



Enhanced Recovery After Surgery (ERAS)

**Patient handbook
Abdominal Aortic Aneurysms (AAA)**

Building healthier lives

UHB is a no smoking Trust

Endovascular surgery

Heartlands Hospital is a centre of excellence for Endovascular Aneurysm Repair (EVAR). Heartlands receives referrals from all over the UK, making it one of the busiest centres in Europe.

People referred from our local area will either have a standard aneurysm or a complex aneurysm, both of which will need a specialist stent-graft made.

People referred from other areas will usually have a complex aneurysm and will require a specialist stent-graft.

Approximate waiting times are indicated below. This time frame considers the number of referrals we receive from across the country, the time it takes to plan and manufacture the stent-graft, the operating theatre slots available for surgery, and the available critical care beds to look after patients after the surgery.

Standard EVAR 6–8 weeks from referral to surgery.

Complex EVAR 12–14 weeks from referral to surgery.

Please note: With every planned surgical procedure there is always the possibility of your operation being cancelled. This is normally due to circumstances we have no control over, such as lack of beds.

Pre-assessment clinic (sent out via post and in booklet)

During the pre-assessment clinic you will be seen by several members of the vascular team; this will take between 4–6 hours during which we will discuss your planned surgery, perform tests and check that you are fit for the procedure.

We advise that you ask a friend/relative to come to the appointment with you, especially if you have mobility problems. You may also wish

to bring a drink or snack with you, particularly where clinic times overlap with your normal eating pattern.

The Vascular Clinical Nurse Specialist will tell you how Enhanced Recovery After Surgery (ERAS) works, what you can expect, recovery, self-care and will be able to answer any questions you may have. It is important that you are involved in planning your care and we will ask you to help prepare for your operation and plan your recovery in hospital and at home.

To assess your fitness, the following will be checked:

- Breathing Tests
- Heart Tests
- Blood Tests

This information is gathered and given to the anaesthetic team for a decision to be made.

There are several things that you can do to help ensure you have the best possible outcome before and after surgery. These include; following advice on diet, undertaking exercise, refraining from smoking and keeping a patient diary. This booklet will help you to achieve goals that will enable you to be in the best health before surgery and promote an early recovery/discharge from hospital.

****Please note, if you are a patient that has been referred to us from outside of the local area, all the above tests will have been completed by your hospital. Therefore, pre-assessment clinic will only involve a review by the Consultant and will last approximately 2–3 hrs****

Enhanced Recovery After Surgery (ERAS)

The ERAS approach to caring for patients undergoing major elective surgery is based on the following:

- You are in the best possible condition for surgery
- You have the best possible care during and after your operation
- You have the best possible post-operative rehabilitation

The most important and vital part to successful enhanced recovery is the role you as a patient play, as a partner in your care.

Therefore, it is important that you play an active part in your own recovery process.

Surgery can be physically and emotionally stressful. Reducing these stresses means getting you back to full health as quickly as possible after your surgery. For example, the earlier a person gets out of bed and starts walking, eating and drinking after having an operation, the shorter their recovery time will be.

Evidence has shown that the long-term improvements in health are greater when following the ERAS approach.

Benefits of ERAS include:

- Preventing long periods of fasting prior to your operation
- Reducing the stressful impact of surgery on your body
- Minimising the use of tubes and drains after your operation
- Returning to eating and drinking sooner
- Reducing muscle wastage and improving mobility
- Reducing the risk of blood clots by getting up and moving sooner
- Making you feel well in yourself sooner
- Being discharged from hospital sooner

Before you come in for your surgery

You will need to make plans for going home before you come into hospital as your hospital stay will be short. This information might be

useful to talk through with a friend, carer or family member to ensure you have the practical support in place to aid your recovery. We advise:

- Getting some essential shopping done/pre-cooking some home meals
- Eating a balanced diet – your body will need energy to aid recovery
- Having a healthy lifestyle - giving up smoking and cutting down on alcohol will help your recovery and reduce the risk of complications
- Thinking about how you will manage once you are discharged from hospital

Breathing exercise before surgery

It is important to keep our lungs as healthy as possible, especially when you are going to have a major operation. During our normal daily living we tend not to exert ourselves and so do not inflate the lungs to the full. Doing some daily breathing exercises before surgery may help to increase your lung capacity. This will then help with your recovery and may reduce the episodes of pneumonia and other chest infections.

Please follow the breathing exercises included at the end of the booklet.

Exercises to help improve your mobility before and after surgery

The exercises at the end of this booklet will improve the circulation in your legs and are important to reduce the risk of blood clots before and after surgery. Try and do these exercises three times a day, when you are in bed or sitting on a chair.

Walking exercise before surgery

Walking regularly can be beneficial in improving your fitness. Try doing a set number of steps daily and increase this number until you reach 10,000 steps per day. Even if you are unable to do this many steps per day, the benefits of walking are well documented. Use the walking plan at the end of this booklet to help set manageable targets.

Helping you to stop smoking

Are you a smoker? Yes No

If you have stopped smoking since being offered intervention when did you stop?

Number of days	Number of weeks

If you smoke, you will have been advised by a member of the vascular team to stop smoking, because smoking affects your circulation by causing the blood vessels to narrow and become blocked. As soon as you stop smoking your general health will improve and you will feel much more active.

It is never easy giving up smoking, but it is always worthwhile. People who prepare for change, access support services and use nicotine replacement therapy are the most successful. Trained advisers can talk you through the options and help you to decide what would suit you best.

- To become a non-smoker, you will need to:
- Understand your reasons for stopping smoking and really want to quit
 - Plan how you are going to quit
 - Know what to expect when you stop smoking
 - Be able to manage withdrawal symptoms
 - Gain as much support as possible from family / people around you.
 - Plan for difficult situations
 - Visualise yourself as a non-smoker

Further information on support services and contact numbers can be found at the end of this booklet.

Eating and drinking before surgery

It is important to have regular meals and a balanced diet in the weeks leading up to your surgery.

Three days before you come in, we recommend you drink at least 8–10 cups of fluid every day. We also advise you eat less fibre to reduce the contents of your bowel; this may help reduce constipation after surgery.

Diet before and after surgery

It is also important to make sure what you are eating is the best for your body before and after surgery. This will give you the building blocks to help prepare your body to recover from surgery at an earlier stage.

If you have a poor appetite, it is still important to obtain an adequate amount of protein and calories to help your body heal. You may benefit from having three to four high protein, high calorie drinks such as Build-up or Complan (available in supermarkets and chemists) to supplement your food.

It is ok to lose weight before surgery if you are overweight; however, we would advise that you eat higher energy foods a week before surgery to load your body with energy in preparation for the surgery.

There are lots of helpful eating suggestions at the end of this booklet. If you have any concerns regarding your diet intake after surgery, please contact your EVAS Nurse Specialist.

Eating and drinking after surgery

You will be allowed to eat and drink as soon as you are awake enough after the operation. It is important you do this as early as possible, however it is common to lose your appetite and you may find eating little and often is better than large meals to begin with.

Preparing for theatre

The day before surgery you can eat and drink normally but try to eat foods that are high in carbohydrates, such as potatoes, pasta, bread and rice.

You must **stop** eating and drinking as normal **six hours** before surgery.

You **can** drink clear fluids only (water, coffee or tea without milk) until **two hours** before the operation.

****Milk is not a clear fluid and must not be added to any drinks****

You will also be given carbohydrate-rich drinks to take the day before and on the day of surgery. These drinks are an important way of telling your body that you are in a 'fed' state rather than 'fasting' state, which prevents feelings of thirst, hunger and anxiety before your operation. It will also improve your ability to recover quicker after your operation.

It is important that you let us know if you are feeling unwell during the week before your planned admission date. If you have symptoms of a cough, or have been put on antibiotics for any infection, please contact your Consultant's secretary or vascular nurse specialist on the numbers at the end of this leaflet. They will pass the message on and advise you of what to do next.

Mobilising after surgery

A vital part of your enhanced recovery program is to mobilise as soon as possible after your operation, and this will usually be on the day of your surgery.

Early mobilisation helps to prevent complications such as chest infections by getting your lungs working and helps to prevent bloods clots developing in your legs which can travel to your lungs. Moving around will get your bowels and gut working, reduce any feeling of sickness you

may have and will enable you to eat and drink sooner, giving your body energy to recover.

When will my bowel movements return to normal?

It will take a few weeks for your bowel to settle so we advise to eat regular meals, drink 8–10 glasses of fluid a day and walk regularly. If you do experience constipation **or** loose stools 3–4 times a day for more than four days, please contact your ERAS Nurse Specialist for advice. It is normal for your bowel to be unpredictable for the first few weeks after surgery.

When will I be able to go home?

The enhanced recovery program sets out goals and targets that you need to achieve at specific stages after your operation. Once these goals have been met, you will be medically fit for discharge. These may include:

- Any pain you may have is controlled
- You are eating and drinking
- You are independently mobile
- You have had your bowels open

It can be daunting being discharged from hospital after a major operation; however, the multi-professional team will have decided that you are well enough to be discharged home. Try to be patient - your body needs time to recover from the trauma of the procedure.

Please check the visiting times on your ward on admission should you wish to receive visitors during your stay.

Useful information

Breathing exercises

Exercise 1

Deep breathing exercises work best when you are sitting up in a chair or on the side of the bed. Follow these instructions:

- Take a deep breath in through your nose. Hold for five (5) seconds
- Breathe out through your mouth
- Repeat this exercise ten (10) times two or three times a day

Coughing exercises help to loosen any secretions that may be in your lungs and should be done after your first five (5) deep breaths. To produce an effective cough:

- Take a deep breath and cough

Exercise 2

The active cycle of breathing technique (ACBT) is a breathing technique used to clear phlegm and re-inflate your lungs. It has three parts:

- Breathing control
- Deep breaths
- Huff or cough

Firstly, find a comfortable, well-supported position - ideally sat out in the chair or sitting upright in bed. Relax your neck, upper chest, shoulders and arms.

Breathing control

- Rest your hand lightly on your stomach
- Breathe in and out quietly and gently through your nose if you can
- As you breathe in, your stomach should rise

Deep breaths

- Deep breaths help to get the air behind the phlegm that is stuck in your airways. Try to hold each deep breath for the count of three as

this will also help to re-inflate your lungs

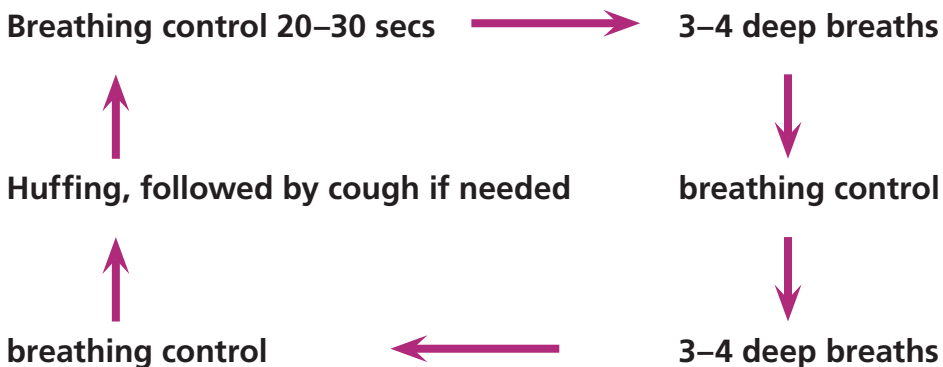
- Take a long, slow deep breath in through your nose and out gently through your mouth
- Try to breathe right down to the bottom of your lungs, expanding your ribcage
- Aim to do three to four deep breaths before returning to breathing control. You may need to do a few cycles of deep breathing and breathing control before doing a huff (see below) if your phlegm is sticky

Huff

- A huff is similar to a cough, but you aim to keep your mouth and throat open
- Imagine you are trying to steam up a mirror right in front of you
- Take a breath in and then force the air out quickly, keeping your mouth open
- If you wheeze as you exhale you are huffing too hard

Cough

- After doing a huff you may need to do a good strong cough and bring your phlegm out into a pot or tissue. It's important to clear the phlegm off your chest after the operation to prevent a chest infection



Daily breathing exercises

Day	Morning	Afternoon	Evening
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

Daily walking plan

Day 1 = 250 steps
Day 2 = 500 steps
Day 3 = 750 steps
Day 4 = 1,250 steps
Day 5 = 2,000 steps (increase number of steps by 250 each daily until Day 14)
Day 14 = 10,000 steps
(As recommended by British Heart Foundation)

Number of steps per day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14

Exercise plan to help you improve your mobility before and after surgery

Brace your knees:

- Lie on the bed with your legs straight or if you are sat in a chair slowly straighten one leg
- Brace your knee by pushing the back of your knee down and into the bed
- Keeping your leg straight, draw your foot towards you and hold for five seconds
- Repeat five times on each side

Knee-bend and straighten:

- Sitting on a chair or in bed, bend and straighten your leg ten times on each side

Ankle circles:

- Move your foot in a circle, repeating ten times with each foot. Make sure your heels are free from rubbing on the sheet

Marching on the spot:

- Sit on a chair and march on the spot with your feet ten times

Knee rolling:

- Tighten your tummy muscles by gently pulling your tummy button into your back, breathing normally. With your knees bent and your feet resting on the bed, gently roll your knees to one side as far as is comfortable. Repeat on the other side. This exercise can help with trapped wind

Exercise before surgery

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14

Exercise after surgery

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14

Nourishing meal suggestions

Eat small nourishing snacks between meals. Try not to skip meals; have a snack or nourishing drink if you cannot manage a main meal.

Have nourishing drinks during the day. Avoid drinks up to 30 minutes before meals, as they may fill you up.

If you are not eating as much as you normally would, try fortifying foods (see below) to make them more nourishing.

Have a selection of easy-to-prepare foods in case you do not feel like cooking.

Make use of your freezer and cupboards to store convenience foods. Aim to try and have seven daily portions of fruit and vegetables to ensure a good vitamin and mineral intake, you may find it easier to digest if you remove the skin.

Try to include high calorie and high protein foods at each mealtime.

High protein food

Meat, fish and eggs

Soya milk, yoghurt and cheese

Nuts, beans and lentils

High calorie foods (fat and sugary; if your appetite is poor)

Biscuits, cakes, crisps, chocolate and puddings

Cream and butter

Snack ideas – high in energy or protein

Savoury:

'Cream of' soups

Bombay Mix

Individual cheeses, crisps and dips

Peanut butter, nuts, quiche, cocktail sausages and pork pies

Cheese and biscuits

Sandwiches

Instant noodles

Sweet:

Milk or rice pudding, mousse and custard

Tea cakes, malt loaf, pastries and muffins

Trifle, ice cream, full fat yoghurt and chocolate

Milky drinks are high in energy and protein, choose from the following:

Full cream milk, milkshakes, smoothies and yoghurt drinks

Hot chocolate, malted drinks, milky coffee and tea

Complan and Build Up drinks

If you dislike milk, try these high energy alternatives:

Sugary (non-diet) fizzy drinks e.g. Lucozade, Cola, and lemonade

Soups, particularly 'Cream of' soups

Fruit juice and soya drinks e.g. OY or Provamel

Fortifying foods

The following suggestions may help to add extra energy and protein to everyday foods if you have lost weight or are not eating much:

When having milk, try using full cream milk instead of lower fat milk in tea, coffee, soups, sauces, milk puddings, porridge and custard.

Add ice-cream or creamy yoghurt to milkshakes and smoothies.

Try using condensed or evaporated milk.

Add full cream milk to breakfast cereals; add extra dried fruit or nuts and sprinkle extra sugar on top.

Add jam, honey or syrup to yoghurt, porridge or cereals.

Toast

Spread butter or margarine on the toast whilst it is still hot.

Spread thickly with jam, marmalade, honey or peanut butter.

Try the above with crumpets, muffins and teacakes.

Sandwiches

Add mayonnaise or salad cream to fillings such as egg, tuna, cheese or meat.

Spread butter or margarine thickly.

Use 'Cream of' varieties, add grated cheese, dumplings, baked beans or pasta.

Mashed potato

Add butter, margarine, cream, grated cheese or extra milk.

Mash hard boiled egg with potato and margarine or butter. You can also add flaked fish/corned beef/minced beef/fried onions.

Vegetables

Melt butter or margarine on top and sprinkle with grated cheese or chopped egg.

Serve with a sauce e.g. cheese or hollandaise sauce.

Puddings

Try to have a pudding after each main meal or as a snack in-between if your appetite is poor.

Add cream, ice-cream, yoghurt, condensed or evaporated milk to puddings such as milk puddings, fruit or instant desserts.

Add sugar, honey or syrup to ice-cream or other puddings.

Make fruit fool using custard or double cream and pureed fruit.

Sample meal ideas

Breakfast

Creamy scrambled egg with buttered toast.

Porridge/cereals with honey/jam.

Crumpets with butter and jam.

Muesli with whole cream milk and natural yoghurt.

Main meal

Shepherds pie with grated cheese topping and buttered vegetables.

Chicken curry or dahl with rice or chapatti spread with butter or margarine.

Cauliflower cheese made with fortified milk with grated cheese topping.

Fish in cheese sauce with creamed potatoes and buttered vegetables.

Snack meals

Beans on buttered toast with grated cheese topping.

Buttered jacket potato with tuna mayonnaise filling.

Ham or cheese omelette, chips and salad with mayonnaise.

A creamy soup with grated cheese and croutons.

Pudding ideas

Milk pudding e.g. rice/tapioca/semolina.

Baked egg custard.

Crumble with ice-cream.

Trifle with cream.

Stop smoking information

This information gives six practical, quick and simple steps you can take to get more information and support when quitting smoking. Alternatively, it provides details of who to contact in your contact in your local borough.

1. Talk to your GP

Many people don't realise that their GP can help them quit smoking. Your doctor can do a lot, such as enrolling you in a 'stop smoking' clinic and prescribing nicotine replacement therapy such as patches, gum or stop smoking medication such as Champix. Find out more at www.nhs.uk/Livewell/smoking/Pages/WhatyourGPcando.aspx

2. Join your local stop smoking service

Did you know that you're up to four times more likely to quit successfully with the help of your local stop smoking service?

Services staffed by trained stop smoking advisers are available all over the country. You can join a local group that meets once a week or have one-to-one support if you prefer. You usually go for a few weeks and work towards a quit date.

Find your nearest NHS Stop Smoking Service from the NHS SmokeFree website, or call the SmokeFree National Helpline to speak to a trained advisor on **0300 123 1044**.

3. Find online support

The SmokeFree website has been designed to give a range of evidence-based support for you. The support is free and can boost your chances of success, whatever method you are using.

Follow the link; <https://quitnow.smokefree.nhs.uk/> instructions and connect with the free online support that is available.

4. Have an emergency phone number to hand

Keep an emergency number to hand, perhaps for your local stop smoking service or the national helpline (Call **0300 123 1044** Monday - Friday 09:00 to 20:00 and Saturday–Sunday, 11:00 to 16:00pm).

5. Consider using a nicotine-containing product

Cigarettes are addictive, and self-control alone might not be enough for you to stop entirely. Give yourself a better chance of success by using nicotine replacement therapy (NRT). This is available on prescription from your GP, from your local stop smoking service, or from a pharmacist. You could also consider trying e-cigarettes. While they're not risk free, they are safer than cigarettes and can help people stop smoking.

Email/call an expert in stopping smoking

Ask an NHS SmokeFree expert for advice; follow the link below and read more about the stop smoking treatments available on the NHS.

**[www.nhs.uk/smokefree/help-and-advice/
support#GAZVY5IQmgZmMDSi.97](http://www.nhs.uk/smokefree/help-and-advice/support#GAZVY5IQmgZmMDSi.97)**

All this information and lot more can be found on the NHS Choices website: **www.nhs.uk/Livewell/smoking/Pages/NHS-stop-smoking-adviser.aspx**

Alternatively, if you live in Birmingham, your GP will be able to advise you on your nearest stop smoking service.

For residents living in Solihull you can contact Solihull stop smoking service below:

Helpline: **0800 622 6968**

(Monday – Friday 09:00–19:00, Saturday 10:00–14:00)

Text 'smokefree' to **66777**

Website: **www.quit51.co.uk**

Contact.quit51@nhs.net

Facebook; Quit51 Stop Smoking Service Twitter; @quit51adviser

Good Luck and think positive!

Go online and view NHS Choices website for more information about a wide range of health topics: **www.nhs.uk/Pages/HomePage.aspx**

You may want to visit one of our Health Information Centres located in:

Main Entrance at Birmingham Heartlands Hospital Tel: **0121 424 2280**

Treatment Centre at Good Hope Hospital Tel: **0121 424 9946**

Clinic Entrance Solihull Hospital Tel: **0121 424 5616** or contact us by email: **healthinfo.centre@heartofengland.nhs.uk**.

What do I need to bring for my hospital admission?

Checklist

Your present medication	
Wash bag toiletries and shaver etc. (towels can be provided by the hospital)	
ERAS booklet	
Outdoor clothes, ready for discharge	
Slippers/outdoor shoes	
Nightclothes	
Dressing gown	
Reading glasses	
Book/magazine	

If needed, have I?

Arranged my aftercare/respite	
Arranged transport home	
Stocked up food in my fridge/freezer and cupboard	
Prepared my house ready for returning home	

Please do not bring any valuables or large amounts of money into hospital.

More information contact:

Vascular help line: **0121 424 2879**, this also has an answer phone to leave messages on.

Vascular co-ordinator: **0121 424 3902**

Vascular nurse specialist: **0121 424 0620 / 0121 424 0917**

References

www.smokefree.nhs.uk

www.nhs.uk/Pages/HomePage.aspx

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Please use the space below to write down any questions you may have and bring this with you to your next appointment.

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If you require this information in another format, such as a different language, large print, braille or audio version please ask a member of staff or email **patientexperience@uhb.nhs.uk**.

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