



Oxford University Hospitals  
NHS Foundation Trust

# Cardiac Rehabilitation Exercise Programme

Windrush Leisure Centre  
Witan Way  
Witney  
Oxford  
OX28 4YA

**PLEASE BRING THIS FOLDER WITH YOU  
TO EACH EXERCISE SESSION**

**Name:**

**Start Date:**

**Time:**

**Final Date:**

**Time:**

## Information for participants

If you are at all unwell (for instance with a stomach bug, cold or virus) or have been prescribed antibiotics for any condition, please DO NOT attend the exercise session. Please call the department to let us know that you will not be attending.

**Contact us on: 01865 220 251**

If you miss two consecutive sessions and have not contacted us to tell us why, we will assume you no longer wish attend and will allocate your place to someone else.

The table below shows how you can keep your heart healthy.

| <b>Giving up smoking</b> | <b>Controlling blood pressure</b>  | <b>Increasing physical activity</b>   | <b>Controlling weight</b>  | <b>Eating a healthy diet</b>  | <b>Lowering cholesterol</b>  | <b>Drinking within sensible limits</b>  | <b>Preventing or controlling diabetes</b>            |
|--------------------------|--|---|--|---|--|---|--|
| No smoking               | BP below:<br>Home reading: 135/85<br>Clinic reading: 140/90<br>Over 80 years: 150/90 | Reduce time spent sitting or lying down.<br>Moderate intensity exercise for at least 150 minutes, spread over the week.<br>Two strengthening activities per week. | Waist should be less than 31.5ins (80cm) for a woman and 37ins (94cm) for men. South East Asians: waist should be less than 31.5ins (80cm) for a woman and 35.5ins (90cm) for men. | At least five portions of fruit and vegetables per day.<br>Reduce saturated fat, salt and sugar intake. | Total cholesterol level (TCL) as low as possible, TCL less than 4mmol/l, low-density lipoprotein (LDL) under 1.4mmol/l and high density lipoprotein (HDL) above 1.2mmol/l. | Have two alcohol-free days a week.<br>No more than two to three units of alcohol daily. | Maintain a HbA1c blood result less than 42 mmol/mol. |

It can be difficult at first to change your lifestyle, but over time you will notice the benefit to your health and well-being. Set small realistic goals to help you achieve your aim. You can do this on your own or with help from health professionals. Don't try to change too many things at once.

|              |              |                    |                    |                    |
|--------------|--------------|--------------------|--------------------|--------------------|
| Risk Factor: | Goal:        | Progress/Comments: | Progress/Comments: | Progress/Comments: |
| Date:        | Action plan: | Date:              | Date:              | Date:              |
| Risk Factor: | Goal:        | Progress/Comments: | Progress/Comments: | Progress/Comments: |
| Date:        | Action plan: | Date:              | Date:              | Date:              |
| Risk Factor: | Goal:        | Progress/Comments: | Progress/Comments: | Progress/Comments: |
| Date:        | Action plan: | Date:              | Date:              | Date:              |

# DATA PROTECTION

## CARDIAC REHABILITATION EXERCISE SESSIONS

You have now been invited to take part in the hospital-supervised Cardiac Rehabilitation exercise scheme at a local leisure centre. In order for us to look after all the patients at these sessions, we may sometimes ask the gym staff / volunteers to join us to help supervise the class.

If you choose to, and it is appropriate for you, you may be offered the opportunity to join the supervised leisure centre exercise referral scheme once you have completed your eight hospital-supervised exercise sessions.

We will need to share some of your medical history with the gym staff involved so that they can look after you appropriately. The information we will share with them is the minimum they will need to help look after you or prescribe your individual exercise programme. This will be information such as:

- the treatment you have had in hospital and how you responded to this
- the type of medications you are taking
- the results of some of your tests or investigations.

It is important that you fully understand that we need to disclose this type of information to staff and volunteers, both verbally and in writing, and that you consent to this. All staff are not allowed to disclose any of the information that they receive about you to a third party. They must treat the information that they do know about you with respect and in accordance with the Data Protection Act and the Access to Health Records Act.

Please sign to confirm that you confirm that you understand and have had the opportunity to ask any questions.

Signed: .....

Dated: .....

## SAFETY CONSIDERATION FOR GYM-BASED SESSIONS

I have read and understood the information that has been provided regarding the safe use of the exercise equipment. If I have any questions, I will consult a member of staff before starting the exercise.

Signed: .....

Please print name: .....

Dated: .....























## Why is physical activity so important?

Welcome to the exercise part of your Cardiac Rehabilitation. Whatever your current health you can benefit from physical activity. Surveys have shown that 70% of the population in the UK do not do enough regular physical exercise to achieve health benefits and to protect their heart. Exercise also plays a very important role in your recovery after a heart attack or heart surgery.

### Exercise definitions:

Current guidelines state that we should be aiming to do **at least 150 minutes of moderate intensity aerobic physical activity per week**. In addition to this Muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders and arms) Adults should move more and sit less. Some activity is better than none. Adults who sit less and do any amount of moderate to vigorous intensity physical activity gain some health benefits." But what do we mean when using terms such as physical activity, exercise, physical fitness and health related fitness?

**Physical activity** is any bodily movement with a significant increase in energy expenditure. Physical activity therefore includes activities such as walking your dog, gardening and cleaning.

**Exercise** is something that you are going to do during the Cardiac Rehabilitation programme. Exercise is a type of physical activity. It is structured, planned and repetitive movements that are done to maintain or improve one or more of the characteristics of physical fitness.

**Physical fitness** encompasses many characteristics such as your stamina, flexibility, and balance. Your physical fitness relates to your ability to perform physical activity.

**Health related fitness** refers to your ability to perform your daily activities. Doing physical activity or exercise on most days of the week can help to increase your ability to perform your daily activities more easily. Health related benefits, especially for someone with heart disease (or someone with a high risk of heart disease), are the following:

- improved cholesterol levels
- lower blood pressure
- improved blood sugar control
- lower anxiety and depression
- improved ability to perform daily activities
- increased confidence and sense of well-being
- improved rate of return to work and leisure activities
- fewer visits to the doctor and hospital
- reduced dependence on cardiac drugs
- improved feelings about being able to cope after a heart attack or surgery
- increased exercise threshold for the onset of chest pain (angina).

What is even more encouraging is that these changes are possible with light to moderate exercise. So do not panic – we are not going to make you run marathons! Your exercise programme will be designed around you, your needs and your capabilities, and will gradually progress as you gain fitness and confidence. During the sessions you will be taught how to use the various pieces of equipment and how to exercise safely and effectively.

## **How long should I be exercising to gain health benefits?**

We get most benefit from doing physical activity on a regular basis, rather than just once or twice a week. In order to gain the maximum benefit to your health, you should aim to do at least 150 minutes of moderate intensity aerobic physical activity per week. So, even though you are starting the supervised exercise sessions it is very important that you continue with your regular activity at home on other days. Remember, this 150 minutes does not include your warm up and cool down so make sure you leave enough time so you do not have to rush the exercises.

Your weekly plan could include activities such as gardening or housework or walking to the local shop. You can split up your 150 minutes throughout week – for example, 30 minutes of activity, 5 days per week. You could even split this further each day, for example 10 minute bouts of activity 3 times throughout the day. Adults should move more and sit less.

### **Additional activity recommendations**

In the back of this folder you will find a physical activity diary. We recommend that you record your exercise and activity for the first month that you attend our classes, and also details of how you feel and whether you experience any problems. Staff will regularly review your diary during the programme. Keeping an activity diary will give you an accurate and useful record of the progress that you are making.

## **Sensible health precautions**

- Exercise only when you feel well. If you are unwell with a virus, cold, tummy bug or if you are taking antibiotics, we recommend that you wait at least two days after the symptoms have disappeared before starting any type of physical activity. If you are unsure if you are well enough to exercise, please call and ask a member of the team before going to the gym.
- Make sure that you have eaten a light meal approximately 1 to 2 hours before exercising. Do not exercise on either a full or completely empty stomach.
- Do not exercise in the extremes of temperature. Dress warmly when exercising in the cold. If it is warm, slow your pace.
- Know your capabilities. Exercise regularly but do not exceed the levels that have been recommended to you. Slow down when walking up hills.
- Wear proper clothing. We recommend loose fitting, comfortable clothing that is appropriate for the weather. Do not wear heavy tracksuits in an attempt to lose weight. All you will lose will be water and minerals, which could be harmful. Wear shoes that are comfortable for your activity.

## Coming to our exercise class

### What to bring with you:

- **this exercise folder**
- **GTN spray / tablets** (if you have been given them)
- **a bottle of water**
- **a small towel** (if you wish)
- **blood glucose monitor** (if you are diabetic)
- **fast acting bronchodilator** (if you are asthmatic).

### What to wear:

- soft-soled shoes or trainers
- sweatshirt or jumper with a T-shirt or shirt underneath
- tracksuit trousers, jogging bottoms or shorts
- for safety reasons please do not wear sandals or slip on shoes
- please **do NOT** wear denim or cords.

**Take your medication as normal each day when you are exercising. If you have been given a GTN spray or tablets, remember to keep them with you at all times. You should never stop any of your medications without discussing it with your GP.**

You must compare how you feel each day with your usual symptoms and capabilities.

If you develop any new symptoms or find that your usual symptoms are worse (i.e. more breathlessness, more frequent angina, swollen ankles) you must inform your GP as soon as possible.

## What will happen in the classes?

**The class will follow the same format every time, as described below:**

- check-in (blood pressure and heart rate check)
- warm-up (all three parts should take 15 minutes in total)
- main exercise
- cool down (both parts should take at least 10 minutes in total)
- check-out (blood pressure and heart rate check).

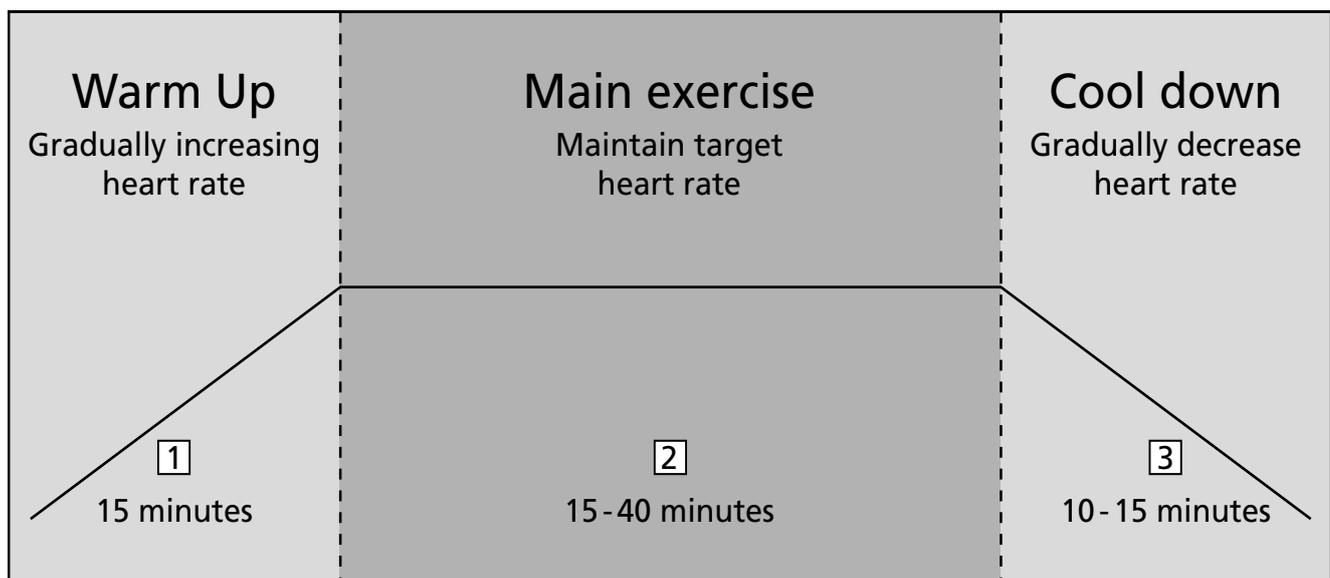
**You MUST inform the cardiac rehabilitation staff when you are checking-in if:**

- You have forgotten to take your medication.
- You have had your medication changed.
- You have been feeling unwell (if you are taking antibiotics, have chest discomfort, excessive shortness of breath, coughs, colds, stomach upsets, discomfort in joints or muscles).

During the sessions you must remember to **keep your feet moving** whenever possible (so no standing around chatting!). This rule should apply to all three phases of your exercise session (warm up, main session and cool down), and also when you are walking outside. This has important implications for your blood pressure and the amount of work that your heart has to do. For this reason **please DO NOT stand around waiting for one particular piece of equipment** – keep your feet moving, and look for an alternative activity.

## Warming up and cooling down

You should always think of any activity you are doing as a three-part process. Warming up and cooling down are just as important as the main activity itself.



### Warm up:

Always warm up with light exercise at the start of the session. This has important safety implications. For example:

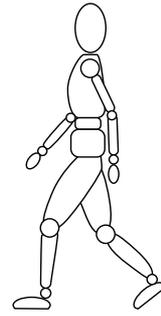
- By gradually increasing the workload of the heart, it is able to adapt slowly to increasing demand. This is much safer than suddenly increasing the workload. It helps reduce the risk of angina and disturbances in your heart rhythm by making sure that the coronary arteries are dilated and that your heart has a good supply of oxygen.
- Including pulse-raising activities, e.g. walking, marching on the spot, or low-level cycling, followed by stretching of the muscles that you are going to be using, reduces the risk of injury.
- Whatever you do for your warm up it should be completed at a low level, i.e. light / easy, equivalent to 1 to 2 on the effort score.
- Ideally the warm-up should last 15 minutes and then you are ready to start your main exercise.

During your exercise sessions you will be shown how to warm up and cool down. This will include the following movements and stretches shown on the next page.

## Warm up exercises

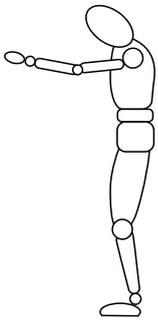
### 1. Pulse raising (movement) activities

Walking, marching on the spot, or low-level cycling are suitable ways of raising your pulse. Do this for the first 5 minutes of the warm up, starting very gently and gradually increasing the intensity. The purpose is to warm up the muscles in preparation for stretching, and to increase the heart rate gradually.



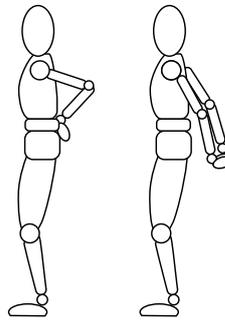
### 2. Stretching activities

The next 5 minutes of your warm up should be to stretch the muscles that you are going to be using. Only stretch as far as your muscles allow. It is important to remember to keep your feet moving in between the stretches so that your body remains warm and your heart rate is still raised slightly, so maintaining the effects of the first 5 minutes of the warm up.



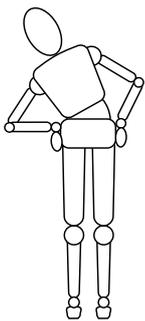
#### Upper back stretch

Lock your fingers together with your arms stretched out in front. Lower your head forward to look at the floor. Remember to keep your feet moving. Hold the stretch for 10 to 15 seconds.



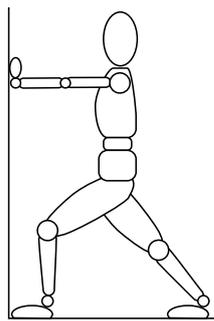
#### Chest stretch

Place your hands on your lower back. Gently move your elbows towards each other. Keep your back straight. Remember to keep your feet moving. Hold the stretch for 10 to 15 seconds.



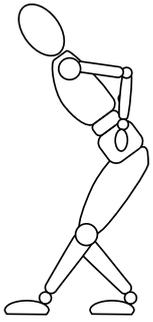
#### Lower back and waist mobility

Stand with your feet shoulder width apart either with your hands on your hips or down by your side. Slowly lean to one side from your waist, being careful not to move your hips. Come back to the upright position and lean to the other side. Repeat 5 times.



#### Calf stretch

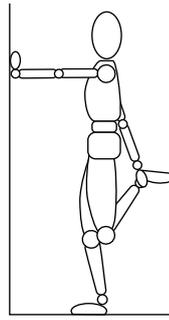
Press the heel of the back leg into the floor until a gentle stretch is felt in the calf muscle in the back of the lower leg. If a stretch is not felt, adjust the position by moving the back foot further back and hips forward. Hold the stretch for 10 to 15 seconds on each leg.



### Hamstring stretch

With one leg in front of the other, lean forward slightly, placing both hands on the hips. Straighten the front leg and slightly bend the back leg. Keep the head up and continue to lean until a stretch is felt in the back of the forward straight leg.

Hold for 10 to 15 seconds. Repeat on the other leg.

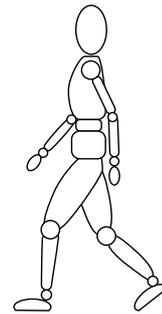


### Front of thigh stretch

Put your left hand on the wall for support. Bend your right knee and hold either your right ankle, back of your shoe or the back of your trousers by your ankle. Keep the supporting leg slightly bent throughout. Move your knees together by lifting your right foot behind the body. Keep the back straight and push the hip forward until a gentle stretch is felt. Hold the stretch for 10 to 15 seconds and then repeat with the left leg.

## 3. Pulse raising (movement) activities

The final 5 minutes of the warm up should be pulse raising activities at a slightly higher intensity than the first 5 minutes. The purpose is to continue to increase the heart rate in preparation for the main exercise session. Walking, marching on the spot, or low-level cycling are suitable methods of pulse- raising.



### Cool down:

It is important you leave enough time at the end of your session to cool down properly. Gradually lower your pace during the cool down. The goal is to bring your body back to its resting state.

- A thorough cool down for 10 minutes reduces the risk of fainting or dizziness that could result from a sudden drop in blood pressure if you suddenly stop exercising.
- Cooling down also reduces the risk of disturbances in your heart rhythm that could happen if you stop exercising suddenly.

**(These factors reduce the risk of sudden heart problems and should be taken very seriously.)**

- Stretching during the cool down also helps to reduce any muscular injury that may be caused by the activity.

# How hard should I be working?

## Monitoring your exercise level

It is important to make sure that you are not pushing your body too hard, but also that you are working hard enough to achieve the benefits that we have discussed. During the programme we will show you various ways of checking how hard you are working so that you are able to exercise safely and effectively, both in a supervised setting and on your own.

### 1. Measuring your heart rate (pulse)

Your heart rate, i.e. how many times your heart beats per minute, is a very useful indicator of how hard you (and therefore your heart) are working. During exercise your heart rate will increase in response to the increased demand of working muscles to supply blood and oxygen.

The best area to measure your heart rate is between the tendons in the middle of your wrist and the bone on the outside of your up-turned arm, about 1 inch from the base of your thumb.

- Lightly place your index and middle fingers (never use your thumb) over the area described above. You should feel a slight pulsing as your heart pushes blood around the body.
- Count the number of beats that you feel for a 15 second period.
- Multiply this by 4 and this will give you how many times per minute your heart is beating – this is your heart rate.
- It is important that you measure your heart rate **as soon as possible** after each exercise, before it starts to slow down - otherwise it will not be a true reflection of how hard you are working.

We will give you a recommended heart rate range when you start to exercise. This range is related to you, your diagnosis and your medication, so everyone will be different. Your target heart rate is just a guide. It is important to remember that certain medications, e.g. beta blockers, will affect the way your heart rate responds to exercise. It may not increase as much as it used to. Alternatively, if you reach the top end of this range, do not worry, you do not need to be working any harder than this so just reduce the level you are working at.

### 2. Effort score

A second way of measuring how hard you are working is to measure your level of effort and give it a score of between 0 and 10. Use the table below. (Borg, G. CR 10 scale 1982, 1998).

| Effort score |  |
|--------------|--|
| 0            | No effort at all (no intensity)        |
| 0.5          | Extremely light/easy (just noticeable) |
| 1            | Very light / very easy                 |
| 2            | Light / easy                           |
| 3            | Moderate                               |
| 4            | Somewhat hard                          |
| 5            | Hard                                   |
| 6            |  |
| 7            | Very hard                              |
| 8            |  |
| 9            |  |
| 10           | Extremely hard (almost maximum)        |

During the exercise we want you to pay close attention to how hard you feel you are working. This feeling should reflect your total amount of exertion and fatigue, combining all sensations and feelings of physical stress, effort and tiredness.

Don't concern yourself with any one factor such as leg pain, shortness of breath or exercise intensity, but try to concentrate on your inner feeling of exertion. Try not to underestimate or overestimate this; be as accurate as you can (ACSM 2006).

Ideally, at this stage of your recovery we would like you to be working at a level that corresponds to 'moderate – somewhat hard' (level 3 to 4). If you describe your effort level as 'hard', then you are working too hard and need to slow down. You must be completely honest and try to be as accurate as possible. This is a useful way of checking your activity levels and keeping within comfortable limits.

### 3. Talk test

This is another simple way of assessing how hard you are working. Try having a conversation while you are exercising. If you can speak in complete sentences and are only a little out of puff, then you are working at the correct level. If you find yourself gasping and short of breath, then you are working too hard and need to slow down.

## Safety advice

**Please read and follow these safety guidelines.**

### 1. What should I do if I experience any pain while exercising?

**STOP** whatever you are doing, no matter where the pain is coming from. You should never experience any pain during or after physical activity. **IF YOU ARE IN THE MIDDLE OF A REHABILITATION CLASS, TELL ONE OF THE MEMBERS OF STAFF IMMEDIATELY.**

### 2. Are there any other reasons that I should stop exercising?

Yes, you should listen to your body and stop exercising immediately if you experience any of the following:

- pains or tightness in the chest
- pain, swelling, stiffness in joints
- palpitations
- excessive sweating
- excessive shortness of breath
- sickness/nausea
- feeling dizzy or faint.

Please let one of the cardiac rehabilitation staff know **immediately** if you are experiencing any of these problems.

It is also important that you stick to the prescription that is given to you. If you feel that you are capable of walking or pedaling faster than your programme indicates, do not just increase it yourself. Instead, talk to a member of the rehabilitation team, and we will tell you if we think it is appropriate and safe for you to do so.

### 3. What should I do if I have angina when I am exercising on my own?

Angina is an uncomfortable feeling in the chest. It usually feels like a heaviness or tightness in the centre of the chest, which may spread to the arms, neck, jaw, face, back or stomach. Use your GTN spray or tablets (if you have been given these) because this will increase the supply of blood to your heart and help to relieve the discomfort.

**What to do if you get chest pain:**

Pain



Rest



1 to 2 GTN spray/tablet under the tongue



If the pain is not relieved by 5 minutes



1 to 2 GTN spray/tablet under the tongue



If the pain is not relieved by 5 minutes



**CALL 999 FOR AN AMBULANCE**

**10 minutes  
maximum –  
or sooner  
if you feel  
unwell**

**If at any point your pain becomes worse, or if you feel unwell (e.g. dizzy, sweaty, short of breath) please call 999 for an ambulance immediately.**

**If your pain is relieved, but if the episodes of angina are more frequent or are taking longer to go away, please arrange to see your GP to be reviewed.**

**If you notice that your angina has started to happen at night or when you are resting, it is important that you see your GP so that he/she is aware of your new symptoms.**

## Safety considerations for sessions at the gym

**In order to make sure you are safe during your exercise session, please read through the following information carefully.**

- While you are being checked in it is your responsibility to tell your **Cardiac Rehabilitation Nurse about any illness/symptoms** that you have had since you last attended the class.
- Your exercise prescription is written out in your exercise folder for you to refer to. **Please read your prescription carefully before you start each piece of equipment. DO NOT exceed the prescribed level. Speak to an Exercise Physiologist if you are not happy with your programme.**
- **If you are in any doubt, ask a member of staff before you start exercising.**

### **When using the treadmill it is important that you:**

- Attach the safety cord to your belt/waistband before starting the machine.
- Make sure that you are clear about the speed that you require **before** starting the treadmill.
- Reset the treadmill completely prior to starting the machine – this can be done by pressing the 'reset' button or the 'stop' button twice.
- Face forward **at all times**. Do not turn around to talk to people.
- Use hand rails for support but do not grip them tightly, lean or push on the hand rails.
- Familiarise yourself with the 'stop' button, and the emergency stop procedure, in case you need to stop the machine quickly.
- When increasing the speed, lightly press and release the button repeatedly, rather than applying pressure for a prolonged time.
- Do not put your exercise books on any part of the treadmill. Check your programme before you start and put your book somewhere where it will not fall onto the equipment.

### **When using the recline/upright bikes:**

- Upright bikes – make sure that the seat is in the right position and that it is secure **before** you get on to the bike.
- The recline bikes are best adjusted while sitting on the bike, using your body weight to move the seat.
- Your legs should be **almost straight** when you are pedaling whatever type of bike you are using.
- Make sure that you are clear about what level of resistance you require. If in doubt, please check with a member of staff before you start.

### **When using the rowing machine:**

- Make sure that the resistance lever or dial is in the correct place **before** you start.
- Make sure that the seat is secured when you sit down. You can do this by either holding onto it, or pushing the seat back as far as it will go before you sit down.
- Secure your feet appropriately, using the foot straps provided.

- Maintain good posture throughout the activity – **keep your back straight**, and try to remain as upright as possible.
- When you have finished rowing, safely return the bar to the original position, slide the seat as far back as possible, and carefully stand up.

### **When using the X-trainer:**

- Take care getting on and off the machine – the foot pedals will move as soon as you stand on them. When you get onto the machine make sure you hold onto the fixed handles and not the ones that move.
- Stand on the lowest foot pedal first – otherwise the other pedal may hit your shin. Make sure that your toes are as far forward on the pedals as possible.

### **When using the arm bike:**

- Your arms should always be slightly bent, even when at the furthest point away from you.
- The seat height should be set so that your arms and shoulders are level. Make sure you are not pedaling above or below shoulder height.
- Make sure your feet are either flat on the floor or use the bars on the wall for support.

### **REMEMBER:**

- If at any point during your exercise programme you feel uncomfortable/ unhappy to continue with the activity, stop immediately and tell a member of staff.
- If you are in any doubt about these instructions, please check with a member of staff before starting the activity.
- If you experience any pain or discomfort (chest pain/muscular pain) you must tell a member of staff immediately.

## **References**

The information in this booklet is based on evidence. The following references were used:

*American College of Sports Medicine (2021) Guidelines for Exercise Testing and Prescription. 11th Edition. Lippincott, Williams and Wilkins. Baltimore*

*Borg, G. (1998) Borg's Perceived Exertion and Pain Scales. Human Kinetics. Champaign, Illinois.*

*British Association of Cardiac Rehabilitation (2007). BACR Phase IV Exercise Instructor Manual, 4th Edition. Human Kinetics, Leeds.*

*Department of Health (2000) National Service Framework for Coronary Heart Disease. DOH. Chapter 7.*

*Thow, M. (2006) (Ed) Exercise Leadership in Cardiac Rehabilitation: An evidence based approach. Whurr Publishers Limited. Chichester.*









## **Useful information**

For more information on how to record your blood pressure please visit:

Website: [www.bhf.org.uk/bloodpressureathome](http://www.bhf.org.uk/bloodpressureathome)

For more general information on blood pressure please visit:

Website: [www.bloodpressureuk.org](http://www.bloodpressureuk.org)



## 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: Cardiac Rehabilitation  
July 2025

Review: July 2028

Oxford University Hospitals NHS Foundation Trust

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