Enhancing your recovery after cardiac surgery

Steps you can take to get better sooner

Patient’s name: ..........................................................................
Consultant’s name: ..................................................................
Admission date: ......................................................................
Planned discharge date: .......................................................
Type of operation: .................................................................
Date of operation: .................................................................
Introduction

We want you to get better as soon as possible after your heart operation.

Research has shown that this can be achieved by:

- Getting you as fit as possible for your operation
- Reducing the stress of surgery on your body
- Getting you up and about soon after your operation

In Papworth, we call this initiative ‘PORTICO’, which stands for Preparing and Optimising Patients, and Reducing Trauma In Cardiac Operations.

One of the most important principles of PORTICO is that there are lots of things that you can do to speed up your recovery. This booklet gives you information on how to do these. There is space for you to monitor your progress and we encourage you to do this.

In conjunction with this booklet you can view a short film made by us at Papworth Hospital.

www.papworthhospital.nhs.uk/apatientsguide

This will help you prepare for your cardiac surgery, and help ensure you are in the best health you can be prior to your surgery. It will also give you an idea about what to expect before during and after your surgery. It is intended to help you understand your body.

For any questions relating to your surgery, then please contact a member of the Cardiac Support Team, who will be willing to help and advise you. They are contactable on 01480 364100, weekdays and office hours. You may reach an answer phone during these times, but if you leave a message with your name and number, they will call you back as soon as they can.
1. Live well
Good nutrition is always important but it becomes even more vital before and after surgery. A healthy balanced diet will provide your body with all the nutrients it needs to fight infection and repair tissues.

Studies have shown clearly that people who are underweight, malnourished or overweight have more complications after surgery. People who are a healthy weight and well nourished will heal and recover more quickly.

Prior to surgery your nutritional state will be assessed. If you are identified as malnourished or at risk of malnutrition (this means you are eating and drinking too little or have unintentionally lost weight) you will be provided with some written dietary information to help you to improve your nutrition before surgery. You may also be prescribed supplement drinks and referred to a dietitian for further advice.

For most people a healthy balanced diet includes:

- **Fruit and vegetables** - aim to eat at least five portions per day. Ensure you have a variety and choose from fresh, frozen, tinned, dried or juiced.
- **Starchy foods** at each mealtime, e.g. rice, bread, pasta and potatoes. Choose wholegrain varieties when you can.
- **Protein-rich foods** such as lean meat, fish, eggs, beans, lentils or nuts. These should be eaten at least twice a day.
- **Milk and dairy foods each day** - try lower-fat versions if you need to lose weight.
- **Limit foods high in fat, sugar and salt.**

If you are found to be overweight, you should try to take steps to lose weight before surgery as this will reduce your risk of complications (particularly breathing and wound problems). You should do this sensibly by continuing to eat a healthy balanced diet that includes all the four food groups listed above.

It is important that you continue to eat regular meals but you could cut down on food and drinks high in fat and sugar and reduce your portion sizes. If you need to snack between meals, choose healthy snacks such as fruit and low-calorie yoghurts. Good nutritional habits set up now will be easier to maintain after your surgery.

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<thead>
<tr>
<th>Before surgery</th>
<th>After surgery</th>
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<tbody>
<tr>
<td>Nutritionally balanced diet + a healthy weight</td>
<td>= Quicker recovery and fewer complications</td>
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Your BMI is ____________
2. Stay active
While waiting for your heart operation it is important to remain physically active. The stronger and fitter you are before the operation, the quicker you are likely to go home afterwards.

Physically active means to keep doing the activities you would do in your normal daily life, as much as your symptoms allow. If your symptoms include chest pain/tightness or shortness of breath it is important to discuss your level of activity with the doctor or nurse you see in clinic.

Walking is an important way to remain active, whether you can walk a few steps or a few miles. Here is some simple advice to help you remain safe when walking.

- Dress in loose fitting clothes and wear comfortable shoes.
- Walk at a pace that enables you to maintain your breathing comfortably. An example of this is that you should be able to ‘walk and talk’ at the same time. If you become too breathless or develop chest pain, you should STOP and rest. Always ensure that you carry your GTN spray if you have been prescribed one.
- Start with a time/distance you can comfortably manage and gradually increase it if you can.
- Avoid extreme weather conditions, e.g. too windy, wet, cold or hot, as they may make you feel more tired or breathless.
- Ensure that you remain hydrated when you exercise by drinking plenty of fluids.

Included in this booklet are some exercises to help flexibility and strength prior to your operation. They have been designed specifically for people who are breathless and weak. If done regularly, they will increase muscle strength, improve circulation, help with shortness of breath and prepare you for your surgery.

- Try to find a comfortable position and relax the muscles not involved in the exercise.
- Avoid holding your breath while exercising.
- Give yourself time to recover your breath after each exercise. Rushing to finish the exercise can make you feel more breathless. Your breathing should sound quiet. Breathe in and out at a comfortable pace. Continue until your breathing feels settled.
- You do not have to do all the exercises in one session. It may be better for you to do several short sessions of exercise each day, rather than one long session.
- If you feel unwell you may need to stop exercising or reduce the amount you are doing. Gradually build it up again as you start feeling better.
- Try to find a regular pattern for exercise that fits into your daily routine. Avoid exercising for an hour after a meal.
- You may find that some of the exercises become too easy for you; read the ‘progression’ column to see how to make your muscles work harder.
Flexibility exercises
These exercises will help to keep your body and shoulders flexible; do them slowly, five times in each direction. Start these exercises by sitting on an upright chair.

- **Shrug shoulders up and down**

- **Keeping hips and feet facing straight forwards, turn your head and trunk as far as you can comfortably go, first to the right and then to the left.**

- **Breathe out and slowly slump down. Slowly straighten up whilst taking a breath in.**
**Strengthening exercises**

**Warm-up exercise:** sitting on a bed or chair, pump your feet up and down. This helps the movement in your ankles and the blood flow in your legs. Aim: to strengthen your thigh muscles.

**Inner range**
Lying or sitting on a bed, place a rolled up towel under knee, pull foot up towards you. Lift foot to straighten knee. Count to five. Relax down. Repeat using other leg. Increase number of repetitions. Add a weight to the ankle (reduce repetitions at first).

**Straight leg raise**
Lying or sitting on a bed - pull foot up towards you. Keeping knee straight lift leg six inches. Count to five. Relax down. Repeat using other leg. Increase number of repetitions. Add a weight at the ankle (reduce repetitions at first).

**Middle and inner range**
Sitting on a chair or over edge of the bed. Lift your foot to straighten knee. Count to five. Relax gently down. Increase number of repetitions. Add a weight at the ankle (reduce repetitions at first). Repeat using other leg.
**Calf exercises**
Aim: to strengthen your calves

**Sit to stand**
Sitting on a chair with hands on your knees (or on arms of chair).
Stand up, then sit down slowly. Do not use your arms. Increase number of repetitions, then use lower chair or stool.

**Step ups**
Standing in front of a step or bottom stair. Hold onto a hand rail. Slowly step up onto the stair with both feet, then step down again. Alternate the leg you lead with.
To make this exercise harder, increase the height of the step.

**Squats**
Hold onto the back of a chair, standing up. Slowly bend your knees a small way, hold, then stand up straight.
To make this exercise harder, increase the depth of squat by bending your knees more.

**Heel raiser**
Hold onto the back of a chair, standing up. Rise up onto toes and back down to floor.
Increase number of repetitions. Then progress onto one foot (reduce repetitions at first).
You might find it useful to complete this diary of the exercise that you have done to get fit for your operation. This diary is designed to help you monitor your exercises and show what progress you have made.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Activity</th>
<th>Duration/repetitions</th>
<th>Comment</th>
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<tbody>
<tr>
<td>DD/MM</td>
<td>10:00am</td>
<td>Leg exercises</td>
<td>5 of each</td>
<td></td>
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<tr>
<td></td>
<td>3:00pm</td>
<td>Flexibility exercises</td>
<td>3 of each</td>
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3. Get practising
After heart surgery most patients have a wound down the centre of their chest over the breast bone. An important part of wound and bone healing is the restriction of the activities you do with your arms after the operation. This is because certain activities put a lot of stress on the bone that is trying to heal.

The main restriction is NO lifting, pushing or pulling with your arms for the first three months after the operation to allow the wound to heal successfully. As a guide you should not lift any object that is greater than 5lbs/2.2kg in weight.

Some of the activities this will affect are getting in and out of bed, standing up and sitting down in a chair, carrying shopping bags and general everyday living activities within the home.

- **Getting in and out of bed**
  To make getting out of bed easier after the operation it would be beneficial to practise the correct technique beforehand. The usual technique we advise is for you to roll onto either side and gently lower your legs off the edge of the bed, then push down through your elbow and come up into a sitting position on the edge of the bed. For lying down the same process is followed in reverse.

- **Getting in and out of a chair**
  To help you when getting up from a chair without using your arms we advise a technique of sitting on the edge of the chair with your arms crossed on your chest. Then with your feet firmly flat on the floor, rock gently backwards and forwards three times with your nose coming forward over your toes. On the third rock forward push up strongly through your legs and come up into the standing position.

4. Be prepared
Start to make plans for going into hospital and coming home after your operation.

- Think about how you will travel to the hospital. It might involve an early start so try to get some rest the day before.
- Think about what you will take into hospital. Make sure you have a pair of well fitting, flat, comfortable slippers or shoes. If you normally use a walking aid or have glasses, dentures or hearing aids, then make sure you bring these with you.
- Think about how you will get home from hospital. You will be given the date that we expect you to be discharged. Make sure your friends and family know when this will be.
- Check that you have enough support in place for when you get home, as you might need extra help.
- Before going into hospital, it is sensible to stock up your freezer so you don’t have to worry about shopping immediately after you are discharged.
- If you are finding it difficult to manage at home prior to your operation, or you cannot get up out of a chair easily without using your arms, do mention this to the nurse at pre-admission clinic.
- If you are the primary carer for someone else, think about how this person will be looked after while you recover from your operation.
Steps to improve your recovery whilst in hospital

Nutrition
Make sure that you start to eat and drink well so that your body has the fuel it needs to heal.

After surgery your normal appetite may be reduced, but it is important that you try to eat and drink, as this will help stimulate your appetite. If your appetite and food intake remain poor when you go home, you should try to eat six small meals or snacks each day. If your appetite does not return to normal within a few weeks and your weight reduces unintentionally, you should contact your GP for further advice and support.

Exercise
Take exercise as guided by the physiotherapist as this helps your body get strong and fit again. After your surgery you will be encouraged to be active as soon as possible.

Here is a typical programme for after your operation:

Day 1
The physiotherapist will assess your breathing and check that you can take a deep breath and cough comfortably. You will be taught how to support your wound to ensure you can cough strongly. The aim will be for you to sit out of bed in the morning and again in the afternoon on the first day. You will have information about protecting the healing of your wound and how to move without putting pressure through your arms. You will be taught some simple exercises to help maintain your strength. You may also do some walking on the spot.

Day 2
The physiotherapy team will assess your walking and may still be monitoring your breathing, particularly if you are coughing up phlegm or are unable to take a deep breath effectively. You will be advised on how much walking you should be doing and if it is safe for you to be walking on your own. Our aim is to get you as independent as possible as soon as possible. We will reinforce the information we have given you about your wound and exercises.

Day 3
By day three you should be able to walk around the ward short distances (approximately 10 to 50 metres) on your own. You will be encouraged to do this frequently throughout the day as the more mobile you are the quicker you will be able to go home. You will also be encouraged to be do things for yourself such as washing and dressing.

Day 4 and 5
Your walking will be progressed under the supervision of the physiotherapy team until you are able to walk a distance that is functionally acceptable for going home. Our standard is 100 metres but do not worry if you can’t do this as everyone is different. You will also be assessed on the stairs, if this is felt essential for a safe discharge home. You will be taught flexibility exercises similar to those you did before your operation and given further information about your recovery and cardiac rehabilitation.

If your stay in hospital is longer than expected then the physiotherapy team may continue to see you. However, if you are independently mobile and have no breathing problems, you may be discharged from regular review by the team.

It might be useful to keep a diary or log so that you can track your daily feelings and progress on the road to recovery.

Be positive about your recovery - remember little steps go a long way!
Diary

Day 1 - post surgery

How am I feeling?

How well controlled is my pain?
☐ Well controlled
☐ I'm still sore and would like some more painkillers

What are my goals?
• Start eating and drinking. Try to eat something at each meal and drink at least 6 cups of fluid.
• Sit out of bed with assistance from staff for up to 6 hours.
• Try to get out of bed and on to my feet.

What have I eaten today?
☐ Breakfast..............................................................................................
☐ Lunch...................................................................................................
☐ Dinner...................................................................................................

How many cups of drink have I managed today?
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8

Some nausea is normal on day 1
☐ I haven’t managed to eat because:
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What am I proud of achieving?
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How active have I been?
☐ Sat out of bed with assistance for ......... hours.
☐ Walked on the spot with assistance
☐ Practised supported cough and exercises ......... times today
☐ I haven’t been able to because:
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Day 2 - post surgery

How am I feeling?

How well controlled is my pain?

☐ Well controlled

☐ I’m still sore and would like some more painkillers

What are my goals?

• Eat 3 meals and drink at least 6 cups of fluid

• Continue to follow guidance from the Physiotherapist about walking, exercises and coughing

• Get out of bed (without using arms) and walk a few steps with guidance

• Sit out of bed for up to 6 hours

What have I eaten today?

☐ Breakfast..............................................................................................

☐ Lunch...................................................................................................

☐ Dinner...................................................................................................

How many drinks have I managed today?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8

☐ I haven’t managed to eat because:

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How active have I been?

☐ Sat out of bed

☐ Walked around my bed

☐ Walked ......... steps

☐ Practised supported cough and exercises ......... times today

☐ I haven’t been able to because:

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What am I proud of achieving?

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Day 3 - post surgery

How am I feeling?

How well controlled is my pain?
☐ Well controlled
☐ I’m still sore and would like some more painkillers

What are my goals?
• Eat 3 meals and drink at least 6 cups of fluid
• Walk to the bathroom with help
• Check that I have day clothes to get dressed tomorrow

What have I eaten today?
☐ Breakfast..............................................................................................
☐ Lunch...................................................................................................
☐ Dinner...................................................................................................

How many cups of drink have I managed today?
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8

How active have I been?
☐ Walked .......... steps or distance ☐ 1 ☐ 2 ☐ 3 ☐ 4 times today
☐ Have done my exercises .......... times today

What am I proud of achieving?
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Are there any changes to my support arrangements at home after discharge? (If yes, talk to your nurse)   Yes   No
Day 4 - post surgery

How am I feeling?

How well controlled is my pain?
☐ Well controlled
☐ I’m still sore and would like some more painkillers

What are my goals?
• Walk to the bathroom unaided
• Get dressed
• Open my bowels
• Eat 3 meals and drink at least 6 cups of fluid

What have I eaten today?
☐ Breakfast..............................................................................................
☐ Lunch...................................................................................................
☐ Dinner...................................................................................................

How many cups of drink have I managed today?
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8

How active have I been?
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What am I proud of achieving?
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Are there any changes to my support arrangements at home after discharge? (If yes, talk to your nurse)
Yes ☐ No ☐
Final post operative period

How am I feeling?

How well controlled is my pain?
☐ Well controlled
☐ I’m still sore and would like some more painkillers

What are my goals?
• Walk up and down 1 flight of stairs
• Walk around the ward on my own with confidence
• Understand my medication
• Prepare for going home

What have I eaten today?
☐ Breakfast..............................................................................................
☐ Lunch...................................................................................................
☐ Dinner...................................................................................................

How many drinks have I managed today?
☐ 1  ☐ 2  ☐ 3  ☐ 4  ☐ 5  ☐ 6  ☐ 7  ☐ 8

How active have I been?
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What am I proud of achieving?
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Going home
If you are not well enough to go home on the planned day of discharge then don’t worry. We are all individuals and some of us take longer than others to get better. Don’t be surprised if you feel ‘down’. This is normal after an operation and your mood will improve.

We are here to support you as you recover and your clinical team will be able to explain things to you and answer any questions that you or your family have.

Steps to improve your recovery after you leave hospital
• Continue to eat and drink well and take regular exercise.
• Take part in your local cardiac rehabilitation.
• Remember we are always here if you have any questions.

Contact details
Cardiac Rehabilitation 01480 364429
Cardiac Support Nurses 01480 364100

Monday to Friday 9.00am - 6.00pm except Bank Holidays

We would appreciate your feedback on this booklet so that we can continue to improve it for future patients:

Have you found this information useful in preparing you for your surgery?
Yes
In parts ..............................................................
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No ........................................................................
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Did you find it helpful to keep a diary of your activity and progress?
Yes
At times ...............................................................
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No ........................................................................
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Do you feel that you have been an active participant in your care?
Yes
In part ...............................................................
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No ........................................................................
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Any other comments ........................................
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