Patient Information
GS25

NHS Golden Jubilee

Colorectal prehabilitation
– prepare for your colorectal surgery or treatment

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Next review: July 2027
Version 3

About this leaflet

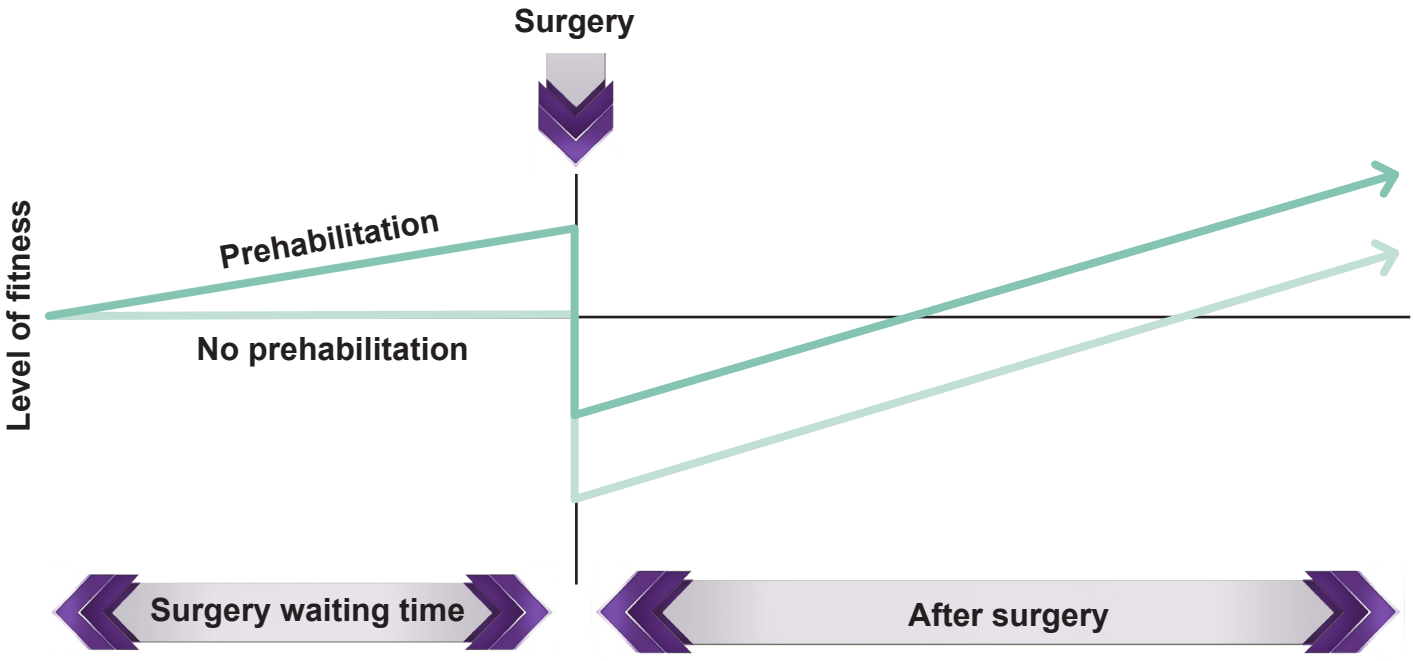
The purpose of this leaflet is to provide patients with information about safe activity and how to improve your health and level of fitness before treatment or surgery.

What is prehabilitation and why is it important?

Prehabilitation means your journey to recovery starts before your treatment/surgery has even begun through physical, nutritional and psychological support.

Prehabilitation is designed to maximise an individual's overall general health and level of fitness to enable them to withstand the effects of treatment or surgery, and introduces steps you can take to help you prepare for your upcoming procedure. The actions you take now can help you recover quicker, reduce the risk of complications and the time you spend in hospital. Many people are happy to learn they can do something to improve their health in preparation for surgery.

You may only have a short time between potential diagnosis and your treatment/surgery, however, small changes can make a big difference. The benefits of prehabilitation can be seen in as little as 7-10 days.

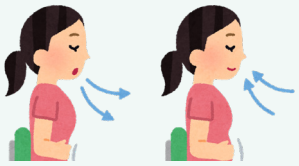


Benefits of prehabilitation

- Reduce length of stay in hospital
- Reduce complications after surgery
- Improve physical function
- Improve overall fitness
- Improve emotional wellbeing
- Improve nutritional health
- Provide a sense of control and purpose
- Enhance quality of life
- Promote long-term positive health behaviour

Prehabilitation is not a standalone treatment. It is made of many key components to help you 'Get READY' for surgery:

Get READY



R espiratory exercises



E at well



A ctivity



D ental and oral hygiene



Y our lifestyle and wellbeing

Respiratory exercises

Below are the step by step instructions for the deep breathing exercise. Aim to carry out this deep breathing exercise 3 times a day, ideally morning, noon and in the evening.

Positioning is important: before you start make sure you are sat upright, not in a slumped position. Take a couple of practice breaths with your hands on your stomach - you should feel your hands being pushed out as you breathe in and move in as you breathe out.

Deep breathing exercise

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These are the step-by-step instructions for your deep breathing exercise. If you can, carry out this exercise in a high sitting position.



Step 1

Take a deep breath in through your nose, hold for 3 seconds and breath out slowly through your mouth.

Repeat 3 times.

Step 2

Huff – sharply breathe out through your mouth. This is the same action as using your breath to steam up a mirror.

Repeat 3 times.





Step 3

Cough.

After your surgery your Physiotherapist will show you how to support the wound in your chest with a towel.

Scan the QR code to view our breathing exercises video

Incentive Spirometer

Below are step by step instructions for using your Incentive Spirometer.

It is recommended to use you Incentive Spirometer 2 to 3 times per day to record a measurement of your inspiratory breath.



Chest training: Incentive Spirometer

Step 1: Sit upright

Step 2: Hold the device in an upright position

Step 3: Put the mouthpiece in your mouth and close your lips around it

Step 4: Breathe in slowly through your mouth for as long as you can. The green piston should rise the middle column. The green button should stay between the arrows.

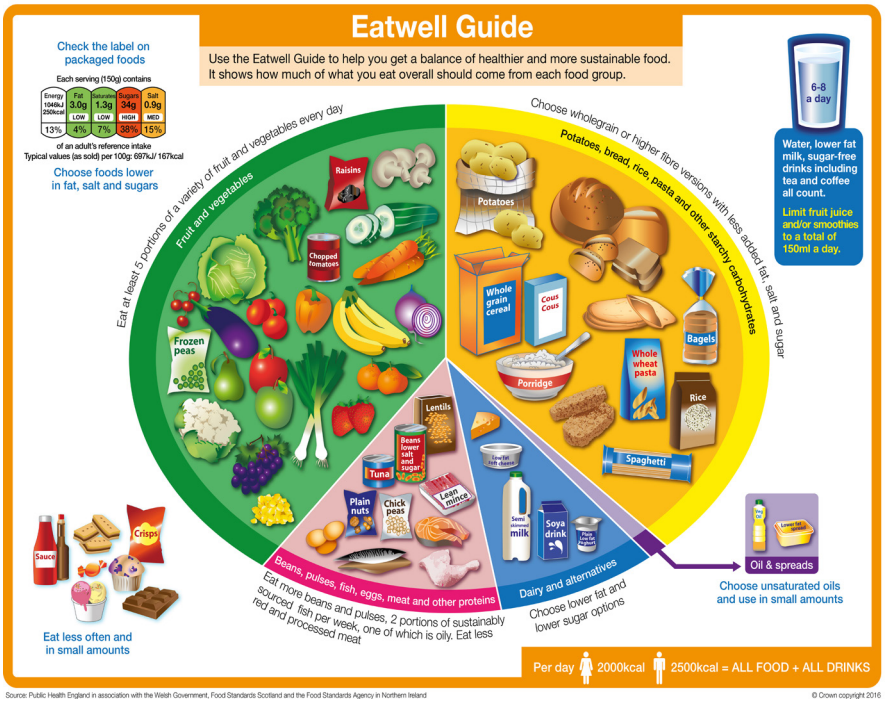
Step 5: Keep the green button floating for as long as you can and then breathe out slowly.

Step 6: Rest for a few seconds and repeat steps 1-5 for 3-5 breaths. Record your highest breath daily in the diary provided.

Scan the QR code to view the incentive spirometer video

Eat well

Eating a balanced diet is an important part of maintaining good health to help prepare for your surgery. The Eatwell Guide shows you how much of what you eat should come from each food group.



Fruit and vegetables: Aim to eat at least 5 portions of a variety of fruit and vegetables each day.

Bread, rice, pasta or other starchy carbohydrates: Starchy food should make up just over a third of the food we eat. Choose higher fibre wholegrain varieties, such as wholewheat pasta and brown rice, or simply leave skins on potatoes.

Milk and dairy products: Good sources of protein and vitamins. They are an important source of calcium too. Try to choose low fat varieties to limit your intake of saturated fat.

Meat, fish, eggs and beans: These foods are good sources of protein, vitamins and minerals. Pulses, such as beans, peas and lentils are good alternatives to meat because they are lower in fat and higher in fibre and protein too. Choose lean, low fat, cuts of meat and mince, and eat less red and processed meat like bacon, ham and sausages. Aim for at least 2 portions of fish every week, 1 of which should be oily, such as salmon or mackerel.

Choose unsaturated oils and spreads, and eat in small amounts: Unsaturated fats are healthier fats and include vegetable, rapeseed, olive and sunflower oils. Remember all types of fat are high in energy, but should be eaten sparingly.

Information source: **https://www.nhs.uk/live-well/eat-well/the-eatwell-guide/**

For people who are underweight, have recently lost weight unintentionally or have a poor appetite, it is important to maintain a stable weight and prevent further weight loss prior to your surgery.

The following ideas may help you to increase your energy and protein intake:

- Eat little and often. Aim to have 3 meals and 3 snacks per day
- Avoid ‘low fat’, ‘sugar-free’, or ‘diet’ products
- Choose the meals you enjoy
- Have a nourishing dessert/pudding – full fat yogurt, rice pudding or sponge and custard
- Have a pint of full fat milk everyday – for example on cereal, milky drinks or in puddings
- Add butter or margarine, cream or cheese to mashed potatoes, vegetables, scrambled eggs and hot pasta
- Have drinks (tea/coffee/juice) with or after meals as these can fill you up if taken just before food.

Activity

There is strong evidence that it is safe to stay active in the time leading up to surgery or treatment. You should try and do 30 minutes of moderate level activity every day. If you cannot manage this in one go, try breaking the activity into smaller manageable periods, for example, 10-15 minutes activity in the morning and then 10-15 minutes in the afternoon.

Physical activity does not mean a lot of hard work or expense, it could be going out for a walk, gardening, or using your stairs at home. Avoid sitting for long periods of time.Your physiotherapist will issue you with a personalised exercise programme at your appointment. You may notice changes to your breathing when exercising. This can show if you are exercising to an appropriate level.

You should aim to be a little breathless, but still be able to hold a conversation with someone. If you are too breathless, to do this you must stop, catch your breath and then carry on. You should aim to be working to level 3-5 on the Rate of Perceived Exertion (RPE) scale in this booklet.

I already exercise and am quite fit. What should I do?

If you already exercise regularly and your Consultant is happy for you to do so, then please continue with your routine. Keeping up your fitness will help you cope with the effects of your surgery better and exercise may also help you to cope with the worry and anxiety upcoming surgery brings. Please discuss with a healthcare professional involved in your care if you have any concerns regarding activities or exercises.

Walking

Walking is often overlooked as a form of exercise, but it is simple, free and one of the easiest ways to get more active and healthier. A brisk 10-minute daily walk has a range of health benefits and counts towards your recommended 150 minutes of weekly exercise.

You can tell you are walking briskly if you can talk but cannot sing. If you become breathless enough that you cannot talk to someone, stop, catch your breath and carry on. Your physiotherapist will provide you with a Rate of Perceived Exertion (RPE) scale to guide you.

Tips:

- Plan a route in advance.
- Remember wherever you are going, you must be able to get back.
- Take a mobile phone or inform someone you are going for a walk.
- Get others involved!
- Use a walking aid if necessary.
- Wear comfortable, supportive shoes.

You can monitor your daily step count using a pedometer. Most mobile phones have a pedometer or step count function included. It is recommended that you increase your step count by 10% each day. Please fill in the step count diary to monitor your progress.

Rated Perceived Exertion (RPE) Scale

NHS Golden Jubilee

0	At rest (no exertion at all)
0.5	Very easy (very, very light)
1	Easy (very light)
2	Not difficult (fairly light)
3	
4	A little hard
5	
6	Hard
7	
8	Very hard
9	
10	Extremely hard







Main exercises:

Warm up for 1 minute marching on the spot in standing or in sitting.

Sit to stand:



Sitting in a chair and keeping your feet hip width apart, push on the arms of the chair to stand up. Slowly and controlled, sit back down. Repeat 10 times.

Heel raises:



Standing freely or holding on to a wall/chair for support, rise up to your toes. Hold here for 3 seconds and slowly release your heels back down to the floor. Repeat 10 times.

Mini squats:



Standing freely or using a chair/wall for support, slowly bend your knees to a comfortable angle and release back to standing. Repeat 10 times.

Hip abductions:



Standing freely or using a chair/wall for support, life your leg out to the side, keeping your knee straight. Repeat 10 times with each leg.

Hip extensions:



Standing freely or using a chair/wall for support, lift your leg out behind you, keeping your knee straight. Repeat 10 times with each leg.

Shoulder raises:



Take a deep breath in and on exhale slowly raise one or both arms straight up in line with your ears. Slowly drop them back down by your side. Repeat 10 times.

Core exercises:

These exercises should be started before surgery to help strengthen your tummy muscles. The physiotherapist will advise you when you can start these exercises post-op.

1. Tummy Tightening Breathing

What to do

- Lie on your back with your head supported by a pillow and bend your knees as far as you feel is comfortable. You can start off doing this on a flat bed.
- Take a deep breath in and slowly exhale through your mouth.
- As you exhale, gently tighten up the deep muscles in your lower abdomen (tummy).
- You should feel a gentle "tightening".
- It is important at this stage not to lift your bottom or press your back into the bed.
- Hold this "brace" feeling for 3-5 seconds and then release.
- Breath and relax between each repetition.
- Repeat 3-5 times.

Progression

- As you progress, you can do the exercise on the floor without a pillow and begin to aim for a "stronger" tightening sensation.
- Begin to hold the brace for a longer count of 10-15 seconds and breathe deeply 2-3 during each tightening.
- Repeat 5 times.
- Try placing your hands on your lower tummy and you will feel the muscles tightening.

How often

- Aim for 2-3 times per day



2. Pelvic Tilt

What to do

- Lie on your back with your head supported by a pillow and your knees bent up as far as feels comfortable.
- Very gently rock your pelvis upwards and flatten your back down into the bed or floor.
- You should feel your abdominal and bottom muscles tightening a little.
- Rock back to your "neutral" or starting position and repeat.
- Start with 5 repetitions and just very slight, gentle movements (the movements are so small, they may not be apparent to someone looking on).

Progression

- As you progress, allow your back to arch up a little more and tighten your abdominal muscles more strongly as you push your back into the floor.
- Build up towards 20 repetitions.

How often

- Aim for 2-3 times per day.



3. Hip Lift/Bridge

What to do

- Lie on your back with your head supported by a pillow and your knees bent up as far as feels comfortable.
- Very gently tilt your pelvis backward and tighten up your pelvic floor muscles (the muscles you use to hold on when you need the toilet).
- Lift your bottom off the bed/floor and slowly lift up vertebrae (back bone) by vertebrae until your bottom is off the bed/floor.
- Lift your bottom as high as you can comfortably hold, if you feel pain – STOP!
- Hold this position for a moment then slowly lower your spine and pelvis back down.
- Imagine you're lifting a string of pearls off the floor and back down again.
- Repeat 3-5 times.

Progression

- Build up gradually to 10-15 repetitions and lifting higher as you feel more comfortable.

How often

- Aim for 2-3 times per day.



4. Knee Rolls

What to do

- Lie on your back with your head supported by a pillow and bend your knees up as far as feels comfortable.
- Arms by your side.
- Keep your knees and ankles together and gently let your knees begin to drop over to one side.
- Only move your knees as far as feels comfortable.
- Then carefully tighten your tummy muscles and roll your knees over to the other side.
- Try to keep your shoulders down and your head relaxed, looking upwards.
- Aim for 5 rolls each side.

Progression

- As you progress, increase the range so your knees drop lower.
- Build up towards 20 repetitions.

How often

- Aim for 2-3 times per day.



Cool down:

It is very important to complete a cool down after exercise to help restore your body to a 'resting state'. After completing your exercise programme, you should perform the following for around 3-5 minutes, gradually slowing your pace:

1 **Marching on the spot**



In addition, complete a cycle of the deep breathing exercise on page 3.

Daily diary

Please record the number of steps you have achieved for each day using a pedometer/ phone/ smart watch, record the level your inspiratory muscle trainer (IMT) is set at and record the highest breath achieved on your incentive spirometer.

	Day	M	T	W	T	F	S	S
Week 1	Daily step count							
	Highest spirometer							

	Day	M	T	W	T	F	S	S
Week 2	Daily step count							
	Highest spirometer							

	Day	M	T	W	T	F	S	S
Week 3	Daily step count							
	Highest spirometer							

	Day	M	T	W	T	F	S	S
Week 4	Daily step count							
	Highest spirometer							

	Day	M	T	W	T	F	S	S
Week 5	Daily step count							
	Highest spirometer							

	Day	M	T	W	T	F	S	S
Week 6	Daily step count							
	Highest spirometer							

	Day	M	T	W	T	F	S	S
Week 7	Daily step count							
	Highest spirometer							

	Day	M	T	W	T	F	S	S
Week 8	Daily step count							
	Highest spirometer							

	Day	M	T	W	T	F	S	S
Week 9	Daily step count							
	Highest spirometer							

	Day	M	T	W	T	F	S	S
Week 10	Daily step count							
	Highest spirometer							

	Day	M	T	W	T	F	S	S
Week 11	Daily step count							
	Highest spirometer							

	Day	M	T	W	T	F	S	S
Week 12	Daily step count							
	Highest spirometer							

Dental and oral hygiene

Good dental and oral hygiene reduces the risk of lung complications after surgery and improves your overall general health. You should aim to:

- Brush your teeth for 2 minutes, at least twice a day
- Use a fluoride mouthwash
- Use dental floss

For more information on recommendations for dental and oral hygiene including teeth cleaning guide, please refer to the NHS Inform website: **www.nhsinform.scot**

Your lifestyle and wellbeing

As well as eating well, it is also important to consider your lifestyle in relation to smoking and alcohol.

Stopping smoking/vaping

Giving up smoking/vaping is one of the most important steps in getting healthy before your operation. The sooner you stop smoking/vaping prior to surgery the better.

Smoking/vaping significantly increases the risks in colorectal surgery by causing pulmonary complications (pneumonia, chest infections), cardiovascular events and impaired wound healing. Active smokers face almost double the complication rate compared to non smokers.

Quitting at least 4 - 8 weeks prior to surgery is strongly advised to mitigate these risks but quitting even a few days before surgery can reduce carbon monoxide levels, though longer is better.

To get help stopping smoking/vaping:

- Speak to your local pharmacist
- Call Quit Your Way 0800 84 84 84

Alcohol

You should limit the amount of alcohol you drink. Do not exceed national recommendations, which are currently 14 units per week for both men and women. People who drink alcohol above the recommended amount are 3 times more likely to develop infections or have issues with healing.

Reducing alcohol intake one month before surgery can significantly reduce these risks. Reducing intake less than one month before can still be of benefit but to a lesser extent.

					
2.2 units	**1.5 units**	**2.2 units**	**3.1 units**	**9.8 units**	**1 unit**
1 pint of beer/lager/ cider (4% ABV)	330ml bottle of beer/later/ cider (4.5% ABV)	175ml glass of wine (12.5% ABV)	250ml glass of wine (12.5% ABV)	750ml bottle of wine (13% ABV)	25ml measure of spirits (40% ABV)

For more information on healthy lifestyle choices, visit: www.nhsinform.scot

Prehabilitation at NHS Golden Jubilee

You may see a Physiotherapist who will help improve your physical function and overall strength. This may be a face to face or by telephone/video consultation. They will have a discussion with you to see how much exercise you currently manage and if there are ways in which you could improve this. They will tailor any advice to suit your individual ability.

What does the programme involve?

The Physiotherapist will complete an initial assessment where you will be asked some questions and complete some exercise tests to establish your current level of fitness. They will create a home exercise programme based on your initial assessment, which will be made up of cardiovascular, strengthening and lung training exercises as appropriate.

We hope you find Prehabilitation gives you the guidance you can use to positively impact the time leading up to your surgery and help you take control of your health and wellbeing.

Further information

Your healthcare team are here to support you. Any question that is important to you is important to us. Please contact the prehabilitation physiotherapist on **0141 951 5121** or email **gjnh.heartandlungprehab@gjnh.scot.nhs.uk** if you need help or advice to discuss any of the information in this booklet.

NHS Scotland Prehabilitation for Scotland - resources to help you prepare for surgery.

https://www.prehab.nhs.scot/prehab-and-me/

Maggie's Centre - Maggie's Centre website offers free practical, emotional, and social support for people affected by cancer, including patients, families, and carers.

https://www.maggies.org/

Notes

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Tha gach sgrìobhainn againn rim faotainn ann an diofar chànanan, clò nas motha, Braille (Beurla a-mhàin), teip claistinn no riochd eile a tha sibh airson a thaghadh.

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