Cardiac Rehabilitation

Information following a Type 2 Myocardial Infarction (MI) / Heart Attack

If you have any further non-urgent questions or concerns relating to your heart please contact:

Cardiac Rehabilitation advice line on York: (01904) 725821
Monday to Friday: 08.00 – 16.00 hrs.
The York Hospital, Wigginton Road, York, YO31 8HE

Please do not call the cardiac rehabilitation advice line if you are unwell or have any chest pain as this is not manned all the time.

Caring with Pride
Caring about what we do • Respecting & valuing each other
Listening in order to improve • Always doing what we can to be helpful
Introduction

The blood supply to the heart is delivered by blood vessels called the coronary arteries. These are shown below in Figure 1. These are quite small blood vessels and are approximately 3-4mm in diameter.

A Myocardial Infarction (often termed a Heart Attack or MI) occurs when the blood supply to the myocardium (heart muscle) is interrupted for long enough to cause some muscle cell injury. A process of healing with some fibrosis (scar tissue) in the muscle can then occur. The interruption of blood flow can be caused by a number of conditions affecting the coronary arteries.

Many MI’s are the result of sudden coronary artery blockage due to rupture of an area of fat deposit in the artery wall (a lipid plaque) which results in clot formation in the artery stopping blood flow. This is termed a Type 1 MI. Sometimes, but not always, the symptoms of an MI can be: chest pain/tightness or shortness of breath.
Fig 1: The blood supply to the Heart.

Fig 2: showing cross sections of heart arteries
(Muscular layer of artery wall shown in white)
Type 2 - MI.

The term Type 2 MI is used when the interruption of blood flow in the coronary arteries causing the change in the heart muscle is due to something other than a ruptured fatty deposit (lipid plaque). It can be caused by several different conditions.

The main causes of a type 2 MI are outlined below:

1. Coronary artery spasm: The coronary arteries, like all arteries, have a muscular layer (see Fig. 2). The muscular layer can sometimes suddenly constrict or tighten and this is known as ‘Coronary artery spasm’. This can reduce the blood supply to the heart muscle and cause an MI. This can happen randomly without clear cause or sometimes during very ‘stressful’ events.

2. Abnormal Heart Rhythm (Arrhythmia): Normally, the heart beats at approximately 60-90 beats per minute and this can be felt by taking your pulse over a minute. The beats should feel regular as the heart should beat in a synchronised way. Abnormal heart rhythms are called arrhythmias and can be due to a prolonged fast, slow or sometimes irregular heartbeat. Sometimes an arrhythmia due to a very high heart rate can cause reduced coronary blood flow resulting in an MI. Your cardiac rehabilitation Specialist Nurse will give you specific information regarding the arrhythmia you have had.

3. After or during the physical stress of surgery: as this can sometimes reduce flow in the coronary arteries.

4. Anaemia: this can be due to bleeding, iron deficiency or other causes. If severe this can reduce the oxygen carrying capacity of the blood. It can sometimes therefore (usually in combination with other problems such as underlying narrowing in the coronary arteries and/or the physical stress of surgery) result in an MI.

5. Valvular heart disease / Aortic stenosis or regurgitation.

6. Pneumonia/other severe illness.

7. Heart Failure: when normal pumping of the heart is reduced.

Your Consultant Cardiologist may advise that you have further investigations for your diagnosis and may include a heart scan or angiogram. Your Cardiac Rehabilitation Specialist Nurse will explain tests that are advised and will also give you any relevant written information regarding your specific Type 2 MI.
Going home following the diagnosis of a Type 2 MI.

It is important once you are discharged from hospital that you do “pace” your recovery.

The Cardiac Rehabilitation Team will explain to you how to increase your activity and fitness gradually and safely, taking into account your previous level of physical fitness or how physically active you were before your MI. If you have any other health problems or worries relating to exercise, you may wish to talk to the Cardiac Rehabilitation Physiotherapist.

Goal setting and pacing

When you arrive home following discharge from hospital gradually increase your distance by a few minutes every two to three days by approximately five minutes/more depending on what feels ‘fairly easy’. If you feel tired after walking a certain distance then do not continue to increase it until you are able to walk ‘easily’. If walking is a problem and is difficult due to other health problems, we may be able to offer advice and alternative forms of exercise to try. Different people will take different times to recover.

Driving

Following a Type 2 heart attack there is a DVLA driving restriction of four weeks. You must tell your car insurance company that you have had a heart attack before you resume driving.

Medications

Depending on the cause of your Type 2 MI, your Cardiologist may decide that regular medication is advised. These may vary depending on what the cause of your MI has been. Your cardiac rehabilitation/cardiology specialist nurse or pharmacist will discuss your medicines with you before you go home.
Housework and gardening

Start with activities that will not increase the demand on your heart. Tasks that can be undertaken include dusting, drying dishes, preparing light meals and lifting no more than a half a kettle. Try to avoid lifting heavy shopping bags, and allow people to help with tasks when offered. Eventually over the weeks, you will be able to gradually increase your tasks.

In the garden you may want to do easy jobs at first, such as light weeding or hoeing. Remember to start with a small amount and build up gradually.

You may feel tired for the first couple of weeks, and an afternoon rest can still be taken. Try not to sleep for long periods in the day, as this can disrupt your normal night time sleep pattern. Learning to relax is beneficial, and may help you sleep at night.

Sexual activity may be resumed when you feel you can engage in more strenuous activity, and your partner should engage in most of the physical aspect at first. As a guide, full sexual intercourse is recommended after four weeks.

Activities you are advised to avoid

- Strong, sudden efforts such as heavy lifting, pulling or pushing, as a guide, nothing heavier than half a kettle for first two weeks;
- Heavy lawn mowing and sustained activities that involve raising both your arms above your head, e.g., hedge clipping for the first six weeks.
Healthy heart tips:

1. **Smoking**

   Smoking is the second most common cause of cardiovascular disease. The best choice you can make to keep your heart and blood vessels healthy is to stop. Your cardiac rehabilitation nurse can offer you support if you want to stop.

2. **Healthy eating and your heart**

   - Healthy eating for your heart is called the cardio-protective diet (also known as the Mediterranean diet). Following a cardio protective diet can help reduce the risk of developing cardiovascular disease. The following food groups should be included in your diet:
     
     - Starchy foods: base meals on wholegrain or higher fibre versions of cereal, bread, rice and pasta. Have less processed foods and refined carbohydrates.
     
     - 5 a day: Try to include at least five portions of fruit and vegetables every day. A portion size is equal to a medium size apple, orange or banana, a small bowl of salad or two tablespoons of vegetables. If you are taking a statin to lower your cholesterol you should avoid grapefruit/grapefruit juice.
     
     - Fat: try to reduce the total amount of fat in your diet especially animal or saturated fats. These should be replaced with small amounts of unsaturated fats such as vegetable olive or rapeseed oil. Semi-skimmed milk is recommended rather than full-fat milk. Food should be grilled wherever possible and visible fat on meat removed. Reduce intake of biscuits, cakes, crisps.
     
     - Salt: Try to reduce salt in your diet especially if you have high blood pressure. Salt substitutes are not recommended.
     
     - Fish: Fish is recommended twice a week, ideally one portion should be oily, e.g. salmon, sardines, mackerel, and pilchards and the other portion should be white fish.
• Nuts, seeds and legumes (beans, peas and lentils): try to include a small handful of nuts (raw or unsalted), seeds and legumes four to five times per week as these are associated with lower total cholesterol.

• Sugar: Avoid sugar sweetened drinks. Soft fizzy drinks can be high in sugar and contain few nutrients. Try replacing with low sugar drinks. A high intake of sugar has been linked to heart disease therefore reducing sugar in your diet is recommended.

• Alcohol: The recommended intake for alcohol is now 14 units for both males and females per week spread over at least three days. Too much alcohol can damage heart muscle, increase your cholesterol and can increase blood pressure and heart rate. If you are taking warfarin you should not exceed one unit per day.

3. Exercise and your Heart

There are two ways you can easily help to improve your future health. When once you have recovered from your MI (between four to six weeks) you should aim for the following as you are able:

1. Become more physically active throughout the day and

2. Exercising regularly during the week.

Choose light activities at first that you enjoy doing, and that you can achieve, such as walking. During exercise it is normal to feel warm and to breathe harder. You should be able to talk at least in broken sentences during exercise. This is called the walk and talk test. You should never exercise through angina symptoms such as chest pain/discomfort or if you become unduly short of breath.

Physical activity means any body movement that uses the muscles and requires a noticeable increase in energy, for example; walking, gardening and housework.

Exercise is a form of physical activity that is structured, sustained and targeted at improving physical fitness. You cannot store fitness, and therefore you are recommended to take part in regular physical exercise when once you have made a full recovery. Where able, we advise 150 minutes per week which can be made up of 5 episodes of 30 minutes per week and a couple of resistance type activity to improve body strength of your upper and lower limb muscles.
Regular physical exercise:

- Improves circulation;
- Improves stamina;
- Can help to lower cholesterol and blood pressure;
- Can help to control weight gain;
- Helps to maintain efficiency of the heart muscle;
- Promotes the feel good factor;
- Can reduce the risk of further cardiovascular events.

Evidence suggests that the risk of future coronary artery disease decreases for people who are regularly active at or above moderate intensity. Ask your Cardiac Rehabilitation Team about this.

Helpful hints for exercise

- Always warm up before exercise and cool down afterwards;
- Do not exercise if you are unwell, for example have a cold or flu, if you have a temperature, a temporary infection or angina;
- Avoid exercising in extremes of heat or cold, and be aware of very strong winds, as they can ‘catch’ your breath;
- Try to avoid swimming in very cold water.
Ongoing help and advice

What to do if symptoms return:

Your cardiac rehabilitation nurse will discuss this with you prior to discharge based on your consultant’s advice.

If you have any further non-urgent questions or concerns relating to your heart you can phone Cardiac Rehabilitation advice line:

York (01904) 725821.

This advice line is open for enquires Monday to Friday 08.00 – 16.00 hrs.

If you are unwell or have any chest pain you will need to decide whether to call for medical help and you should not call the cardiac rehabilitation advice line as this is not manned all the time during working hours.
Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact Christine Rallison, Lead Cardiac Rehabilitation Co-ordinator, The York Hospital, Wigginton Road, York, YO31 8HE or telephone 01904 725821.

Teaching, Training and Research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Medical students in training may observe consultations for this purpose. You can opt-out if you do not want medical students to observe. Staff may also ask you to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services. PALS can be contacted on 01904 726262, or email pals@york.nhs.uk. An answer phone is available out of hours.

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