.org

Free practical, social and emotional support for cancer patients and their family and friends.

Macmillan Cancer Support

Website: www.macmillan.org.uk

Cancer care and support charity.

Kidney Cancer UK

Website: kcuk.org.uk

National information and support charity.

Oxford University Hospitals NHS Foundation Trust

Website: www.ouh.nhs.uk

Information about the hospital services.

The British Pain Society

Website: www.britishpainsociety.org

Information for people living with pain.

Royal College of Anaesthetists

Website: www.rcoa.ac.uk/fitterbettersooner

Online resources and information to help you to become fitter and better prepared for your operation.

British Association of Urology Surgeons

Website: www.baus.org.uk/patients

Information about urology (including kidney surgery) for patients, for their families.

Research studies

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

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

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

Author: Hamira Ghafoor, CH ERAS Team
Enhanced Recovery Facilitator
February 2024
Review: February 2027
Oxford University Hospitals NHS Foundation Trust
www.ouh.nhs.uk/information



Making a difference across our hospitals

charity@ouh.nhs.uk | 01865 743 444 | hospitalcharity.co.uk

OXFORD HOSPITALS CHARITY (REGISTERED CHARITY NUMBER 1175809)

