Guidelines for patients undergoing surgery as part of an Enhanced Recovery Programme (ERP)

Helping you to get better sooner after surgery

June 2012
Foreword

These guidelines have been produced to provide general information for patients undergoing surgery as part of an Enhanced Recovery Programme (ERP). They have been written by medical and non-medical members of three medical Royal Colleges, all of which run patient groups that provide support to the clinical members in the differing specialties. The guidelines have been reviewed by medical and non-medical members of each participating College and other allied parties.

The Royal College of Anaesthetists Patient Liaison Group
www.rcoa.ac.uk

The Royal College of General Practitioners Patient Partnership Group
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The Royal College of Surgeons (England) Patient Liaison Group
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Contents

What is Enhanced Recovery? 2

Clear communication: a full range of information and explanation for you 2

The enhanced recovery care pathway: a sequence of care 4

Six key steps 5

Step one: Referral from primary care: involvement of your GP 5

Step two: Pre-operative care by the hospital team 6

Step three: Admission to hospital 8

Step four: Care during the operation by the surgeon and the anaesthetist 9

Step five: Post-operative care in the hospital 10

Step six: Follow-up – rehabilitation and going home 11
What is Enhanced Recovery?
Since March 2010, a new approach to all aspects of your care has been developed and is now widely used throughout the NHS to help you get better sooner. However, not all patients will be suitable to take part in enhanced recovery programmes (ERP) and not all hospitals offer it for all surgical procedures. If you have any questions about the enhanced recovery approach you should discuss it with your surgeon or specialist nurse.

When enhanced recovery was first developed it was offered to healthier patients. It was quickly demonstrated that recovery was faster in this group. Subsequently health care teams realised that there were many elements of the ERP that would speed up recovery in all patients, compared to recovery time in conventional care. The ERP is now widely used within hospitals for patients having certain operations.

‘Helping you to get better sooner after surgery’
Two important principles lie behind enhanced recovery. Both must be in place to bring the full benefits of enhanced recovery to you:

- clear communication: a full range of information and explanation
- a fully structured and well organised sequence of clinical care. This means that all healthcare professionals will work from a specific programme, called a care pathway, which allows all elements of your care to follow each other more promptly.

Clear communication: a full range of information and explanation for you
Enhanced recovery seeks to involve and inform you at every stage. Research shows that if you know what to expect, you may have improved confidence and be in a better frame of mind. The result is less anxiety, less fear and a reduced ‘stress response’ to the operation. It is gradually being understood that this leads not only to a more confident recovery, but a faster physical recovery as well.

Information should be provided at every stage of the pathway.
The ways in which the Enhanced Recovery team will communicate with you are as follows:

- Before you agree that you need the operation, a specialist doctor (often a consultant surgeon) or a specialist nurse will make sure that you understand the benefits and risks of your operation, and any alternative treatment. You may need to consider carefully what the risks are, and where you personally stand on the range of risks for this operation. To understand the anaesthetic risk better, please see www.rcoa.ac.uk/patients-and-relatives/risks.

- After you have agreed to proceed you will be able to find out if there is anything you can do to improve your chance of rapid recovery. This might include stopping smoking, trying to increase your general level of physical activity, having your blood pressure checked or cutting down your alcohol intake, as advised by your GP.

- Prior to your surgery, often at a pre-assessment clinic, you can find out what is proposed for your anaesthetic and pain relief. If there are choices, these will be explained to you. Specialist nurses and/or anaesthetists will explain what will happen.

- Many enhanced recovery care pathways provide a patient diary which describes what you can expect to happen on each day after surgery. Some diaries have spaces for you to write down your progress and your concerns.

- At some stage, ideally as early as possible, you will receive information about what to expect when you go home – so you, your home carers or family and your professional carers can prepare whatever is necessary to complete your recovery at home. It will help your confidence and well-being if you can be at home as soon as possible, but only if you and your carers at home know and understand what to expect.
The Royal College of Surgeons of England, The Royal College of Anaesthetists and The Royal College of Obstetricians and Gynaecologists all produce information for patients who are undergoing surgery. This information can be found online at:

www.rcseng.ac.uk/patient_information/get-well-soon
www.rcoa.ac.uk/patientinfo
www.rcog.org.uk/recovering-well

You may also be able to obtain advice from your GP.

The enhanced recovery care pathway: a sequence of care

The doctors, nurses and other healthcare professionals will have planned a wide range of care that will help you recover as fast as possible. This includes well established medical and nursing practice, such as good control of pain and nausea but also a number of modern and innovative practices.

These newer ideas for surgical, anaesthetic and nursing care, and for rehabilitation mostly focus on reducing the ‘stress reaction’ of the body. Simple things such as being at home the night before surgery, being able to get up and about quickly, and an early return to normal eating and drinking all help reduce the body’s response to stress. The elements of care provided vary, depending on which operation you are having.

Providing good health care is complicated. A hospital which delivers an enhanced recovery programme will have mapped out each small aspect of care and will have in place the systems and staff required to deliver it, regardless of the day of the week or the time of the day.

The essential elements of an enhanced recovery care pathway have been published by the Department of Health in March 2010.¹ The care described, varies depending on what operation you are having.
This guide to enhanced recovery has six sections:

- Referral from primary care: involvement of the GP.
- Pre-operative care by the hospital team.
- Admission to hospital.
- Care during the operation by the surgeon and the anaesthetist.
- Post-operative care in the hospital.
- Follow-up – rehabilitation and going home.

**Six key steps**

**Step one: Referral from primary care: involvement of your GP**

For the best results from enhanced recovery, you should be as healthy as possible before the operation. Hospital staff should communicate with your GP and give them clear instructions about what types of health check are most useful before surgery. The most important are given here, but in general all types of long-standing disease (heart disease, asthma, high blood pressure) should be controlled as well as possible.

*General healthy living goals:* There is evidence of faster and safer recovery associated with stopping smoking, weight loss (if overweight), reduced alcohol intake (if drinking to excess), and increased exercise. Vigorous physical exercise is not required, but a regular session of everyday activity is useful. These should start as early before surgery as possible as the benefits may take a number of weeks to appear.

*Check for anaemia:* This is when there are fewer blood cells in your blood than there should be. There are a number of causes, including regular blood loss, poor diet, or a range of chronic diseases. Tests are required to find the cause. If the cause is lack of iron in the body, then iron supplements, which can be prescribed by your GP, may help.

*Improve diabetic care:* Good control of blood sugar levels in patients with diabetes is associated with faster healing after surgery, fewer infections and shorter hospital stay. If you have diabetes, then you and your GP or specialist diabetes nurse should try and get your blood sugar as well controlled as possible. Weight loss and increased physical activity can help with this.
Step two: Pre-operative care by the hospital team

The more you understand about what is going to happen, what you will feel like and what can be done if things don’t quite go to plan, then the more confident you will feel during your recovery. Reducing levels of anxiety helps lessen stress reactions of the body which allows for a faster recovery.

Your opportunities to ask questions

Pre-assessment clinic visit: All enhanced recovery care pathways will include at least one visit to a clinic in the hospital which specialises in preparing patients for surgery. It is normally staffed by specialist nurses who will check your general health and make any specific arrangements you need. They will give you information leaflets to read, and will be able to answer your questions. You will be able to find out what is suggested for your anaesthetic and pain relief. If there are choices, these will be explained to you, and your preferences taken into account. There might not be an anaesthetist available at the pre-assessment clinic, so the final anaesthetic plan will not be made until the day of your operation but, if you understand the options, then you will be able to agree a plan on the day of surgery without any surprises.

Talking to the surgeon again: It may not be routine for you to see the surgeon again until you come into hospital, but if you have any questions or concerns, then you should ask for a meeting with the surgeon or a member of the surgical team. You could do this via pre-assessment clinic staff, or you may have been given the phone number of a specialist nurse who deals with your type of operation.

Therapy advice from health care professionals: Depending on your operation, you will meet the nurses, physiotherapists, and/or occupational therapists who will care for you. For example, if having a hip replacement, most enhanced recovery care pathways include a hip school, when the physiotherapists will teach you how to use crutches, and how to sit down (on chairs or toilets) safely with your new hip. If you are having a bowel or bladder operation and will be left with a stoma or catheter, you will be taught by specialist stoma or continence
nurses how to look after your bowel or bladder function. They can show you the different equipment and you can practice handling it. You may also meet an occupational therapist who can help if you will need devices or alterations to your living environment at home.

**New elements of care in ERP**

*Nutrition:* A key part of enhanced recovery is keeping you well fed. Most pathways include the offer of carbohydrate nutritious drinks to be drunk before you arrive at the hospital. These drinks taste sweet and are designed to help prepare you for surgery.

*Drinks:* New evidence-based guidelines from the anaesthetists confirm that, for most patients, it is safe to drink water until just two hours before your operation. This is a change from traditional pre-anaesthetic care which required much longer periods without a drink. For enhanced recovery, the hospital should set up a system which predicts the time of your operation and gives you a time at which you need to stop drinking. Until this time, you should drink water only, perhaps a small glassful every half hour during normal waking hours.

*Preparation of the bowel if undergoing colo-rectal surgery:* New evidence-based guidelines from the surgeons confirm that traditional methods of flushing out the bowel before operations on the bowel are not always necessary. These treatments can cause large amounts of loose motions and contribute to dehydration and imbalance of salts in the blood. Modern studies show that for many patients, they can be safely omitted.

*Discharge planning:* Since getting you out of hospital safe and well is a primary goal, the enhanced recovery team will be thinking about it before you even come in for surgery. Practical equipment will be prepared or put in place. This is the time to find out what your physical condition will be like when you leave hospital, and to work out with the pre-assessment clinic staff what you are going to need. If family and friends can help you, and you are happy for them to do so, you can start making these arrangements before you come into hospital.
Step three: Admission to hospital

Admit on the day of surgery: To help keep you relaxed and confident before your operation, the enhanced recovery team would like you to be at home for as long as possible before surgery. Having a good night’s sleep the night before is much more likely in your own bed than in a hospital ward. When you arrive in hospital, there may be an admissions area where there are comfortable chairs and a relaxing environment for you to wait. All staff, including the surgeon and anaesthetist, will visit you there, and final confirmation of your consent for the operation and anaesthetic will be given. You can ask any questions you still have – it’s useful to make a list of these at home, so that you don’t forget them. Final blood tests maybe necessary, and the nurses on the admission unit will give you all the support you need.

Walk to theatre: If possible, you may be asked to walk to the operating theatre.

Water: As explained before, the enhanced recovery team should predict the time of your operation and give you a time at which you need to stop drinking. Until this time, you should drink water only, unless advised otherwise.

Use of ‘pre-meds’: A pre-med is a tablet or injection that used to be given to many patients before an anaesthetic to help them relax before their operation. This no longer routinely happens, but if you do feel exceptionally anxious you should discuss this with your anaesthetist.

Nutrition: You may be offered carbohydrate drinks up to two hours before surgery.
Step four: Care during the operation by the surgeon and the anaesthetist

Minimally invasive surgery: A key element of some enhanced recovery pathways is the use of new surgical techniques that allow operations to be done with less damage to the body. Laparoscopic surgery (‘keyhole’) can be used for many major operations – for example removal of parts of the bowel, the kidney or the uterus (womb). Other operations (for example removal of the bladder) can sometimes be done through a smaller surgical incision (cut). In orthopaedic surgery, the joint can sometimes be approached with less damage to nearby ligaments.

Individualised fluid balance therapy: The anaesthetist makes sure that any fluids lost before, during or after surgery are carefully replaced. New monitoring equipment is available which allows the anaesthetist to accurately judge how much fluid to give.

Modern anaesthesia and pain relief: Your anaesthetist has access to modern drugs, some of which allow faster recovery than others. Drugs to prevent sickness are also part of standard anaesthetic care. Your anaesthetist may also suggest local anaesthetic drugs are used which cause numbness when placed near to the relevant nerves. This lessens the need for strong anaesthetic and pain relief medicines that can make you feel sick. To find out more about this please go to www.rcoa.ac.uk/patientinfo. There are many different nerve block techniques available, depending on your operation. These can be combined with general anaesthesia or sedation – so you do not have to be awake for surgery.

Preventing hypothermia: Surgical teams understand how keeping a patient warm enhances their recovery. Your anaesthetist can tell you what system will be used: a warm mattress; a hot air cover; warmed intra-venous or irrigation fluids; blankets and wraps for the head. Your temperature may be monitored and every effort will be made to keep you warm, or to rewarm you afterwards.
### Minimal use of drains and tubes
This is another area where many surgeons are moving away from traditional surgical practice. A drain is a thin tube left under the skin which allows fluid or blood collecting inside to drain away. The surgical team can see if there is fluid collecting which could indicate an important complication is occurring. Studies confirm that it is often safe to omit these drains, but your own surgeon will recommend what is best for you.

Naso-gastric tubes were routinely placed in patients having abdominal and other operations. The tube was passed (after anaesthesia) through the nose into the stomach to keep the stomach empty. These are now generally believed to cause slower recovery of gut function and more chance of chest infection. They are also very uncomfortable. Although sometimes still required, they are avoided as much as possible.

### Step five: Post-operative care in the hospital

**Getting up and about within 24 hours:** This is a key part of recovery. Getting out of bed to sit in a chair or walk short distances as soon as it is safe to do so has many advantages. It helps prevent deep vein thrombosis (blood clots in the legs and elsewhere), and chest infection. It also promotes recovery of the gut to be able to accept and absorb food. The enhanced recovery team will explain a programme of ideal mobility, which may start on the day of your operation. You may receive a diary which sets out your goal for each day, and space for you to write in what you have achieved. The team will ensure that you have the correct level of pain relief to make this as comfortable as possible. You may be asked to bring in your own clothes or to walk to a dining area to eat. For orthopaedic operations, in particular, the physiotherapist and nurses will let you know exactly what you should and should not do, and they will be on hand to assist you as required.
Early return to eating and drinking: Another key element of enhanced recovery is to encourage eating and drinking much sooner than in the past. It varies a lot depending on what operation you are having, but your enhanced recovery team will tell you when they would like you to start drinks and food. This may even be in the recovery room, before you return to the ward. If you are given a diary, this should specify the timing and type of food and drink. Even if you don’t really feel like it, if you understand the importance of good nutrition, then hopefully you will be able to try what is offered.

If you can eat or drink, then your intra-venous drips (in a vein) can be removed. This makes it easier for you to walk about. If you can walk about, then you can use a normal toilet and the catheter can be removed. If you are drinking, then you can take simple pain relief medicines by mouth, which tend to have fewer side effects (such as sickness). These are examples of how the elements of an enhanced recovery come together to give you the best recovery possible.

Step six: Follow-up – rehabilitation and going home

Healthcare professional support: The high level of planning that lies behind an enhanced recovery care pathway means that all the practical support you need at home should be in place. Whether you need a raised toilet seat (hip surgery) or a visit from a continence advisor (operations on the prostate) it will be in place, whether you are discharged on a weekday, at the weekend or at a holiday period. You will also know how to use any aids that you need such as crutches, a stoma or a catheter.

Discharge planning: The planning done by the pre-assessment team and the surgical specialist nurses, together with nurses and doctors on the ward should mean that everything you need at home is ready for you. Your discharge date will have been predicted with some confidence. This means your family or home carers, plus any social services you need will be ready. If you have chosen to go to a nursing home or care home for a little while, then they will be expecting you.
24 hour telephone helpline: The enhanced recovery team should give you clear instructions about who to contact afterwards if you have any worries. This is essential. You will not get the anticipated boost in confidence if you go home and feel that you are on your own and uncertain about what should happen next. Many enhanced recovery teams will routinely telephone you, so that you can ask non urgent and general questions about your recovery. These might take the form ‘I feel like this – is that right?’ You will also need to know who you should call. Some enhanced recovery programmes offer 24-hour telephone assistance, some offer daytime only assistance and others require you to go to your GP, or to a GP out-of-hours service, or to the emergency services. If you are not given this information, then you or a family member should ask for it before you leave the ward – so that you know what help is available for you.

What if I can’t achieve the goals set?
Although the pathway has a structure to it, the health care team looking after you will always consider the needs of each individual. You will not be discharged from hospital unless you are ready, and if complications occur, then the pathway will be adapted as required. However, the basic principles of nutrition, mobilisation and active patient involvement will remain a high priority so that you are soon completing your recovery at home safe and well.

Reference

Further reading
- A summary of this guidance can be viewed on The Royal College of Anaesthetists website at: www.rcoa.ac.uk/erp-summary.
Acknowledgements

Guidelines for patients undergoing surgery as part of an Enhanced Recovery Programme (ERP) – Summary
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Acknowledgements: Dr P Venn, Mr C McLaughlan, Ms S Payne, Mr A Chuter, Dr M Selby, Ms K Williams, Mr S Edwards

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