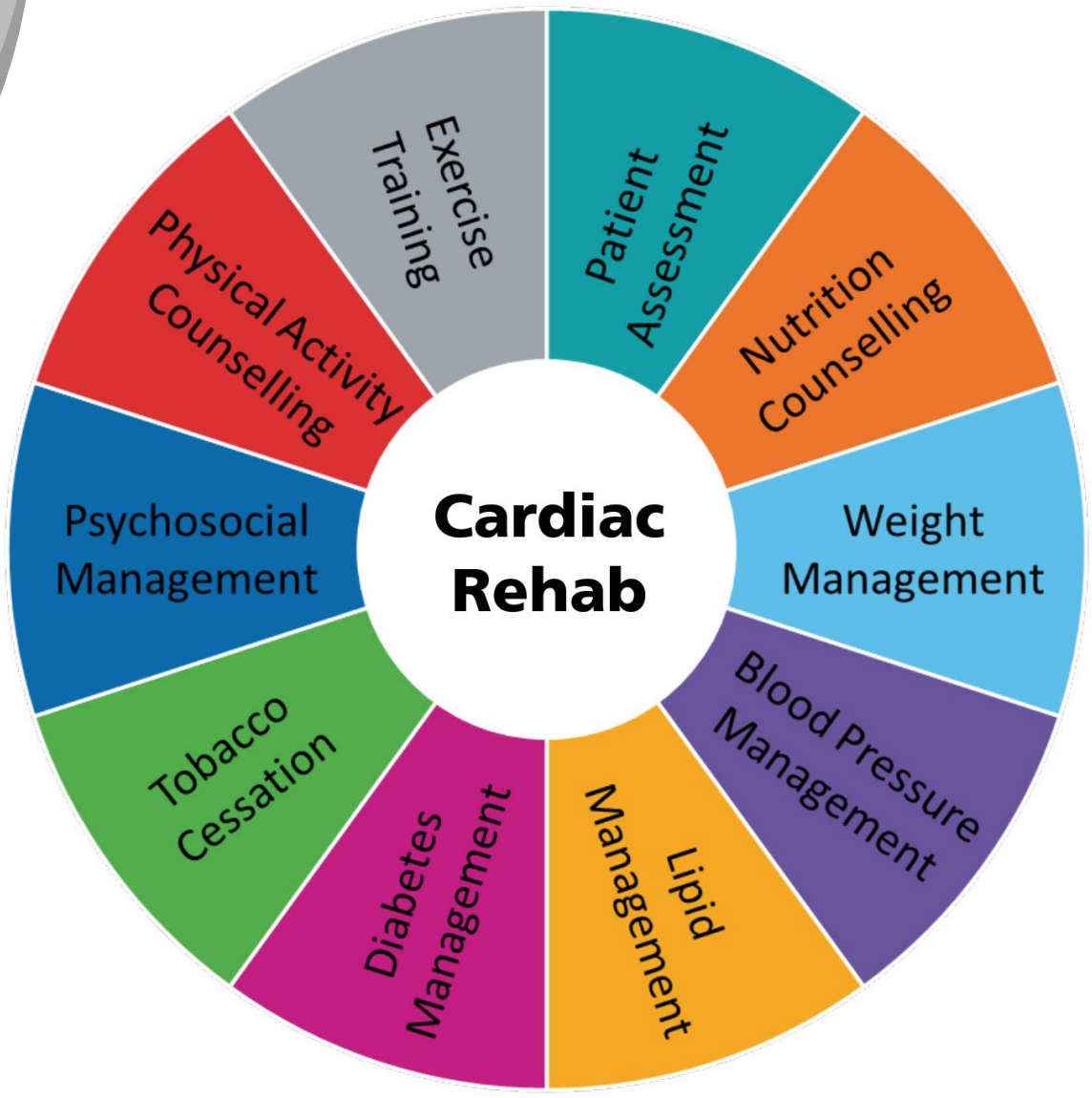
NHS
Oxford University Hospitals
NHS Foundation Trust

Cardiac Rehabilitation with Planner

Information Booklet and Personal Plan



Oxford Heart Centre

Name ……

Your Cardiac Rehabilitation Nurse is ……..

Contact numbers

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Cardiac Rehabilitation Department Philosophy:

Following a cardiac event, to provide and empower individual patients and their families with the skills and motivation to self-manage their physical and psychological recovery, to resume optimal function in their community, and through improved health behaviour achieving an absolute risk reduction in cardiovascular mortality.

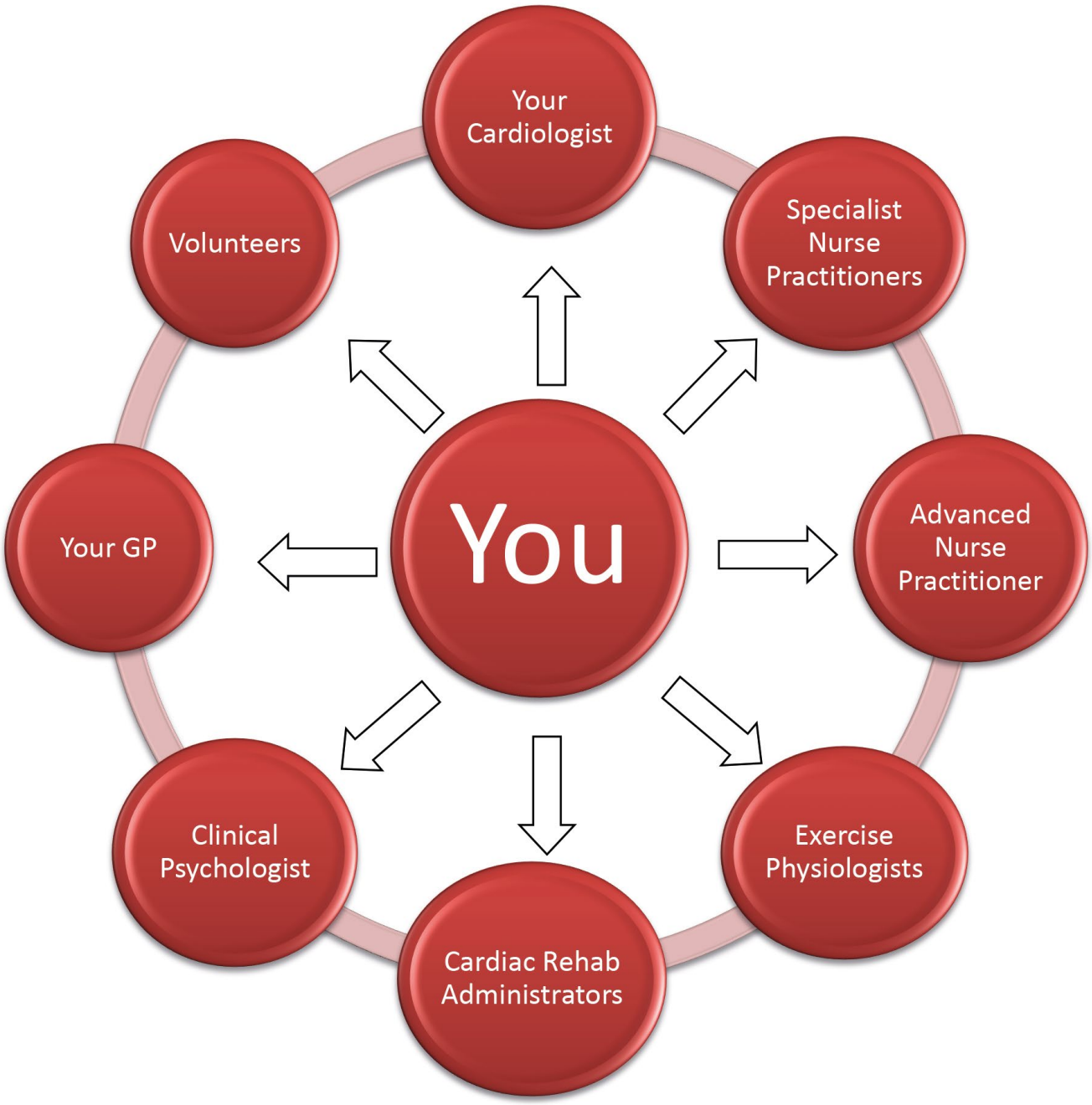
We aim to do this by delivering a high standard, evidence based personalised Cardiac Rehabilitation which is delivered is a range of formats.

Introduction to cardiac rehabilitation

Cardiac rehabilitation (rehab) is a structured programme designed to remove or reduce the underlying causes of heart disease, as well as to provide the best possible physical, mental and social conditions, so that people can, by their own efforts, continue to play a full part in their community. The information in this booklet will help you and your family to understand what has happened to you, help you recover, and plan for the future.

If there is anything that you do not understand or would like more information about, please do not hesitate to ask any member of the team – we are here to help and support you.

The cardiac rehabilitation team consists of:



How we are here to help you

One of our team will spend some time talking you through what has happened and how we can support you with your recovery. Together we will identify your heart disease risk factors, help you to set goals, and make positive lifestyle changes to aid your physical and mental wellbeing.

Our aim is to meet you whilst you are in hospital, if we are unable to see you during this time we will contact you within a week. However, if you would like to speak to us sooner than please feel free to give us a call (using the numbers at the front of this book).

During the early recovery period you will be followed by telephone, to check on your progress and book your cardiac follow-up and risk factor assessment. We will also invite you to join our online information and education sessions. Your cardiac follow-up and risk factor assessment can either be face-to-face or held over the phone (your choice). During this appointment you will speak with a Cardiac Rehabilitation Specialist Nurse and an Exercise Physiologist, where we will review your recovery, risk factors, and goals, and to make a plan moving forwards. At this point you will be invited to join our exercise programme.

Information sessions

We run a series of online education sessions on Microsoft Teams which cover many different topics, including:

- **What is heart disease and the risk factors.**
- **Medications.**
- **Healthy eating and the Mediterranean diet.**
- **Physical activity and exercise.**
- **Mental wellbeing, thoughts and feelings.**

Exercise support

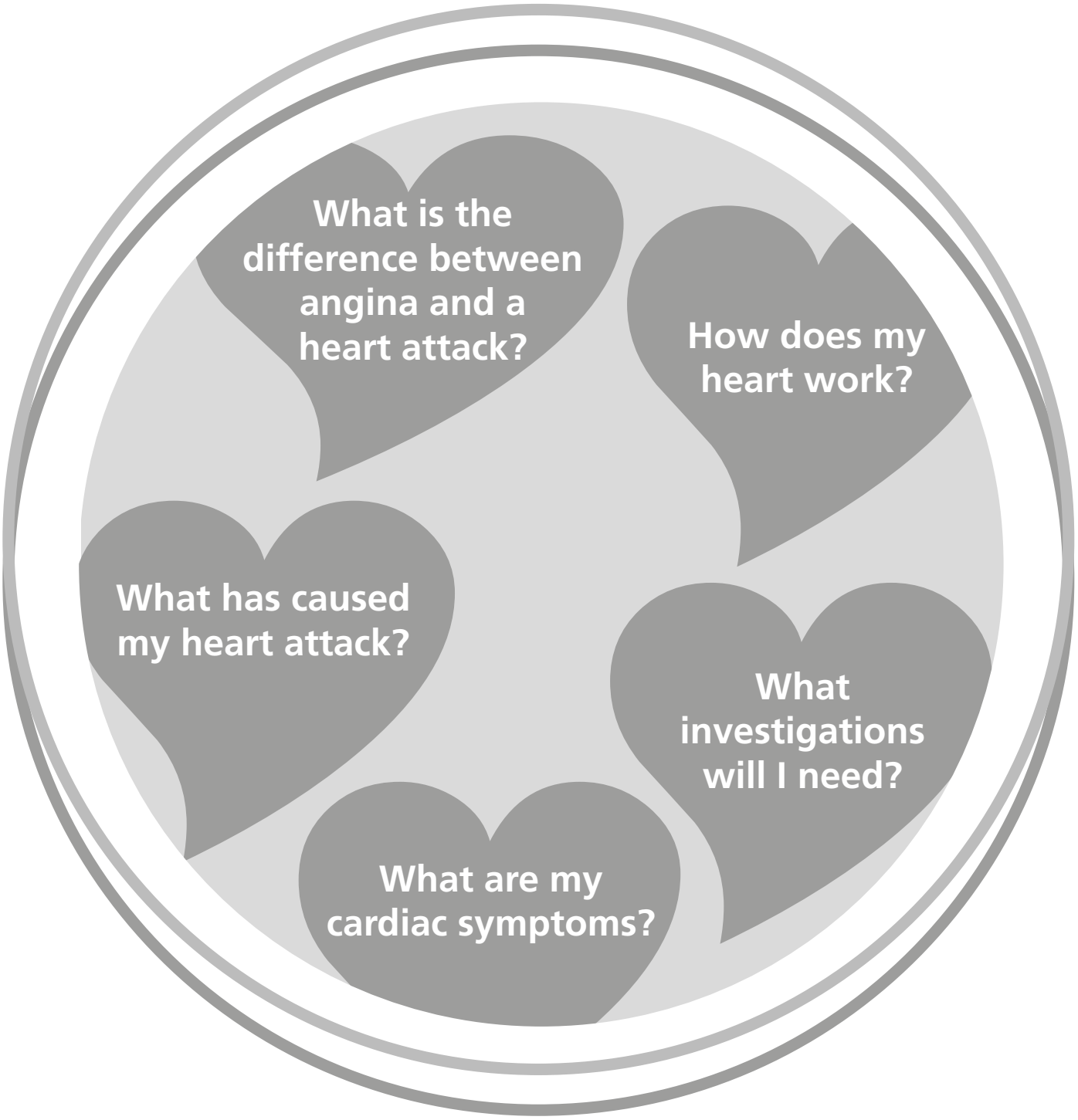
Regaining confidence and your ability to be active is a key focus of Cardiac Rehabilitation. We offer support with a team of Exercise Physiologists to aid you to return to physical activity and supporting you in being active moving forwards.

We run several different exercise programmes throughout Oxfordshire that are individually tailored to you. In addition to this, we are able to offer advice and support for your home exercise.

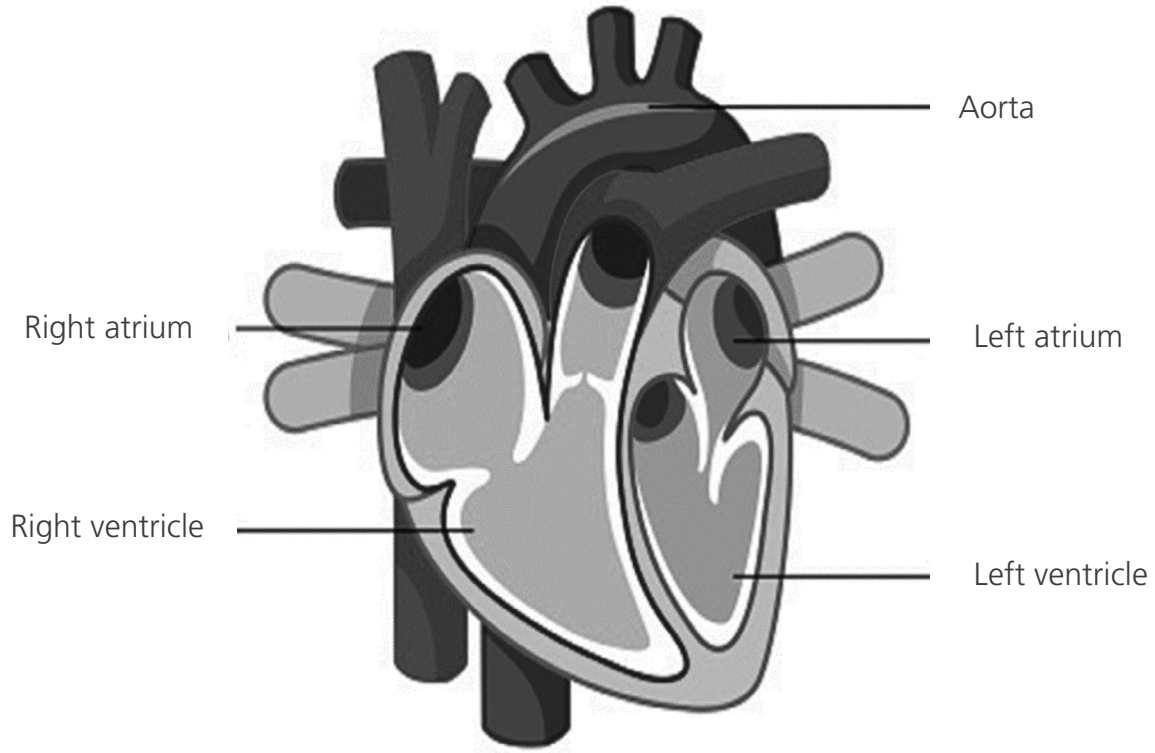
You will be offered this support when you attend your initial Cardiac Rehabilitation appointment where you will speak to an Exercise Physiologist and start to develop your exercise goals and plan. We encourage you to think about what your exercise goals may be and the support you would like to achieve these to allow us to help create an individualised plan for you.

At first you may feel nervous about exercising, but quite soon you will feel more confident. You may even enjoy meeting new people and learning new skills!

Heart disease



Anatomy of the heart



The heart is a muscular pump, which circulates blood to your lungs and around your body. The blood carries oxygen and nutrients to the rest of your body through blood vessels called arteries and veins.

How does the heart work?

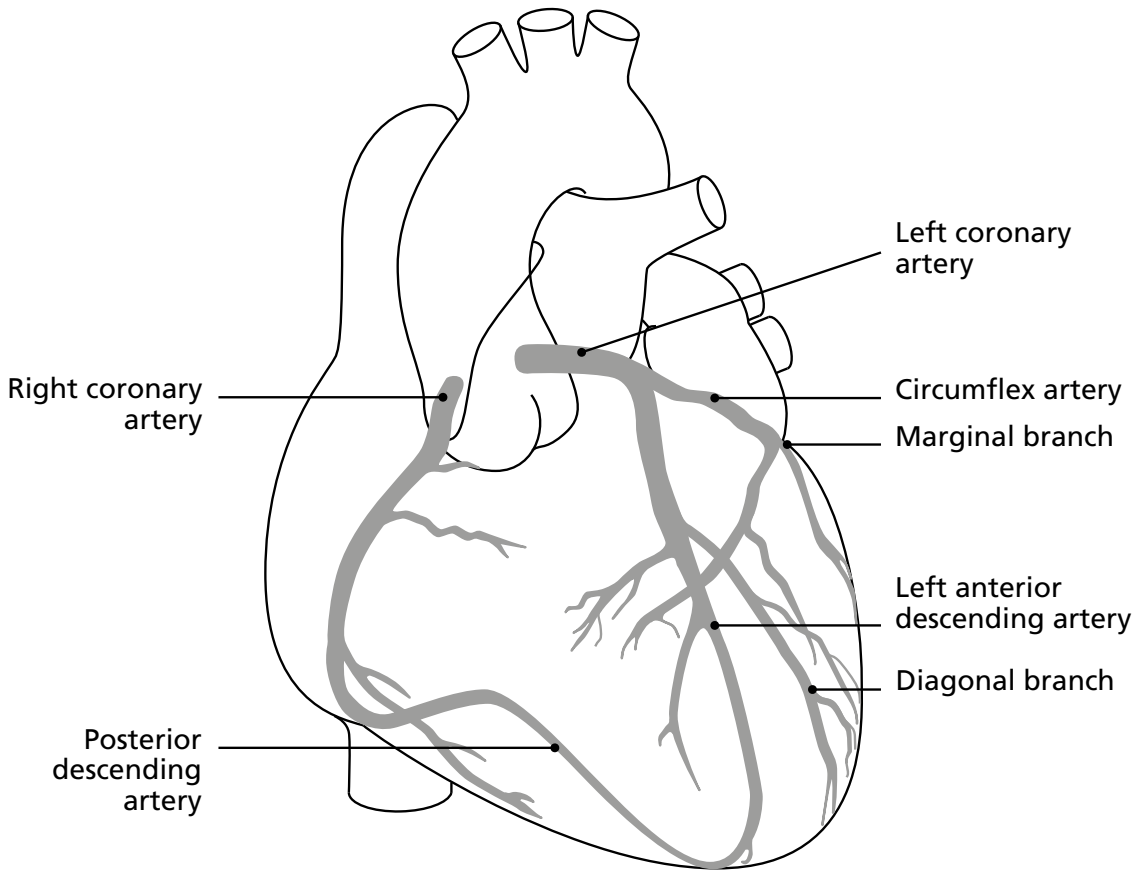
Blood travels from the body to the right side of the heart where both chambers fill up. An electrical impulse causes the chambers to contract, pumping the blood to the lungs where it collects oxygen. The blood then returns to the left side of the heart, filling those two chambers and the same electrical impulse causes those chambers to contract pumping the blood back around the body.

Therefore, the bottom left chamber (left ventricle) has the hardest job, as it is responsible for pushing the blood out of the heart and around the entire body. Consequently, the muscle around the left chamber is thicker than the chamber on the right.

So the question to ask, is where does the heart muscle get its energy / blood supply from?

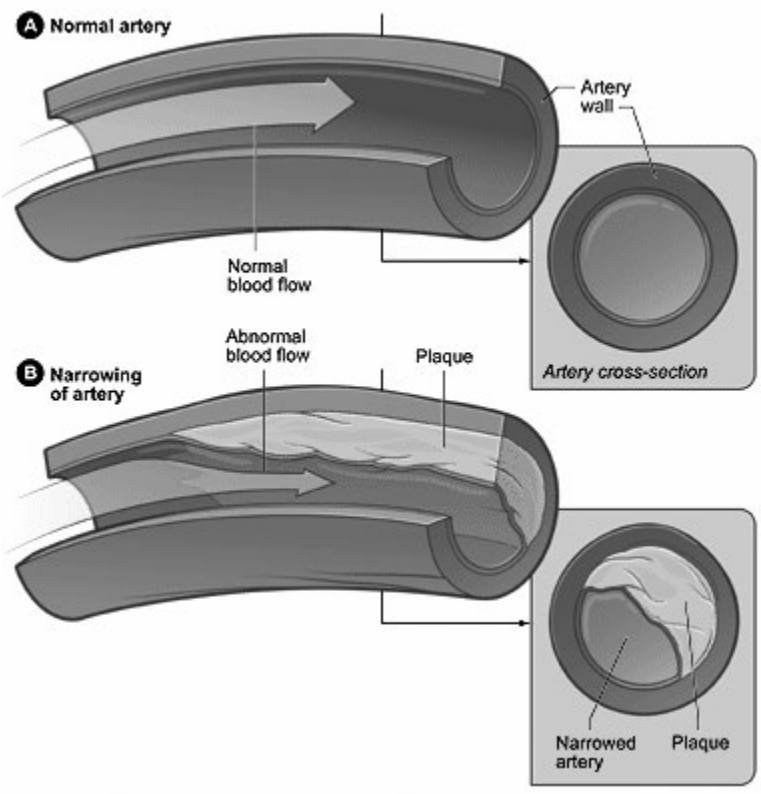
Coronary arteries

The heart, like all organs, needs a blood supply. It does not take the nutrients and oxygen from the blood that travel through it, but has a blood supply of its own. The main blood vessels supplying the heart muscle are called **coronary arteries**; these run on the outside of the heart. It is these arteries that become narrowed or blocked with coronary heart disease.



Coronary heart disease

Coronary heart disease, or coronary artery disease as it is sometimes known, is a process that occurs over time. This is usually from a build-up of cholesterol in the coronary arteries (called atheroma). As these layers build up they start to restrict the blood flow through the arteries. This can cause chest pain, angina and also a heart attack.



Courtesy: National Heart, Lung and Blood Institute.

Coronary heart disease and its conditions

Coronary Heart disease/Coronary Artery disease can result in the following:

Angina

Angina is caused by a lack of blood flow/oxygen down the coronary artery to meet the demand of the heart muscle. During activity/heightened emotions (stress/excitement) the heart muscle needs to work harder and therefore needs more oxygen. If this supply cannot be met, we start to experience symptoms. However, when this demand on the heart reduces, the supply and demand return to normal and symptoms can resolve.

Angina can be described as a discomfort or pain your chest, for some people this can be described as a tightness, or indigestion-like ache, but everybody's experience of angina can be different. Some people find that typical regular activities like walking the dog, shopping or sports feel harder, and you develop more breathless than expected.

Angina is a warning sign that the heart muscle is temporarily not receiving enough oxygen, and should not be ignored.

- **Stable angina**

  Stable angina is predictable, and occurs when the heart is working harder than usual. For example; from exercise, excitement, brisk walking, cold or very hot weather, or eating a large meal.

- **Unstable angina**

  Unstable angina is when the pain/discomfort occurs unexpectedly; possibly increasing intensity and increased frequency. This can happen at during less intense activity or at rest, some people may wake up in the night with symptoms.

If you experience symptoms of either stable or unstable angina you should use your GTN spray. It is very important that you call 999 if you have a pain that is not relieved by either rest or your GTN and lasts for more than 10 minutes. (See 'What to do if you get chest pain' on page 18.)
It is important to let your GP know if you are experiencing angina symptoms, particularly when you are at rest, or if this has started to wake you from your sleep.

Heart attack (Acute Myocardial Infarction)

A heart attack is caused by the blocking of a coronary artery, following a rupture of narrowing within the coronary artery. This causes a blood clot to form, which prevents the blood flow (oxygen) to the heart muscle. This discomfort does not go away with rest or GTN. It can last for several hours and is associated with shortness of breath, sweating, nausea/vomiting, and feeling an overwhelming feeling of doom.

There are two types of heart attack: NSTEMI (Non-ST elevation myocardial infarction) and STEMI (ST elevation myocardial infarction), these relate the changes on an ECG.

- **NSTEMI**

  NSTEMi is often caused by a partial/temporary blockage to a Coronary Artery. There are subtle in your ECG when recorded at the time of your event. There will be an elevation in your troponin levels (blood test). An NSTEMI requires treatment with medication and may require intervention.

- **STEMI**

  STEMI is caused by a complete blockage to a Coronary Artery. There are clear and specific changes in your ECG at the of your event. The troponin level (blood test) is significantly elevated. STEMI requires immediate intervention (often referred to as a Primary PCI).

Acute coronary syndrome

This is an umbrella term which covers the condition of ; unstable angina, NSTEMI, and STEMI.

Causes of heart disease

Research has shown that there are several risk factors that can cause heart disease, which may lead to the development of angina and heart attacks.

Risk factors are habits and bodily characteristics which tend to increase your risk of developing angina or a heart attack.

Risk factors include:

Avoidable	**Unavoidable**
Smoking	Family history of heart disease
High blood pressure	Ethnicity
High cholesterol levels	Age
Being overweight	Gender
Diabetes	
Being inactive	
Stress and psychological issues	

However, some people still have heart disease even though they have none of the above risk factors. Research is on-going to try and find out further causes of heart disease and to improve the treatment of heart disease in general.

Risk factors such as your age, gender, ethnicity and family history of heart disease are unavoidable. You should not worry about these risk factors – but it may be useful to be aware of them. For example, if you have a strong family history of heart disease, you may be able to encourage family members to read this information and have a check-up with their GP. However, this is their responsibility and not something for you to worry about. **Try to concentrate on the risk factors you can do something about**.

Your Cardiac Rehabilitation Nurse will work with you to identify your modifiable risk factors and together make a plan to minimise them.

My cardiac rehabilitation goals:

Here is some space for you to identify which areas you wish to focus on; and detail how you feel these may be achieved / what support you may require to achieve them.

My selected goals

Example:

1. I want to stop smoking; but I am worried about my cravings and how I will manage these when feeling stressed.

2. I want to eat more healthy and lose weight. I don't know what to eat when I want to snack. I have tried diets in the past and these haven't worked.

1.

2.

3.

4.

Tests for your heart condition

Electrocardiogram (ECG)

The ECG records the rhythm and electrical activity in your heart.

Troponin:

If we think you have had a heart attack, we will carry out a blood test to measure for an enzyme called troponin. This is a chemical released by the heart when the heart muscle has been damaged. This measurement will be slightly raised even if only a very small amount of damage has occurred. This test tells us whether your heart muscle has been damaged.

Coronary angiogram

This is used to look inside the coronary arteries to see if they are blocked or narrowed. A local anaesthetic is used to numb your groin or wrist. A fine tube (called a catheter) is then passed through the artery at the top of your leg or arm and into your heart. A special dye which shows up on X-ray is then injected into the tube and into your coronary arteries. This is then filmed using X-ray screening equipment. You may be able to watch the procedure on the screen if you want to. This procedure allows the doctor to see any blockages or narrowing that may be responsible for your symptoms. This will help the doctor to decide what, if anything, needs to be done to improve the blood supply to your heart muscle. The investigation generally takes between 20 minutes and an hour.

Echocardiogram (Echo)

This is an ultrasound scan of your heart, and it tells us how blood travels through the heart chambers and valves. It also gives us information on how well the muscle is contracting around each of the chambers, and gives an indication on the amount of damage to the heart function.

Myoview (Myocardial Perfusion Scan)

This scan looks at the blood flow to your heart muscle and how well your heart is pumping, both during exercise or stress, and at rest. The two images are then compared to allow an assessment of how much of the heart muscle is not receiving blood flow (oxygen) during exercise. This test is used to assess whether any further intervention would be beneficial to improve blood flow to the heart muscle.

Exercise Tolerance Test (ETT) or Treadmill Test

This is an ECG that is carried out while you are walking on a treadmill. Your heart rate, heart rhythm and blood pressure are recorded while you exercise. The treadmill will speed up and become steeper every three minutes so that you work harder and your heart rate and blood pressure increase. This test helps to determine if your symptoms are caused by angina.

Treatments for your heart condition

Following your diagnosis, your nurse, doctor or cardiologist will discuss the possibility of further treatments.

Medication

Following your diagnosis you will be started on some cardiac medications. These are the main treatment and management for Coronary Artery Disease. These medications are to protect your heart and reduce the risk of further events over your lifetime. **Therefore long-term compliance is essential**. Individual drugs are discussed in the medication chapter.

Percutaneous Coronary Intervention (PCI):

A Percutaneous Coronary Intervention (usually called a PCI) may be performed immediately following the angiogram. The narrow section of the artery is opened up by inflating a small balloon inside the artery, squashing the atheroma (fatty tissue) and allowing the blood to flow more easily. This is kept open by the drug coating left by the balloon or by a small piece of metal-mesh (stent) placed inside the artery. A stent is made from metal such as stainless steel, platinum-chromium or cobalt-chromium.

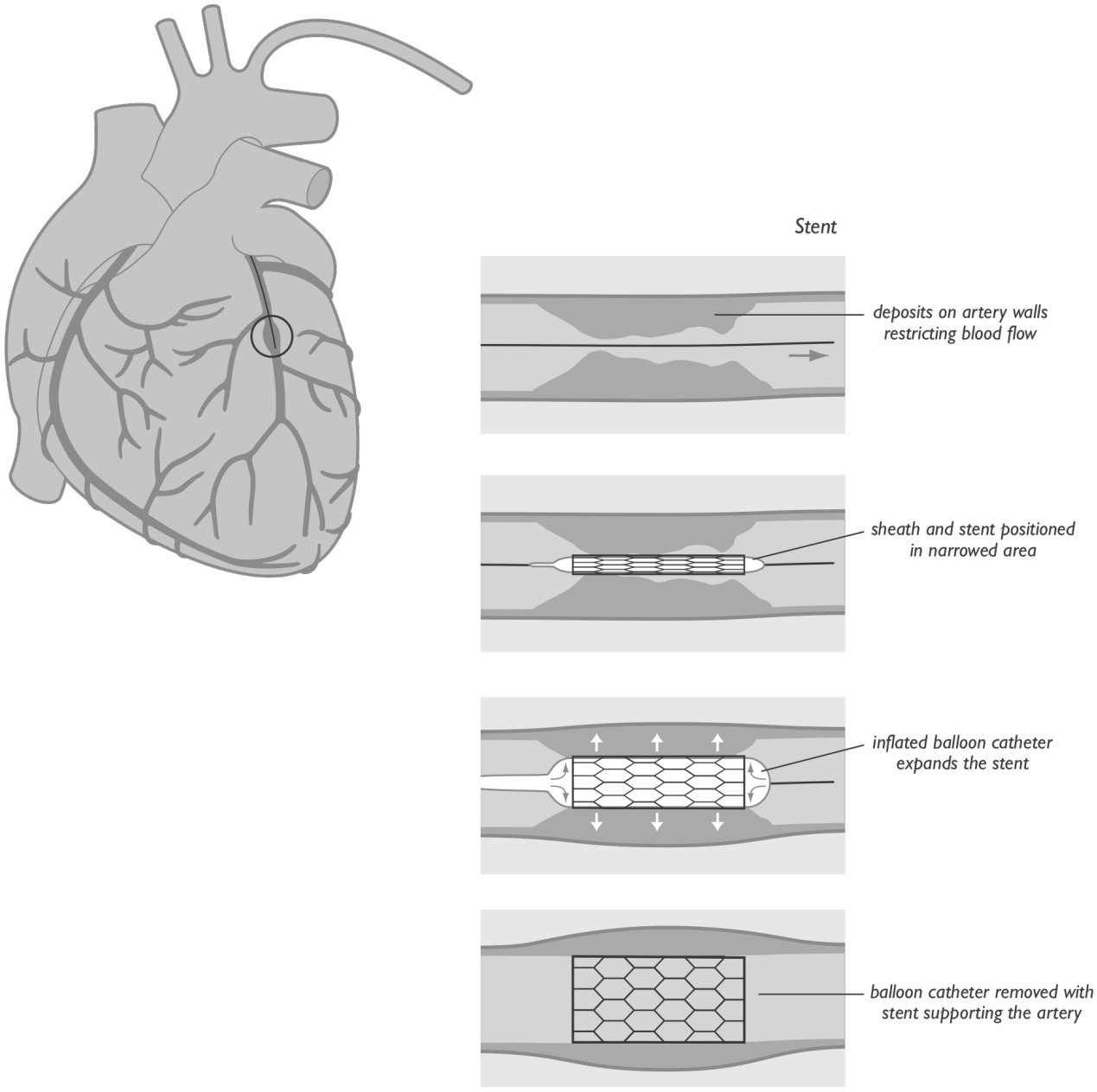
Primary Percutaneous Coronary Intervention (PPCI)

This is the same as a PCI (see above) but is carried out as an emergency procedure, before any other tests.

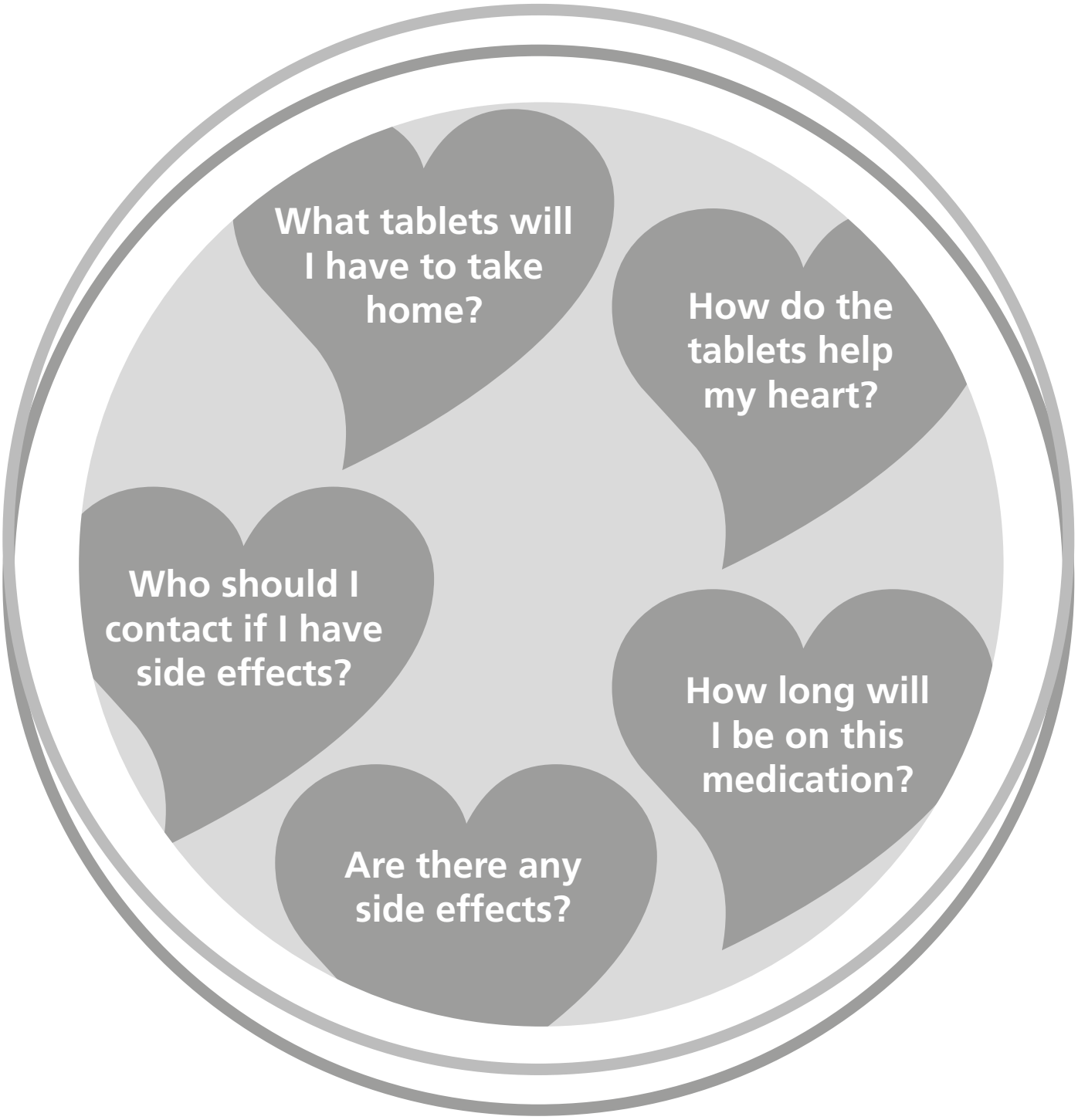
Coronary Artery Bypass Surgery

The purpose of this surgery is to bypass the narrowed sections of the coronary arteries. The heart surgeons do this by attaching a section of blood vessel between the aorta (the main artery leaving the heart) and a point in the coronary artery beyond the narrowing. This is called a 'bypass graft'. A bypass graft can be carried out for each of the main coronary arteries affected. The surgeon uses the mammary artery from your chest wall as the graft, but blood vessels from other parts of the body, such as the leg, are also used.

Insertion of a stent into a coronary artery



Medications



Medications

This section gives you information about groups of drugs that are commonly used in the treatment of coronary heart disease.

Here is a list of the commonly used drugs:

- ACE inhibitors; Ramipril, Lisinopril
- Antiplatelet; Aspirin, ticagrelor, clopidogrel, prasugrel,
- Beta-blockers: Bisoprolol, atenolol
- Nitrates: GTN Spray, ISMN tablets.
- Statins: Atorvastatin.

GTN (glyceryl trinitrate) – tablets or spray

GTN treats chest pain quickly. It may also be used before an activity that would usually start your chest pain.

How does it work?

Angina is caused when an area of the heart muscle doesn't get enough oxygen. GTN dilates (widens) the blood vessels and allows the affected heart muscle to obtain more blood and oxygen.

How to take your GTN medication

- If you get angina, stop what you are doing and rest. Sit down if possible.
- If your pain does not ease within a minute, use your GTN under your tongue.
- If you know that a certain activity will bring on angina, you may find it helpful to use your GTN medication before you start the activity, to prevent the chest pain.
- If, after 5 minutes of using your GTN, the pain is still present, take another dose. Wait a further 5 minutes. If the pain does not improve with two doses, you should call an ambulance. While you are waiting for the ambulance you can continue to use your GTN every 5 minutes.
- With GTN tablets, once the pain has stopped you may spit out the tablet or swallow it. If you need to take another dose, spit out the old tablet and put a new one under your tongue.

If your pain becomes severe at any stage or if you feel unwell, use your GTN and call an ambulance. (Please see flow diagram overleaf.)

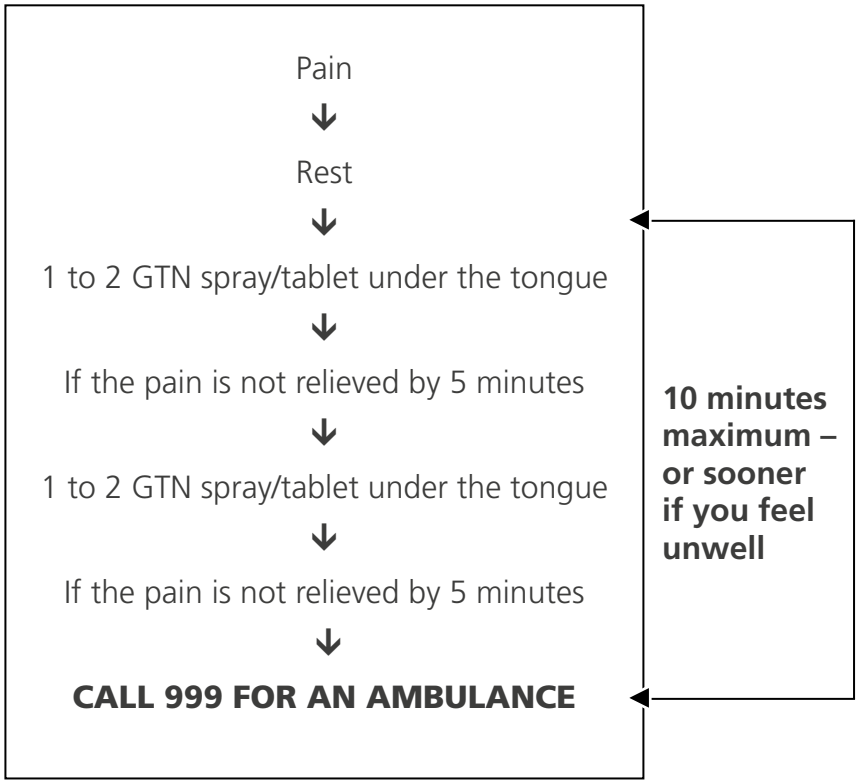
Storage of your GTN

- The GTN spray should have its expiry date printed on the bottle.
- Once GTN tablets are opened, they lose their effectiveness after 8 weeks. When you open a new bottle, write the date they will expire on the bottle and make sure you have a new supply before this date. When using the tablets you should get a slight tingling sensation under your tongue. If you do not, they may be out of date, so you need to replace them. Do not transfer the tablets to any other container and do not mix them with any other drugs.
- You can get your tablets or spray with a prescription from your GP. However, if you run out of GTN it can be bought over the counter at a pharmacy.
- It is very important to carry your GTN spray or tablets with you at all times.
- You may wish to get an additional GTN spray or supply of tablets, one to carry with you and one to have at home.

Side-effects

GTN may cause facial flushing, dizziness and headaches. To reduce the risk of dizziness use the GTN as recommended. To relieve a headache, you can use a simple painkiller such as paracetamol (do not use aspirin or ibuprofen).

What to do if you get chest pain



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

- If your pain is relieved but 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 you have started to get angina 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.
- Do not exceed the recommended dose.
- If you feel you need to exceed the recommended dose, then call an ambulance.

Symptom record

It is often difficult to recall details when asked about such things after the event. If you write it down it helps to order things in your mind and is very useful when you come to tell the doctor or nurse about it.

Below is a chart on which you can record your symptoms.

Date and time	What were you doing?	What kind of symptom was it? Describe…	Action taken. Did the symptom disappear?

Aspirin

Aspirin tablets are often soluble (these should be dissolved in water).

What does aspirin do?

Aspirin lowers the risk of blood clots forming by making blood cells called 'platelets' less sticky. This makes the blood less likely to form clots in narrowed blood vessels. Blood clots can be responsible for causing a heart attack or symptoms of angina. You are likely to take aspirin for the rest of your life.

Side-effects

- As Aspirin affects the time it takes for a clot to form, you may find that you bleed for longer if you cut yourself. You may also bruise more easily.
- Aspirin may irritate the gut, causing indigestion or stomach pain. **It is very important that you take Aspirin with or after a meal**.
- Very occasionally some people can be allergic to Aspirin; particularly in people who have a history of asthma. If you become short of breath or notice a wheeze after taking the tablet, please tell your GP.

If you have problems with any of these symptoms, we advise you to see your GP.

When taking Aspirin for your heart, do not take further doses as a painkiller. Try using paracetamol instead. Non-steroidal anti-inflammatory drugs such as Ibuprofen are not recommended in high doses and long-term use, due to a small increased risk of cardiac events. Please contact your pharmacist if you are considering taking Ibuprofen for pain. Aspirin and Ibuprofen may interact with each other so you should seek advice before taking them together.

Antiplatelet drugs: Ticagrelor or Clopidogrel

Ticagrelor and Clopidogrel lower the risk of further blood clots forming by making blood cells called 'platelets' less sticky. If you are taking Ticagrelor or Clopidogrel you will still need to take aspirin if you have had a heart attack. Ticagrelor or Clopidogrel are usually prescribed for 1 year after a heart attack.

The dose of Ticagrelor is one 90mg tablet twice a day (morning and evening). The dose of Clopidogrel is 75mg once a day.

Side-effects

- shortness of breath (Ticagrelor only).
- nose bleeds
- internal bleeding in the gut
- bruising.

Cautions

Do not drink grapefruit juice or eat grapefruit regularly whilst taking this medication as this can affect how the antiplatelet drugs work.

Always tell your GP and/or pharmacist about any 'over the counter' medications you are taking as some may interact with your tablets.

ACE inhibitors

ACE inhibitors widen (dilate) and relax blood vessels; this reduces blood pressure and helps to protect the lining of blood vessels. After a heart attack and in heart failure it is easier for the heart to pump into widened and relaxed blood vessels.

ACE inhibitors can be used after a heart attack to reduce the risk of further heart attacks, to treat high blood pressure, or to treat heart failure. They are also given even if you do not have high blood pressure.

The ACE inhibitors are normally started at a low dose. **Your GP would be expected to gradually increase the dose over the weeks following your discharge from hospital**; you will usually need a blood test at your GP surgery before the dose is increased.

Common types of ACE inhibitor

• ramipril • perindopril • isinopril • enalapril.

Side-effects

- As the aim is to lower your blood pressure, you may feel dizzy for a short time after taking the tablet. This usually goes away after taking the medication for a few days. If the dizziness continues, try taking it at bedtime.
- Other side effects include a dry cough, which normally goes away after 2 to 3 months, and a runny nose/cold like symptoms. A simple linctus or cough mixture can help with this.

If you are experiencing these side effects and they are a problem for you, please see your GP for advice.

Beta-blockers

Beta-blockers slow your heartbeat down; this reduces the workload of your heart. They are used for a number of reasons, such as reducing high blood pressure, reducing the symptoms of angina, and to control fast heartbeats. They can also reduce the risk of further heart attacks and are sometimes given in heart failure to improve the function of the heart.

Common types of beta-blockers

• bisoprolol • atenolol • carvedilol.

Side-effects

- When first taking your beta-blocker you may feel more tired than usual and get cold hands and feet. These problems usually go away with time.
- Some people experience vivid dreams, which should ease within a couple of weeks. If you are experiencing dreams it is recommended to take your beta-blocker before you go to bed, as this reduces the chance of this happening.
- If you have diabetes, the beta-blockers may affect the amount of insulin you require. Please note that they may also hide the signs of a 'hypo' (low blood sugar), so it is important that you keep strict control of your blood sugar level.
- In a very small number of people beta-blockers can cause a wheeze or difficulty in breathing. This is more common in people who have a history of asthma or lung problems. If this occurs, you must contact your doctor immediately.
- For men, beta-blockers may lead to impotence (inability to have an erection).

If you are experiencing any of these side effects and they are a problem to you, please contact your GP for advice. Do not stop taking the tablets unless instructed by your doctor.

Statins

Statins lower the cholesterol in the bloodstream. High levels of cholesterol goes on to cause the build up of atheroma, leading to the narrowing of arteries.

Common types of statins

- atorvastatin
- rosuvastatin
- simvastatin
- pravastatin.

Ezetimibe is another type of cholesterol lowering drug also used to independently or alongside a statin and change of diet.

Taking your cholesterol lowering medication

Any drug therapy to lower cholesterol should be combined with a low saturated fat diet. It is best to avoid drinking grapefruit juice or eating grapefruit regularly with these medications because it can affect the way the medication works.

Statins are most effective if taken in the evening or before you go to bed, because it is during the night that most cholesterol is produced. Sometimes doctors may recommend taking it in the evening. This is because your body makes most cholesterol at night.

Side-effects

- Some people experience a mild stomach upset and a rash. Generalised muscular weakness, aches and pains have also been reported. If you have problems with these symptoms, we advise you to see your GP.
- As taking statins can affect your liver, your GP will need to monitor your liver function. They will do this by carrying out a blood test. They will also check your blood cholesterol about three months after starting your statins, to make sure the tablets are working.

Even when your blood cholesterol level is reduced you will still benefit from following a low-fat diet.

NHS Prescription Pre-payment Certificate

If you currently pay for your prescriptions, it will be more cost effective if you buy a 'pre-payment certificate' from your local chemist. You will pay a lump sum 'up front' (either for 3 or 12 months) and then any prescriptions you need during that time will be free.

Telephone: 0300 330 1341

Website: www.nhsbsa.nhs.uk/ppc

Medications – allergies and side effects

Are you allergic to any medications? If so, please list them and describe the allergic reaction.

Use this section to make a record of your medications

Drug name	What is the dose?	How often do you take it?	Write any changes and dates in here

Physical activity and exercise

Physical activity and exercise

Returning to your activities and increasing your exercise

Most people in your position are understandably concerned about how much exercise and physical activity is right for them. **The heart is a muscle and like any other muscle it needs regular physical activity to stay healthy**. Physical activity will improve the blood flow to your heart muscle and will help your heart to become stronger and more efficient.

Physical activity is a very important part of your recovery, but the amount and type of activity that we advise **will vary from person to person**. It is extremely important that you work within your own limits and do not compare yourself to anyone else.

Benefits of regular physical activity include:

- Improved quality of life, fitness and strength
- Helps lower your blood pressure
- Improves your blood cholesterol levels
- Reduces risk of developing diabetes, or aids diabetic control
- Helps you to maintain your weight
- Aids sleep and mental wellbeing.

If, during any form of physical activity or exercise you experience any of the following symptoms, STOP and check with your GP or Cardiac Rehabilitation Team before continuing.

Chest pain / discomfort

Pain in your neck / arm / jaw / shoulder blades

Unexpected shortness of breath

Nausea / headaches / dizziness

Excessive tiredness

Persistent palpitations

Excessive levels of sweating

Feeling unwell

Returning to everyday tasks and physical activity

When you initially leave hospital it is normal to feel tired and have low energy levels. It is important to listen to your body and gradually build up what you are doing day by day from the day of your discharge from hospital.

Physical activity means any bodily movement which causes you to use energy (housework, walking the dog, gardening, exercise etc.). Initially, any activity you do should feel easy/light. As a general rule, light household chores, such as dish washing, may be resumed as soon as you feel able.

Types of activities:

Initial easy activities	As your energy levels increase	Heavy tasks to build up to
• Getting washed and dressed • Light housework • Short walks	• Food shopping (using a small trolley rather than a basket) • Vacuuming • Ironing • Light gardening	• Any exercise/sport • Changing your bed sheets • Washing car • Mowing the lawn • Digging

Pacing yourself with your energy levels

Gradually build up to the more strenuous tasks rather than trying them as soon as your home, break up your activities when you return to doing these heavier tasks as they require more energy and effort from your heart, and can make you feel tired.

You may find you have days when you feel more energetic and overdo your activities, which can sometimes lead to you feeling more tired or fatigued the next day. Please don't feel disheartened – this is not a step backwards in terms of your recovery. You won't cause damage to your heart by overdoing it, you will just feel fatigued. It is important to keep a check-in with your energy levels and pace yourself. If you feel tired, take a break from that activity and allow some time to rest and recover. You may find you are then able to carry on later that day if do not feel tired, or the next day. This will help you to continue to build on your activities each day, increase your confidence, and avoid big fluctuations in your energy levels.

Open heart surgery

If you have had bypass surgery or valve surgery you should avoid upper body activity until your breast bone has healed. This is usually 12 weeks, but wait until you have had your follow-up appointment with your surgeon to assess your bone healing before beginning to do tasks with your upper body.

Exercise

Exercise is physical activity that is structured, planned, and repetitive, with the purpose to improve your fitness and health (such as going for a walk, cycling and swimming).

We get the most benefit by doing regular exercise. The current guidelines are to aim to do at least 150 minutes of moderate intensity aerobic physical activity per week, strength exercise on at least 2 days a week, and to minimise the amount of time you're sitting down for.

Aerobic exercise is repetitive, rhythmic forms of exercise which involve large muscle groups (e.g. leg muscles). Good examples of these are walking, cycling, and dancing. Moderate intensity means the exercise should make you feel warm and slightly out of breath, but you are still able to talk.

To achieve the guidelines, it is good to split up the exercise across the week. For example, you may do 30 minutes 5 days per week, or you may want to split this into 10 minute bouts.

Strength exercise can help to build up your muscles, and is any large muscle movement using resistance to improve your strength. It is best to use a lower weight that does not cause you to hold your breath or strain, as this puts more stress on your heart. We advise to focus on building up your aerobic exercise first and allowing time to recover before doing strength exercise.

You should aim to gradually build up to achieve these targets when your heart and your body are ready.

Swimming: Swimming is usually fine for many people with a heart condition. However it can increase stress on your heart. It is important that you speak with your Cardiac Rehabilitation Nurse or Exercise Physiologist before returning to or starting to swim.

There are many other activities which you can do as your fitness levels increase. Before starting a new activity or sport, speak with a member of the Cardiac Rehabilitation Team or your GP.

Physical activity for adults and older adults

- Benefits health
- Improves sleep
- Maintains healthy weight
- Manages stress
- Improves quality of life

Reduces your chance of

- Type II Diabetes -40%
- Cardiovascular disease -35%
- Falls, depression etc. -30%
- Joint and back pain -25%
- Cancers (colon and breast) -20%

Some is good, more is better

Make a start today: it's never too late

Every minute counts

Be active

at least **150** minutes moderate intensity per week
increased breathing able to talk

OR

or a combination of both

at least **75** minutes vigorous intensity per week
breathing fast difficulty talking

to keep muscles, bones and joints strong

Build strength

on at least **2** days a week

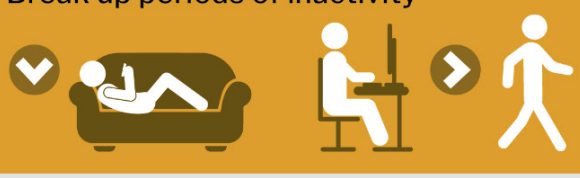
Swim, Brisk walk, Cycle

Gym, Yoga, Carry heavy bags

Run, Stairs, Sport

Minimise sedentary time

Break up periods of inactivity



Bowls, Tai Chi, Dance

For *older adults*, to reduce the chance of frailty and falls

Improve balance

2 days a week

UK Chief Medical Officers' Physical Activity Guidelines 2019

Measuring your activity level

Effort Score: Scale 0 to 10

One way of measuring how hard you are working is to give your effort a score between 0 to 10, using the scale below. Effort relates to how your muscles and breathing feel when you are exercising. Initially your activity should feel light (a score of 1 to 2). As your energy levels increase your exercise should feel moderate to somewhat strong (a score of 3 to 4) and you should feel like you are making your body work but can always talk.

0	**Rest** Sitting at home reading a newspaper
1	**Really easy**
2	**Easy**
3	**Moderate** Can hold a conversation comfortably
4	**Sort of hard**
5	**Hard**
6	
7	**Really hard**
8	
9	**Extremely hard**
10	**Maximal effort** Can hold a conversation comfortably

Walking Programme

Walking is an ideal form of exercise during your early recovery after a heart attack or heart surgery. It is aerobic activity which requires no equipment and is free! Gradually increase your walking distance/time, and then your pace. To avoid getting tired, begin with short walks, little and often, instead of one long walk. The diagram below shows how you can gradually increase the amount of walking you can do.

If you are able to walk for longer than 5 minutes in one go, then start at a stage that feels appropriate to you. Move onto the next stage when you feel ready, for some people this may be after a few days, for others this may take a few weeks.

Everybody is an individual and recovers at a different rate, therefore you should listen to your body and begin walking for a time/distance which you feel is easy and comfortable. You should not feel so tired that you need to sit down for the rest of the day after your walk.

An example of a walking programme that you could follow is shown below:

Stages	Length of walk (in minutes)
Stage 1	5 minutes: Several times per day.
Stage 2	10 minutes: Twice a day.
Stage 3	15 minutes: Daily.
Stage 4	20 minutes: Daily.
Stage 5	25 minutes: Daily.
Stage 6	30 minutes: Daily.

How fast should I walk?

Initially, you should walk at a comfortable pace. If you feel able you should try to increase your pace gradually, building up to a faster pace. One way of checking your pace is by doing the 'talk test' while you are walking. If you feel warm and are breathing more heavily than normal but still feel able to talk, then you are walking at about the right pace.

Other tips for walking:

- Plan your route on firm, level, flat ground if possible, especially for the first few weeks after you leave hospital.
- To start with it may be a good idea to take a friend or relative with you when you walk – this will help your confidence and enjoyment, as well as their health too! It also gives you the opportunity to try the 'talk test' to see if you are walking at the right pace.
- As you recover and feel able to progress, increase your pace and try to introduce some gradual hills into your route. You may find you need to slow down your pace when you are walking uphill if you are getting too puffed.

Heart rate

When you exercise your heart rate increases. Everybody's heart rate responds differently to exercise. This depends on your gender, age, fitness, medical conditions and medication. It is therefore easier to monitor yourself using the effort score on the previous page. You will have the opportunity to discuss your individual heart rate targets during exercise with an Exercise Physiologist at your cardiac rehabilitation appointment.

Importance of warming up and cooling down

Warm-up: Start slowly

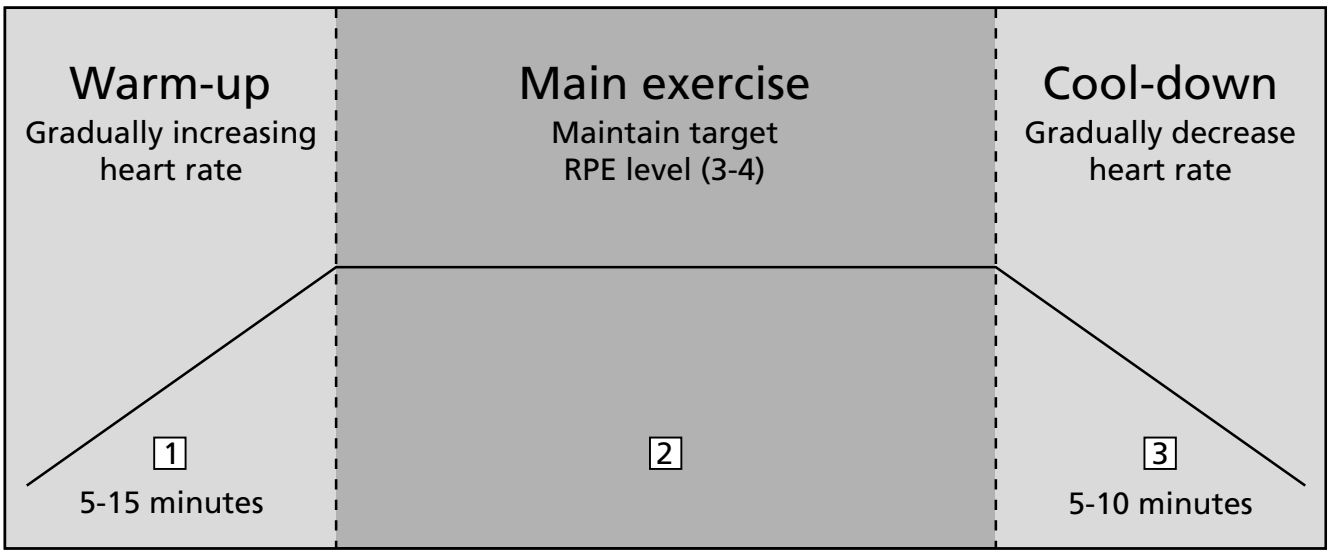
It is important to start any physical activity slowly to reduce a sudden increase in the workload on your heart. This will give your body and heart time to adapt to the activity that you are asking it to do. This warm-up period is very important, as it reduces your risk of angina and disturbances in your heart rhythm.

How: Start at a slow pace that feels light and easy (1 to 2 on the effort score). It should be between 5 to 15 minutes long. The harder you are expecting yourself to work, the longer your warm up needs to be.

Cool-down: Finish slowly

It is also important that you gradually slow down during the last part of your physical activity. This cool-down is just as important as it helps to reduce the risk of sudden heart problems or a sudden drop in blood pressure.

How: Gradually slow the pace so that it feels light and easy (1 to 2 on the effort score). Your cool-down should ideally last for 5 to 10 minutes, depending on the length of your activity.



Sensible precautions to keep you safe

- Do not exercise if you are unwell with a virus, cold or tummy bug.
- When exercising in the cold, dress warmly. Cold and/or windy weather may provoke angina. You can help to prevent this by covering your mouth with a scarf when you are walking so that you warm the air you are breathing in. If it is warm, you may need to slow your pace.
- Wait 1 to 2 hours after a meal before exercising.

Supervised exercise programmes

Many people find that they benefit greatly from taking part in a series of supervised exercise programmes during their recovery. These sessions are provided by the Cardiac Rehabilitation Team at a variety of local venues and are seen as part of your treatment to aid your recovery – there is no charge to attend. They will help you to find out about how much activity you can safely do and give you the confidence to become more active. This will be discussed at your Cardiac Rehabilitation appointment.

Once you have completed the exercise programme, it is important for you to continue regular physical activity. We will help you to create a plan as you come towards the end of the programme.

Resuming sexual activity after a diagnosis of coronary heart disease

You should be able to return to your normal sex life following a heart attack or heart surgery. During your recovery period after you have left hospital, you are at no greater risk of triggering a heart attack during sexual activity than you were before. Most people can resume their normal level of sexual activity with no ill effects.

When can I resume sexual intercourse?

If you have made an uncomplicated recovery after your cardiac event or heart surgery, then you can resume sexual activity when you and your partner feel comfortable to do so. The exertion of sexual intercourse is similar to climbing two flights of stairs. So if you can cope with this amount of activity, it is unlikely you will experience problems.

Which is the safest position?

It is safe to resume your normal routine and positions – no one position is safer than another but it can be strenuous to try new positions. However, anal sex should be avoided initially as it may cause the heart to beat irregularly and more slowly. It is advisable to wait 8 weeks after your heart attack in this case.

What about sex after heart surgery?

After cardiac surgery you may worry that the exertion of sexual intercourse may place added strain on your heart, or cause the wound to come apart, however this not the case. Choose a position which is comfortable and does not place a strain on your chest. You may find it helpful to place a slim pillow between you and your partner.

Practical tips!

To reduce your chance of having angina during sex, try not to be too energetic at the start of your sexual activity.

Impotence

Impotence describes the difficulty in getting or maintaining an erection for sexual activity. This can caused for a variety of reasons: stress, anxiety, excess alcohol, a cardiac condition, diabetes or high blood pressure. It can also be caused by certain medications (such as beta-blockers or diuretics).

Whilst there some medications can help with impotence: Viagra (sildenafil), Cialis (tadalafil), Levitra (Verdenafil), Spedra (Avanafil) please ensure that you follow the recommended advice below:

- There should be at least 12 hours between a dose of avanafil and a nitrate, 24 hours between dose of sildenafil and a nitrate, and 48 hours between a dose of tadalafil and a nitrate. Use of nitrates and vardenafil is not advised as a safe interval between doses has not been established.
- If you have taken any of the above medications, and experience angina during sexual intercourse, you must not use glyceryl trinitrate (GTN). You should stop sexual activity and, if your pain does not resolve within 10 minutes, call 999 for an ambulance.

If you are thinking about starting this medications or were previously taking any of these medications it is important that you discuss with either your Cardiac Rehabilitation Nurse, your GP, or pharmacist.

It is important that this medication is prescribed by your doctor, and not purchased independently.

Impotence is not just a male problem. Women can also suffer a loss of sexual desire because of the medication that is prescribed after a cardiac event.

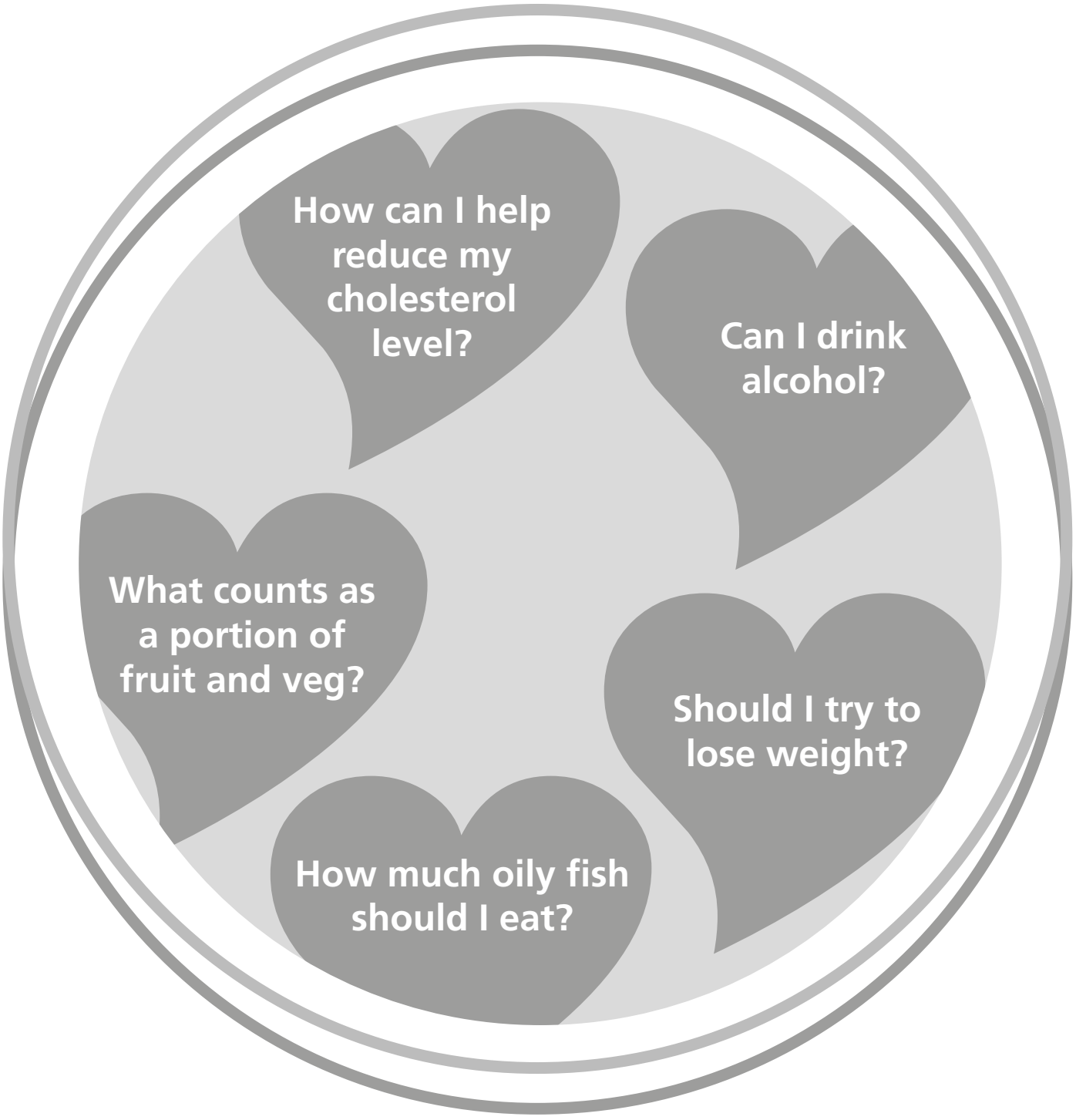
Physical activity diary

Date	Activity (e.g. walking)	Details of activity (e.g. 30 minutes, 1 mile)	Effort Score (0 to 10)	Comments (e.g. chest pain, shortness of breath, tired, felt I could do more, enjoyed it)

Use this Change Planner to help you set and achieve your goals!

Week	Weekly goal	Tick if goal is met	What can I do to achieve my goal next week?

Healthy eating



Healthy eating – general guidelines

Healthy eating applies to everybody, not just people with heart conditions. However, eating healthily is even more important following a heart attack or heart surgery. Recent government guidelines suggest adopting a 'Mediterranean' style diet, for example, eating less meat and replacing it with fish, eating more fruit, vegetables, pulses and legumes and swapping animal-based fats with those from plants.

A Mediterranean style diet will help you to achieve the following benefits:

- Reduce your intake of saturated fat and increase your consumption of healthy fats.
- Have at least 5 portions of fruit and vegetables a day.
- Eat more wholegrain foods.
- Have less salt and sugar.
- Reduce your intake of processed foods.

Reducing your intake of saturated fat and increasing your consumption of healthy fats

It is important not to exclude fat from your diet, as our bodies do need a certain amount of fat from food. Following a very low-fat diet can often lead to an increase in sugar consumption (from low-fat foods that have sugar added to improve their flavour). This can also have negative effects on your body.

Having too much fat in your diet can cause you to gain weight and can contribute to many other health problems, including heart disease.

There are two main types of fat – **saturated** and **unsaturated**. Eating food that is high in saturated fat can raise cholesterol levels in the blood, as well as causing you to gain weight. Most people in the UK eat too much saturated fat. Eating less saturated fat can reduce the cholesterol in your blood and is therefore better for your heart.

Which foods contain saturated fat?

All meat and dairy products contain saturated fat; some that are particularly high in this fat are noted below.

- sausages and fatty cuts of meat such as pork belly, lamb, bacon.
- dairy products (full fat milk, butter, cream and cheese)
- processed foods (crisps, pastries, pies, pasties, cakes, biscuits and chocolate)
- ice cream and full fat dairy desserts
- lard, dripping and ghee
- foods containing coconut and palm oil
- take-away foods.

As part of a healthy diet, you could replace the foods that contain saturated fat with foods that contain unsaturated fat. Most foods containing high levels of unsaturated fat come from plant sources. Unsaturated fats can be further divided into mono and poly unsaturated fats. Some foods that could replace products high in saturated fat include:

- oily fish: mackerel, salmon, trout, sardines and fresh tuna
- nuts and seeds (try and avoid roasted and salted varieties)
- olives and olive oil
- sunflower and rapeseed oils
- avocado.

As part of the Mediterranean diet, it is recommended to swap butter and cooking oils for olive or rapeseed spreads and oils. These are both monounsaturated fats. Studies have shown that in countries where these fats are used routinely, the incidence of heart disease is lower.

Take-aways

When you do have take-aways, think about what you are ordering:

Take-away	High fat / salt / sugar / calorific option	Healthier option
Indian	Cream based sauce such as korma	Tomato based / dry curries
Chinese	Sweet & sour / battered / egg fried rice	Drier stir fried option/boiled rice
Pizza	Stuffed crust / full fat cheese / deep pan option / meat toppings	Thin crust/low fat cheese options / vegetable toppings
Fish and Chips	Battered sausages / pies / large portions	Fish but remove the batter / small portion / fishcake / small portion chips
Kebab	Doner kebab with all the trimmings!	Pitta with chicken or veg option / avoid mayo / sauces
Other fast-food outlets	Burgers / bacon butties / French-fries / chips	Fish / chicken breast / veg burger. Single burger without cheese. Avoid mayonnaise-based sauces.

Many take-away and fast-food companies now publish nutritional values, either in their shops or online. Have a look at these, as they can be a useful guide. Healthier options, such as those shown in the table above, will have dramatically less saturated fat and overall calorie content in them. Try and avoid having take-aways regularly and save them for special occasions!

Another type of 'healthy' fat are Omega-3 fats.

Our bodies can make Omega-3 fats from other fats in our diet, but this can be a slow process and will not be enough to keep us healthy. It is best to get them from a concentrated source, particularly oily fish. Examples of fish that are high in Omega-3 fats are:

- anchovies
- pilchards
- herrings
- mackerel
- trout
- whitebait
- swordfish
- salmon (fresh, frozen or tinned)
- kippers
- carp
- tuna (fresh or frozen)
- sprats
- eel
- sardines
- crab (fresh)

When choosing canned fish, it is recommended to buy them in water or with tomato. Avoid brine or oil.

What is the portion size for fish?

A portion is approximately 140g or 4.9oz of fresh, frozen or smoked fish, or one small tin of canned fish. Canned tuna does not contain Omega-3 but is an excellent example of a food low in saturated fat.

How much fish do I need to eat each week?

The Mediterranean diet recommends eating 3 portions of fish each week. This can be a mix if white and oily fish.

What other food sources contain Omega-3?

If you are vegetarian or don't like any oily fish, there are other foods which are rich in Omega-3. However, it is worth bearing in mind that it does take the body longer to process them.

Examples of these are:

- rapeseed/canola oil
- linseeds (flaxseeds) and linseed (flaxseed) oil
- walnuts and walnut oil (do not heat this to high temperatures).

Other nuts, including brazil, macadamia, pistachios and almonds, soya products and pumpkin seeds contain small quantities of Omega-3.

Some products such as Columbus™ eggs, margarine, bread, yoghurt and milk labelled 'with Omega-3' have been fortified with Omega-3, however you don't have to buy these products to get the amount of Omega-3 needed by your body. You can easily get this through a healthy balanced diet.

What about taking Omega-3 supplements?

Currently there are no UK recommendations to take Omega-3 supplements. It is always better to obtain them from the food itself.

It is important to advise your GP or dietitian if you are intending to take any fish oil supplements.

Fruit and Vegetables

People who eat more fruit and vegetables are less likely to develop heart disease.

Why are they good for me?

Fruit and vegetables are good because they:

- contain vitamins and minerals (including antioxidant vitamins) which can help protect your blood vessels
- contain soluble fibre which helps lower cholesterol
- contain insoluble fibre which helps to keep your stools regular and aid digestion
- are rich in potassium which is required for good heart rhythm and helps control blood pressure
- tend to be low in calories and fat, which can help with your cholesterol and weight management.

How much should I eat?

The 'Mediterranean' diet recommends eating 5 cooked or 3 raw vegetable portions daily, or 3 salad portions. In addition, it also recommends eating 3 portions of fruit daily. These can be fresh, tinned, frozen, dried or as juice. Juice and dried fruit should only count as one portion though, however much you have. Try to aim for a 'rainbow' of fruit and vegetables. The different colours represent different vitamins and minerals; it is good to eat a variety.

It is worth noting that potatoes are not counted as a portion of vegetables.

Rough guide to portion size

Vegetables – raw, cooked, frozen or canned	3 to 4 full tablespoons
Mixed salad	1 cereal bowl
Dried fruit	1 tablespoon
Avocado	half a fruit
Apples, pears, bananas, oranges and other citrus fruit	1 fruit
Plums and similar small fruit	2 to 3 fruits
Grapes, cherries and berries	1 handful (cupful)
Fresh fruit salad, stewed or canned fruit	2 to 3 tablespoons (including a little juice)
Fruit juice	1 medium glass (150ml)

Eat more wholegrain foods

These are very high in nutrients and can contain up to 75% more nutritional value than 'whiter' cereal. They provide:

- fibre
- lots of B vitamins
- essential fatty acids
- protein
- antioxidants (such as vitamin E) and minerals.

Evidence has shown that people who consume wholegrain food as part of a healthy lifestyle may be at a lower risk of many common illnesses including heart disease, stroke and Type 2 diabetes. It is also thought that the risk of developing some forms of cancer may be reduced with higher intake of wholegrain foods.

Surveys have shown that 95% of adults in the UK do not eat enough wholegrain foods and 1 in 3 people do not have ANY!

What are wholegrain foods and what kind of portion sizes should I have?

Wholegrain carbohydrates include brown rice, wholemeal pasta, quinoa, oats and wholemeal bread. Aim for 8 portions for men and 7 for women per day.

One portion equals:

- 1 slice of bread (wholemeal, granary , seeded, etc.)
- 30g uncooked rice and other grains
- 30g uncooked wholemeal pasta
- 3 tablespoons of uncooked porridge oats.

There are also some snack foods that contain wholegrains:

- 120g wholegrain cereal bar (watch the sugar content)
- 2 oatcakes
- 2 to 3 cups of plain popcorn
- half a wholemeal scone.

You can also use wholemeal, wheatgerm or buckwheat flour when baking, in place of white flour.

Have less salt and sugar

Salt:

Eating too much salt could contribute to high blood pressure. 6g of salt is about a teaspoonful – you should not have more than this in a day. This is not a large amount, especially when you consider that 75% of the salt we eat is already in everyday foods.

Which foods contain a lot of salt?

- tinned/packet soup and gravy/stock cubes
- bacon and processed meat, e.g. ham, sausages, pate
- crisps and salted nuts or crackers
- soya sauce, cook-in sauces (jars/tins/packets)
- ready/microwave meals e.g. lasagne/chicken kiev/curries.

How can I cut down on salt?

- Cook without adding salt (this also includes rock salt, garlic salt, and sea salt).
- Watch out for hidden salt in food.
- Read labels and be careful of other terms used for salt, such as sodium, monosodium glutamate and sodium bicarbonate.
- Also be aware of everyday food items that contain moderate levels of salt, e.g. bread, tomato purees, malted milk drinks.

When looking at food labels be aware of the following:

This is a lot of salt	**This is a little salt**
1.25g salt or more per 100g	0.25 salt or less per 100g
(or 0.5g sodium or more per 100g)	(or 0.1g sodium or less per 100g)

Please note: LO-SALT™ is not an appropriate alternative to salt as it contains potassium, which is not good for your heart if you have too much of it and have heart disease or a heart condition.

Sugar:

Recent media coverage has highlighted the high consumption of sugar in the UK diet. The smallest proportion of your diet should be from fatty and sugary foods or 'treats'. It is also important when reducing fat in your diet that you do not replace it with food high in sugar. For example, some low-fat yoghurts have a high amount of sugar in them, to improve their taste.

Although we encourage you to eat fruit, fruit sugars should also be avoided in high quantities, such as fruit juice. You should only have one glass (150ml) of fruit juice per day.

Cholesterol

Cholesterol is a fatty substance found in the blood and cells of the body. Most of the cholesterol is produced by our own liver from the saturated fat we eat. Our body cells do actually need a certain amount of cholesterol to function effectively. We have both good and bad cholesterol in our blood. It is the bad cholesterol, low density lipoprotein (LDL), which causes heart disease.

A high level of high-density lipoprotein (HDL) cholesterol (good cholesterol) is recommended as this is protective against heart disease. Ways of reducing LDL and increasing HDL are as follows:

- Reduce saturated fat and trans fats.
- Eat plenty of soluble fibre
- Increase your intake of plant sterols and stanols.
- Keep to a healthy weight.
- Remember to take cholesterol lowering medication if prescribed.

Trans fats (hydrogenated vegetable oils)

These fats occur naturally in small amounts in beef, lamb, mutton and dairy products. They are also made when vegetable oils are processed to make them hard (hydrogenated) and are mainly used in processed foods like biscuits, pastry and cakes. They may appear on food labels as 'partially hydrogenated vegetable oil'.

Trans fats raise 'bad' LDL blood cholesterol and reduce the 'good' HDL cholesterol. You should limit the amounts of trans fats in your diet.

It is worth noting that although coconut and palm oil are vegetable oils they are saturated fats, so can have as negative an effect on your body's cholesterol levels as animal saturated fats.

Soluble fibre

Foods containing soluble fibre include:

- oats
- lentils
- chickpeas
- beans
- fruit
- vegetables
- granary/seeded bread.

Plant sterols and stanols

Plant sterols and stanols are natural substances found in plant cells that can help to lower cholesterol levels. They are found naturally in a range of plant sources such as vegetable oils and nuts, but to get enough of them to lower your cholesterol levels you may need to have specially manufactured products. Examples of these are Benecol™ and Flora Pro-Activ™. Supermarkets also have their own brands. This is an option you can explore, but in order to be of benefit they must be eaten in the correct amounts and as part of a healthy balanced diet with moderate exercise. They must NOT replace your cholesterol lowering drugs.

How much do I need?

Studies have shown you need 2-3 grams of these products each day to have an effect on cholesterol. The quantities needed to achieve this are shown below.

- 1 Benecol™ or Flora Pro-Activ™ or supermarket own brand yoghurt drink daily.

Or 2 to 3 portions of the products listed below:

- 12g (1/2 oz) spread (either full or low fat) – this is roughly 2 level teaspoons
- 1 pot (125g) yoghurt
- 250ml (1/2 pint) milk
- 20g (1oz) cream cheese.

There is no benefit in taking more than the recommended 2 to 3 portions a day and there is some evidence that having too much may be harmful. It is also important to remember these products all contain fat and may cause you to put on weight, so look out for low fat varieties.

Please note: If you have been told by your doctor that you have Familial Hypercholesterolemia then you should avoid using these specially manufactured products.

The current NICE guidelines also do not recommend that you take antioxidants (including vitamin C and E) or folic acid. The quantities that you need of these vitamins should be found in your diet from eating a variety of fruit and vegetables.

Historically, dietary advice surrounding lowering our blood cholesterol levels advised against eating food such as eggs and prawns, which contain high levels of cholesterol. However, more recent evidence has shown that this type of cholesterol has a very limited effect on blood cholesterol levels and it is saturated fat in the diet which really affects blood cholesterol levels. Prawns actually contain a good quantity of Omega-3 and eggs are an excellent protein source as a lower saturated fat option than meat; as always they should be eaten in moderation.

If you have Familial Hypercholesterolaemia you should still avoid these foods.

Reduce your triglyceride levels

Triglycerides, like cholesterol, are a type of fat in the body. They come from fats in food, or fats made by the body from other energy sources, such as carbohydrates. At normal levels they are not harmful, but if your triglyceride levels are raised, this may be putting you at more risk of heart disease.

What can I do to reduce my triglyceride levels?

Reduce your sugar intake

Have less sugar in your food. Eating a lot of sugary foods and drinks can contribute to a high level of triglycerides in your blood. Try the following ideas:

- Fill up on fresh or frozen fruit, or fruit tinned in natural juice (drain the juice), rather than sugary cakes and biscuits.
- Drink diet, low calorie or sugar-free fizzy drinks and squashes, but ultimately water is best!
- Choose fruit juices which are labelled 'unsweetened' or 'natural' rather than juice drinks. Check labels for added sugar.

Increase your intake of Omega-3 fats (see previous section)

Increasing Omega-3 fatty acids in your diet can help lower triglyceride levels.

Have less highly processed starchy food

All starchy foods are broken down in the body to produce blood sugars – the amount of these foods you eat can affect the level of triglycerides. Try to choose more wholegrain, unprocessed foods as these are broken down more slowly. Some people find that choosing wholegrain breads and cereals helps to lower their highly processed starchy food intake.

Cut down on your alcohol intake

If you tend to drink large amounts of alcohol (especially at one time), this can raise triglyceride levels and increase your risk of heart disease. You will also store the alcohol as fat which can cause you to gain weight.

How much alcohol can I drink?

Both men and women should have no more than 14 units per week, spread over three or more days. Try to have several drink-free days each week.

A unit is…

It is no longer accurate to say one glass of wine = 1 unit. This is only true of a glass of wine at 8% alcohol by volume (ABV) in a 125ml glass. A glass of wine at 13% in a 175ml glass = 2.3 units. It is important to know the strength of a drink (%ABV) and the volume of liquid to know how many units a drink contains. Many bottled alcoholic drinks now label the number of units in either the bottle or a specified measure. For example, a standard strength (12% ABV) bottle of wine is about 9 units.

Try to have at least two alcohol-free days each week.

How can I cut down?

- Why not start your evening with a large sugar-free non-alcoholic drink? This is the time when we tend to be most thirsty and drink the largest quantity most quickly.

Weight and waist circumference

Watch your weight

If you are overweight, losing weight will automatically help lower your triglycerides and reduce your risk of heart disease. It may also lower your cholesterol and blood pressure. It can be very effective! To lose weight we need to eat less energy than our bodies use. However, the way this is best achieved is different for everyone.

Waist circumference

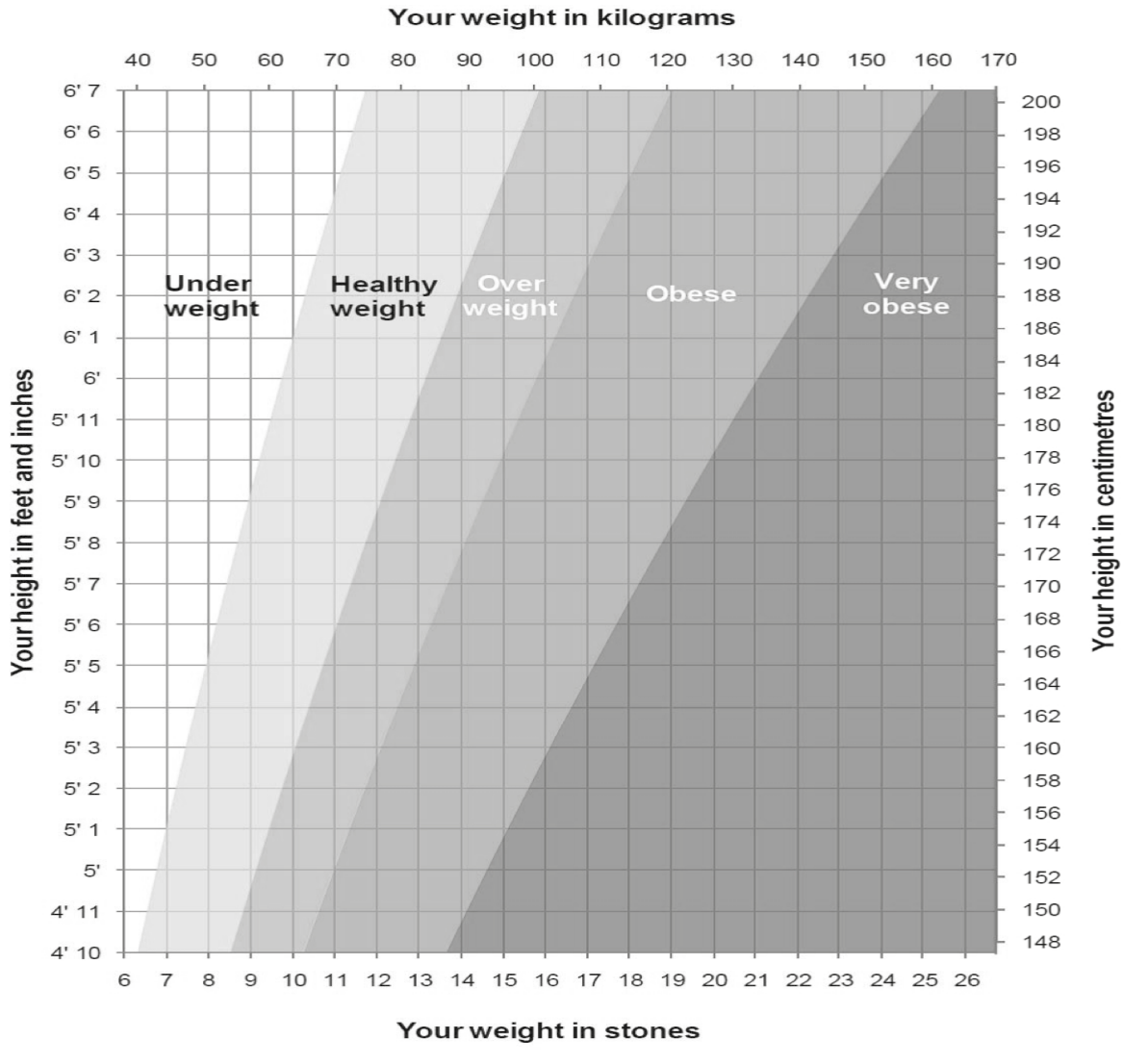
Evidence suggests that carrying too much weight around your middle increases your risk of heart disease more than a similar weight of fat deposited elsewhere in the body.

Find out how your waist measures up

Men	Women	Health risk
Below 94cm (37”)	Below 80cm (31.5”)	Normal
94 - 100cm (37”- 40”)	80 - 87.9cm (31.5 - 34.5”)	Increased risk
100cm and above (40”)	88cm and above (34.5”)	High risk

If you are overweight or have a larger waist circumference then changing your eating habits and increasing your physical activity to help you lose weight would improve your health. You should aim to lose 1 to 2 lbs (0.5 to 1.0 kg) per week.

Use this chart to check if you are the right weight for your height.



As with any lifestyle change it is important to look at why you want to lose weight. To lose weight effectively we need to look closely at what we eat and why. Some people find it helps to write down the reasons they want to lose weight, as well as keeping a food diary to record what they are actually eating and when. There may be a trigger time (e.g. boredom in the evening) or a trigger food (e.g. a favourite food that you find difficult to stop eating). Think what your 'trigger' foods and situations are and what you could do instead.

It can be helpful to look back at a food diary over a week and then make simple goals: for example, you may notice you always skip breakfast, so an initial goal may be to have breakfast. Once you are doing this regularly you could add more goals.

It is also important to feel supported with your goals; support can come from many sources. If you would like more help with losing weight and improving your diet please contact your Practice Nurse or Dietitian.

Some tips:

- Monitor portion sizes. What you should actually be eating is often a much smaller portion than you imagine.
- Use a smaller plate.
- Write down what you have eaten and when.
- Cut down on pre-packed/processed foods (these should be the smallest proportion of your dietary intake).
- Swap refined carbohydrates for wholemeal varieties.
- Bulk up meals with extra salad and vegetables (not potatoes). Think of the food you eat in a day – the largest portion should be vegetables/salad, then carbohydrate (pasta/rice/potatoes), and then protein (meat/fish/pulses/eggs). The smallest quantities should be dairy and then processed and high sugar foods.

Please use the following pages to monitor your progress, using the action plan and change planner. Alternatively, there are now numerous websites and applications (phone apps) available to help monitor diet, healthy eating and weight loss. Some people may find this a beneficial alternative to a food diary.

NHS Choices has some useful information and tools to help with making changes to your diet.
Website: www.nhs.uk/Tools/Pages/Toolslibrary.aspx

Healthy eating action plan

- Think about your diet, refer to the healthy eating information in this booklet.
- Attend the information session on Healthy Eating.
- Assess your drinking habits:
  Men and women – no more than 14 units per week,
  spread over three or more days. Try to have several drink-free days each week.
- Find alternatives to alcoholic drinks.

Add your own goals:

.....

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Weight action plan

Your weight ..... Your height ..... BMI (Body Mass Index) .....

To work out your BMI use the following calculation:

Weight (kg) divided by height (cm) divided by height (cm) again

Target Weight ..... 1 month

Target Weight ..... 2 months

Target Weight ..... 6 months

Losing 0.5 to 2lb a week is a safe and realistic goal Target BMI range .....

Aim to lose 5 to 10% of your body weight if you are presently obese or extremely over weight. This level of weight loss is shown to help reduce blood pressure, cholesterol levels, improve control of blood glucose levels if you are diabetic, and reduce your overall risk of further cardiovascular events.

Action plan:

- Make changes to diet.
- Increase exercise.
- Come to information session on Physical Activity.

Add your own goals:

.....

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Cholesterol action plan

Date ..... Total cholesterol ..... (recommended = under 4 mmol/l)

HDL ..... (greater than 1 mmol/l) LDL ..... (less than 1.4 mmol/l)

Triglycerides ..... Ratio .....

Non-HDL ..... (less than 2.5 mmol/l or 40% reduction)

Action plan:

- Regular checks with your GP.
- Take medication as prescribed.
- Make dietary changes.

Add your own goals:

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.....

Use this Change Planner to help you set and achieve your goals!

Week	Weekly goal	Tick if goal is met	What can I do to achieve my goal next week?

Smoking


How does smoking affect my heart?
How do I access help to quit?
How will this benefit my health?
What Nicotine Replacement Therapy products are available?
Should I cut down if I can't stop?

Smoking

If you have coronary heart disease (if you have angina or have had a heart attack), you probably already know that smoking is harmful to your heart. Quitting smoking is something positive you can do to improve your health.

Stopping smoking is the single most important thing a smoker can do to live longer. Although it may be a stressful time, the period when you are in hospital is a good time to try and stop smoking. The staff at the hospital, your doctor's surgery and some retail pharmacies are able to support you to give up smoking.

Nicotine Replacement Therapy (NRT) is available to help your quit attempt and can increase your success of quitting by four times. NRT is a product that contains nicotine but does not contain all the harmful toxins found in tobacco. Nicotine containing products include patches, gum, inhalators, tablets and nasal sprays. These have all been given marketing authorisation by the Medicines and Healthcare Products Regulatory Agency (MHRA). Unlicensed products that are currently on the market, such as electronic cigarettes, are all going to be regulated and reviewed. This should come into effect at some point in the near future. Please ask your Cardiac Rehabilitation Nurse for more information, support and access to NRT.

Positive steps to success:

- Staying in a non-smoking hospital for a few days will help you make a good start – nicotine is out of the body in two days.
- Get support and try NRT products.
- If members of your family smoke, they could help by quitting too.
- Believe in yourself, prove to yourself and others that you don't have to smoke.
- Take one day at a time – every day without a cigarette is a real achievement.
- Treat yourself with the money you have saved when you have had a few days without cigarettes.

Staying stopped

- Don't give in to temptation to have just one – it's too easy to start smoking again.
- Keep thinking of the benefits to you and your family of not smoking. Remind yourself of your own reasons for wanting to be a non-smoker and stay determined.
- If you do smoke a cigarette, don't feel that you have failed and give up on your attempt to stop.

Use it as a learning tool and think of ways to avoid that situation again. Think of all the reasons and benefits of stopping smoking and plan to have another go at stopping.

Help is also available from:

- **Your Smoking Cessation Practice Nurse at your GP's surgery.**
- **NHS Better Health**
  National Helpline: 0300 123 1044
  Website: www.nhs.uk/better-health/quit-smoking
  Download the free NHS Quit Smoking app via links from the website mentioned above.

- **ASH (Action on Smoking Health)**
  Website: www.ash.org.uk
- **Quitline**
  Telephone: 0207 553 2132
  Website: www.quit.org.uk
- **Oxfordshire Smoking Advice Service**
  Telephone: 0800 122 3790
  Text: STOPOXON to 60777
  Website: www.stopforlifeoxon.org

Action plan

Currently, you smoke ..... a day. ☐ Cigarettes ☐ Pipe ☐ Tobacco/roll-ups

- STOP!
- Cut down if you can't stop (but seek further help to help you stop completely).
- Ask your Cardiac Rehabilitation Nurse to refer you to the smoking cessation service.
- Come to information sessions that are organised by the Cardiac Rehabilitation Department.
- Try support groups (your Practice Nurse at your GP's surgery can put you in touch).

Stopping smoking – immediate benefits:

After 20 minutes
Your blood pressure and pulse rate return to normal.

After 8 hours
Nicotine and carbon monoxide levels in your blood reduce by half and your oxygen levels return to normal.

After 48 hours
Carbon monoxide will be eliminated from your body. Your lungs start to clear out mucus and other smoking debris. You may notice that you are coughing more often.

After 48 hours
There is no nicotine in your body. Your ability to taste and smell is greatly improved.

After 72 hours (usually when you return home from hospital after a heart attack)
Breathing becomes easier. Your bronchial tubes begin to relax and your energy levels increase. It will help with you continuing to not smoke if you make sure your house is free of any smoking products, ready for when you return home.

After 2 to 12 weeks
Your circulation will improve.

Remember, the longer you stop smoking for, the more benefit this has for your body and your recovery from your heart attack or surgery.

Add your own goals:

.....

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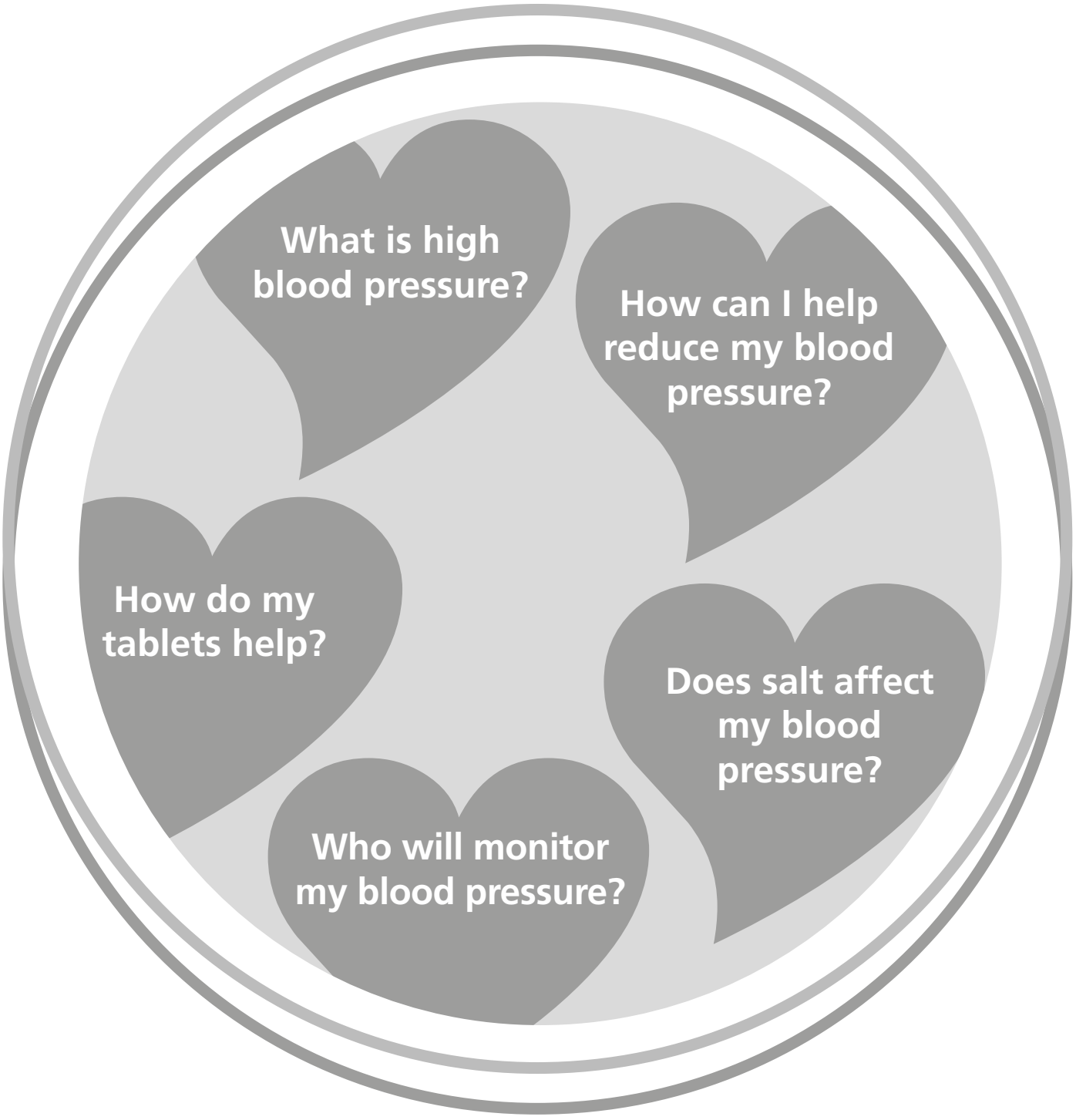
Use this Change Planner to help you set and achieve your goals!

Week	Weekly goal (e.g. Visit your Practice Nurse)	Tick if goal is met	What can I do to achieve my goal next week?

High blood pressure



Blood pressure

This is the pressure measured in the arteries. It rises and falls as the heart pumps out blood. There are two measurements, systolic and diastolic. Systolic measures the pressure in the artery when your heart contracts to pump blood out. Diastolic measures the pressure in the artery when the heart then relaxes.

NICE Targets	Clinic	Home
Under 80 years old	Below 140/90	Below 135/85
Over 80 years old	Below 150/90	Below 145/85
If you have Type 1 diabetes	Below 135/85	Below 130/85
If you have kidney disease	Below 130/80	Below 120/80

These figures are for a resting blood pressure. It can be normal for your blood pressure to rise and fall depending on your activity.

Controlling your blood pressure is important because having blood pressure that is too high is one of the known major causes of heart disease. If your blood pressure is a lot higher than recommended, your risk of developing coronary artery disease or other circulatory problems is increased.

There are some factors which can put your blood pressure up into the high range, including:

- being overweight
- drinking too much alcohol
- kidney disease
- lack of exercise
- too much salt in your diet
- stress.

There are many drugs available which can lower blood pressure and reduce your risk of coronary heart disease.

How you can help:

- Reduce alcohol intake.
- Reduce your weight by eating healthily.
- Use less salt when cooking or on your food.
- Take regular exercise.
- Practice relaxation.
- Take prescribed medication.

Your blood pressure measurement while you were in hospital was: ..... /.....

Action plan

- If your blood pressure medications has changed following your admission, it is important once home to organise getting a blood test and blood pressure review at 2 weeks into your recovery.
- Understand your medication, what your tablets are for and when to take them.
- Reduce salt intake (see the chapter about healthy eating).
- Come to the dietary advice information session in the Cardiac Rehabilitation Department. (Ring the department for the next session date.)
- Increase your activity levels, after discussion with your Cardiac Rehabilitation Nurse.

Add your own goals:

.....

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Blood pressure record

Date and time	Blood pressure
	..... /.....
	..... /.....
	..... /.....
	..... /.....
	..... /.....
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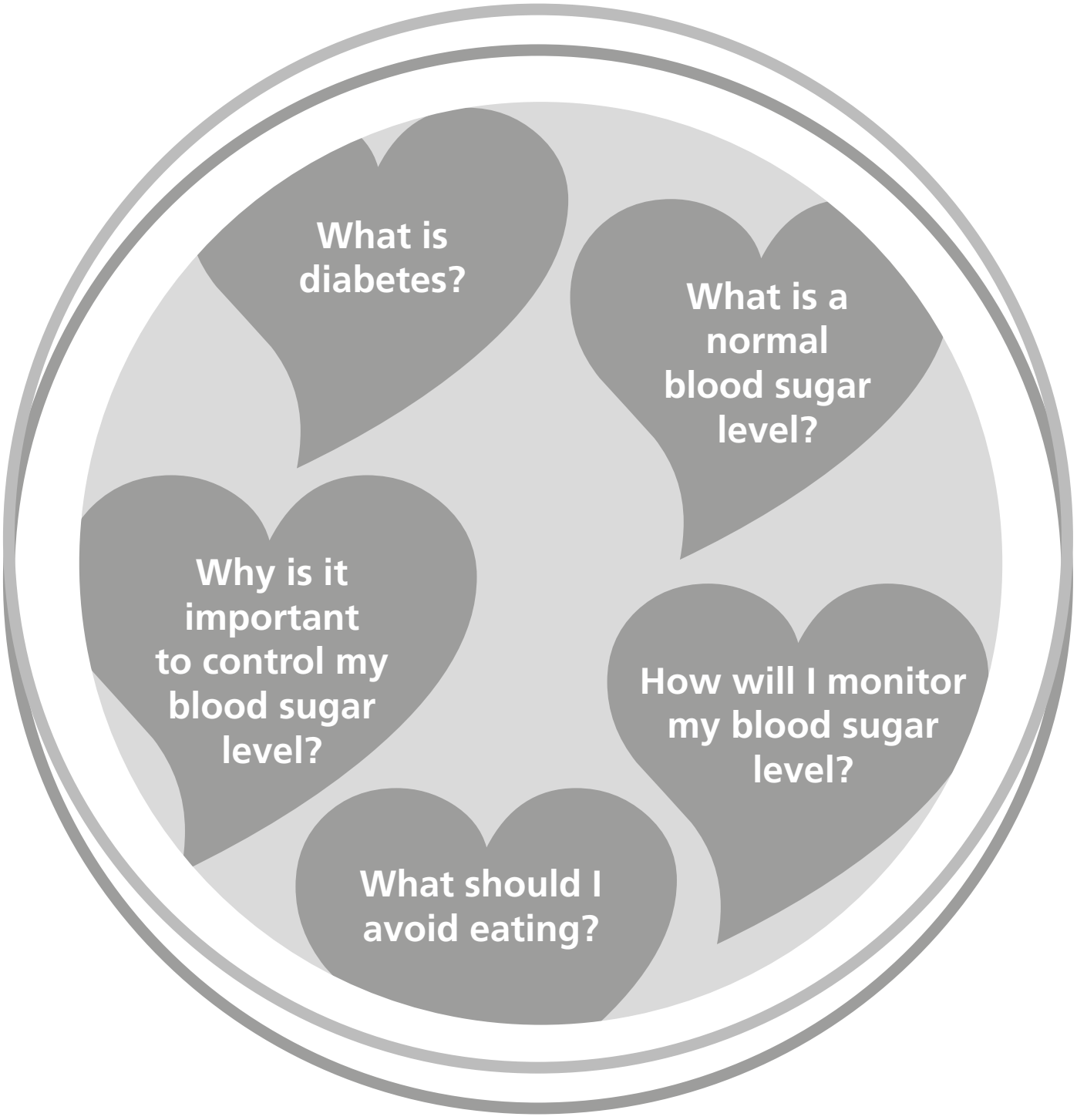
Diabetes


What is diabetes?
What is a normal blood sugar level?
Why is it important to control my blood sugar level?
How will I monitor my blood sugar level?
What should I avoid eating?

Diabetes

High blood sugar levels can increase the risk of developing fatty deposits by damaging the blood vessels in your heart. Research has shown that good control of your blood sugar levels with diet, physical activity and medications, can help to minimise the impact of coronary artery disease.

Regular blood sugar testing may be something which you are already used to. It is important though to understand why you are doing this and what to do if it is not normal.

A normal blood sugar level is between 4 to 7mmols. If your blood sugar is consistently higher than this, your diabetic medication (either insulin or tablets) may need adjusting. If you are not used to adjusting your own insulin please contact your practice nurse, district nurse, GP or Diabetes Nurse Specialist. You should go to your GP surgery for regular diabetic check-ups, which include a blood test that measures your long-term blood sugars (HbA1c).

You need to pay extra special care to your eyes and feet. Both eye (optical) and feet (podiatry) checks are available free of charge to people who have diabetes. It is very important to make use of these services.

What to do if you are unwell

Your blood sugar levels may rise if you are unwell. During your illness you should test your blood sugar levels more regularly. You should also drink plenty of water and sugar-free drinks and test for ketones. If you continue to be unwell and are concerned about managing your diabetes, contact your GP or specialist diabetic service urgently. If they are unavailable, please call 111 for the out of hours service.

If you have any further queries, please discuss these with your Diabetes Nurse Specialist or Cardiac Rehabilitation Nurse.

Exercise

When you are invited to join the exercise programme we may monitor your blood sugars both before and after exercise using a hospital blood sugar monitoring kit.

When you come to exercise always remember to bring along your glucose tablets, a sugary drink (not sugar-free), and a couple of biscuits or cereal bar. This is in case your blood sugars are low before, during or after you have exercised.

Sometimes your blood sugars can drop in the afternoon or evening after exercise; it is important to monitor your sugar levels more closely to reduce the risk of hypoglycemia (low blood sugar levels).

Sometimes exercise can cause blood sugars to rise, if this happens continue to eat normally for the rest of the day and check your blood sugar levels regularly.

Diabetes action plan

- Is your diabetes well controlled?
- Medication (understand tablets and when to take them)
- Dietary changes (information in your folder)
- Regular check-ups at the GP Surgery

Add your own goals:

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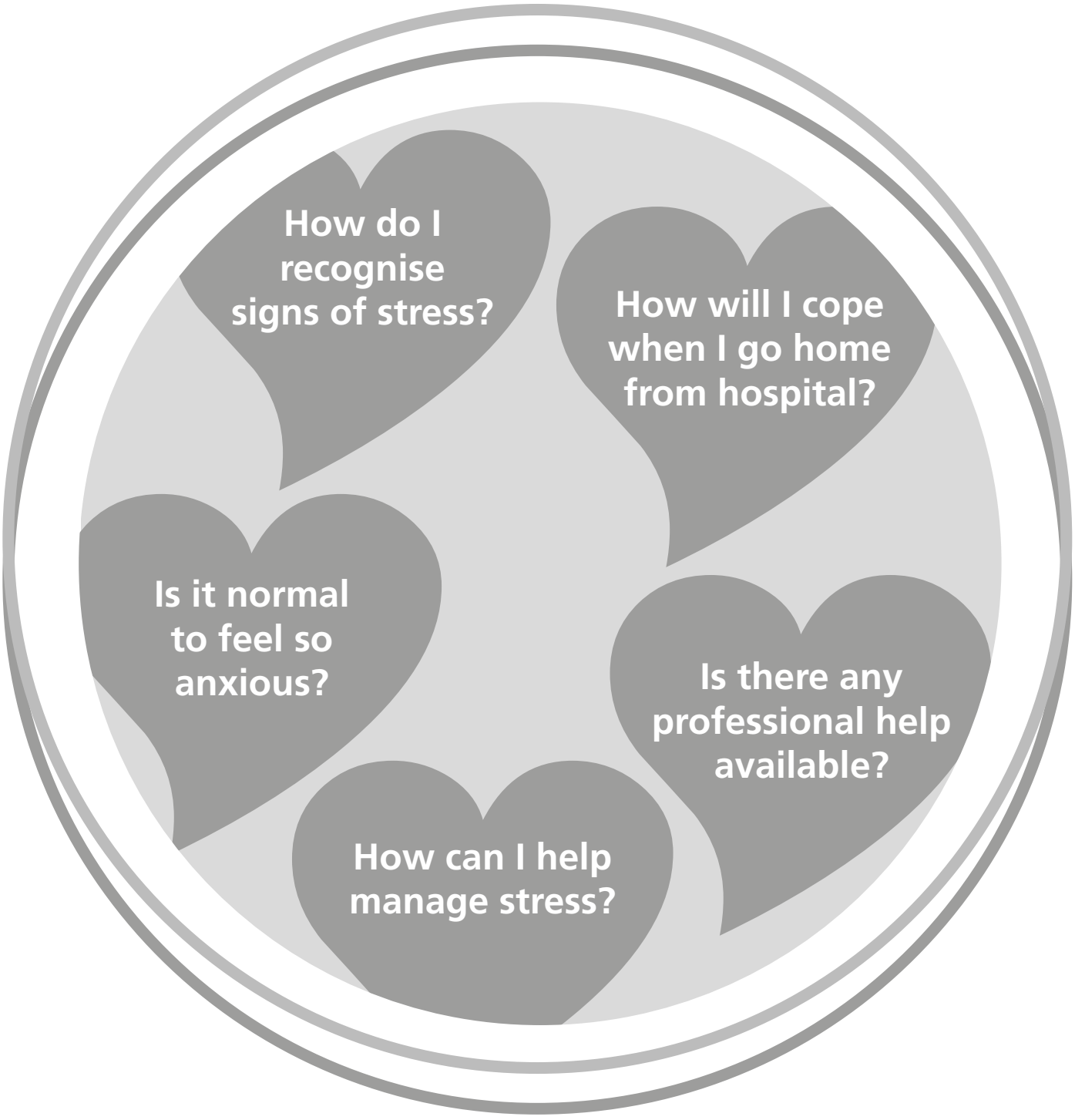
Use this Change Planner to help you set and achieve your goals!

Week	Weekly goal	Tick if goal is met	What can I do to achieve my goal next week?

Anxiety /Stress



Anxiety

It is quite normal to feel anxious and worried after a heart attack, heart surgery or any other frightening experience. Most people start to feel less anxious as they get better and the memories of the heart attack or operation begin to fade. Finding out more information about worry and anxiety can help you to deal with it better.

Anxiety can cause some of these symptoms:

- rapid pulse and palpitations
- dry mouth
- 'butterflies' or a sinking feeling in the tummy
- tingling and cold clammy hands and feet
- rapid breathing
- feeling faint
- strange pains.

Anxiety can have these psychological effects:

- difficulty concentrating and remembering
- lack of self confidence
- problems sleeping at night
- racing thoughts
- finding it difficult to make decisions
- feeling that your personality has changed or that you are 'going mad'.

Anxiety can cause these kinds of behaviours:

- not listening to what people are saying
- restlessness, fidgeting, bad temper
- losing your sense of humour
- feeling unsatisfied.

When we are in danger or under stress our bodies produce a chemical called adrenaline, which prepares our body to 'fight or run'. Problems start when we have a worrying thought which produces adrenaline in our bodies, but we don't need to fight or run. This extra adrenaline does not get used up and causes unpleasant physical and psychological symptoms. When you notice these symptoms it can make you worry and feel scared. It may make you feel there must be something wrong, and you might be worried that you may have another heart attack.

Panic attacks

Occasionally these worrying thoughts and the increase in adrenaline can build up to a high level and you may have a 'panic attack'. A panic attack is not dangerous and is usually over within 10 to 30 minutes. This is because, after a while, the body runs out of adrenaline. The worrying thoughts disappear, your heart rate and breathing slows down, your stomach stops churning and you start to feel better.

Six things to remember to help you cope with anxiety:

- It is not your heart or mind which is going wrong.
- What you feel is the effects of adrenaline.
- These feelings are not dangerous, just unpleasant.
- Notice what is actually happening to your body at the moment – not what you fear may happen.
- Try to stop thinking negative thoughts and the anxiety will start to fade by itself.
- Wait and give the fear time to pass. Do not fight or run away from it. Just accept it.

Feeling low after a heart attack

It is normal to feel low in mood following a heart attack or heart surgery; these feelings will usually go away as time passes. Here are some of the common symptoms:

- sadness
- tearfulness
- poor appetite
- early waking/loss of sleep
- loss of interest in things that were once enjoyable
- no energy for doing things
- loss of interest in your appearance.

These feelings are not dangerous but they are unpleasant. However, if they become worse they may be called depression. If you are depressed you may only feel that you can see the bad side of things.

Your Cardiac Rehabilitation Nurse may ask you to complete two simple questionnaires, which will give us an idea about how you are feeling at the moment. There is also a clinical psychologist who works within our team to provide support if you (and your family) are feeling anxious or low in mood following a heart attack or surgery. If you would like to be referred to the clinical psychologist please ask your Cardiac Rehabilitation Nurse.

Stress

Stress has many meanings but most people think of stress as the demands of life. Stress, and the effect it has on your body, has been linked to heart disease. If you can avoid smoking, excessive alcohol, and tension that can lead to high blood pressure, you can help to protect your health and heart. Learning how to relax is very important. Ask your Cardiac Rehabilitation Nurse about our relaxation sessions.

Everyone gets stressed sometimes. A moderate amount of stress can be helpful, but too much is not only unpleasant, it is also bad for us. We are affected both by external pressures (e.g. work, money, other people) and by internal pressures (e.g. our reactions to these pressures). If any of these pressures are too much, and our coping mechanisms aren't working, we will feel stressed.

The viewpoint you take in any situation is important. How you view an event can influence how you deal with it and the effect it has on you. For example, being stuck in a traffic jam. You may say to yourself, "This is terrible, I'm going to be late, this always happens to me….". The result would be that you feel very wound up, physically tense, exhausted and angry.

An alternative would be to say, "This is a real pain, but there is nothing I can do about it right now, I may as well listen to the radio.". Hopefully this will make you feel calmer.

The first step in a potentially stressful situation is to be aware of what is happening and how you are feeling both physically and emotionally. Then you can choose how to respond, rather than just reacting in a certain way. Sometimes, just learning to accept a situation that you have no control over can mean that you reduce your stress levels.

Recognising the signs of stress

Physical:

- aches and pains (e.g. headache)
- tension (e.g. in your neck and shoulders)
- disturbed sleep pattern (e.g. waking early)
- flare-up of stress related illness (e.g. asthma or psoriasis).

Behaviour:

- becoming more disorganised or struggling to manage your time
- finding it hard to delegate
- working longer hours and bringing work home
- avoiding tackling problems
- cutting down on the things you do for pleasure
- losing touch with your friends
- taking it out on others (i.e. blaming others when things go wrong).

Mood:

- irritable or short-tempered
- anxiety or feelings of panic
- fear (e.g. of being out of control)
- low self-esteem (no confidence)
- feeling miserable
- apathy (e.g. lack of motivation or interest)
- agitation.

A simple relaxation exercise

Relaxation is the natural answer to stress but it can be difficult to fit into your day. To get the most out of relaxation it needs to be practised regularly – you won't feel the benefits immediately. Maybe you could plan to do the following exercise at a set point once or twice in the day; it should take you no more than 5 to 10 minutes.

- Every now and again, have a stretch. Then let your shoulders and arms relax into a comfortable position. Shrugging, wriggling and shaking all help your muscles to relax.
- Try to relax your feet, ankles, calves, knees, thighs, chest, arms and neck.
- If you are sitting in a chair, or lying on the floor, allow yourself to feel as if the chair or floor is supporting your whole weight; feel yourself letting go.
- Try to be peaceful; loosen your jaw and face. A neutral expression will help your face muscles to relax.
- Close your eyes and imagine a peaceful scene. Choose your own special place, wherever seems most restful to you. For a few moments imagine that you are really there.

Some tips for managing stress

- Learn to relax – this might involve using the technique mentioned above, using a relaxation CD or listening to soothing music.
- Exercise – this will improve your sense of wellbeing, make you feel good about yourself and may take your mind off your problems (this will depend on the stage of physical recovery you have reached).
- Time management – prioritise and plan your time. Be realistic about what you can do, break- up tasks, delegate, and pace yourself.
- Talk – share your problems and learn to say 'no' sometimes. It can be done without letting others down.
- Challenge unhelpful thoughts – be positive, you can cope with this, so be kind to yourself.
- Rest when you feel tired; try to relax before going to bed (e.g. a hot milky drink, a relaxing bath and essential oils).
- Treat yourself – make time for your hobbies, to have fun and socialise.
- Good nutrition – avoid excessive alcohol, nicotine and sugars – these can make you feel worse. Instead treat yourself to healthy food and drink plenty of water.
- Worry buster – write down your worries, it really helps you to think clearly.
- Get professional help – if you feel very low or anxious there are services in Oxfordshire or in your local area to help you manage stress.

Cognitive Behavioural Therapy (CBT)

Many people feel anxious, panicky or low after a heart attack, surgery or diagnosis of heart disease. The early days and weeks can be a difficult time for you and your family. Very often, these feelings get better by themselves once you have adjusted to your health difficulties.

However, some people carry on feeling 'not themselves'. You may experience panic attacks that do not go away, or feel so low it is hard to know how to cope. Sometimes, problems from the past come may up again, such as depression, which is difficult to resolve on your own.

If you feel that you would like further help, we can refer you for Cognitive Behavioural Therapy with our psychologist. Cognitive Behavioural Therapy (CBT) is a short-term, focused form of counselling which is very helpful in treating a number of problems. The most common problems for cardiac patients include:

- depression, low mood
- panic attacks
- stress
- worry and general anxiety
- difficulties in coming to terms with what you have been through
- post-traumatic reactions after surgery or intensive care
- non-cardiac chest pain.

Our psychologist can see you and will give you the opportunity to talk through your difficulties in detail. You will then discuss a plan for getting better, including specific skills and strategies, tailored to you as an individual. You can also discuss other sources of help which may be available to you.

Please speak to your Cardiac Rehabilitation Nurse if you feel you could benefit from CBT.

Psychological troubles – how to help yourself and where to get help

Books and leaflets

Booklets on anxiety, depression, phobias and other problems are available from the Cardiac Rehabilitation Nurses, and from the Oxford Cognitive Therapy Centre.

Telephone: 01865 902 801

Email: octc@oxfordhealth.nhs.uk

Website: https://www.octc.co.uk/resources

'Manage your Mind' by Gillian Butler and Tony Hope
A highly recommended self-help book to help keep you mentally healthy.

'Overcoming Anxiety: Self-Help Course' by Helen Kennerley
A three-part CBT self-help programme to help you overcome your anxiety.

'Overcoming Anxiety' by Helen Kennerley
A guide to overcoming a range of problems, fears and anxieties – from panic attacks and phobias to"executive" burnout – with the aim of regaining confidence and self-control.

'The Worry Cure' by Robert L Leahy
A CBT self-help book offering practical tools to help you to deal with your worry.

'Overcoming Worry' by Kevin Meares and Mark Freeston
A CBT self-help book that will help you to understand and deal with your tendency to worry.

'Overcoming Panic and Agoraphobia' by Derrick Silove and Vijaya Manicavasagar
A CBT self-help book to help you deal with your panic attacks and associated fears and avoidance.

'Overcoming Obsessive Compulsive Disorder' by David Veale and Rob Willson
A CBT self-help book describing techniques that you can use to deal with your obsessive thoughts and compulsive behaviours.

'**An Introduction to Coping with Depression'** by Lee Brosan and Brenda Hogan
A CBT self-help booklet introducing you to some strategies that you can use to cope with depression.

'Overcoming Depression' by Paul Gilbert
A CBT self-help book describing ways in which you can overcome your depression.

Mindfulness meditation to help with anxiety, worry and depression
Mindfulness groups are available on the NHS and privately. For an introduction, the following books are useful:

'Full Catastrophe Living: How to cope with stress, pain & illness using mindfulness meditation' by Jon Kabat-Zinn
How to handle potentially stressful situations. How to use mindfulness meditation to help you relieve physical and emotional pain; reduce anxiety and panic; improve your health and your relationships; and much more.

'The Mindful Way through Depression' by Mark Williams, John Teasdale, Zindel V Segal, Jon Kabat-Zinn
A self-help guide offering helpful relief from your depression. This book explores depression and its anatomy, as well as the place and practice of mindfulness and cognitive therapy in breaking through the depression cycle.

Coping with pain

'Living Well with Pain and Illness' by Videyamala Burch 'Explain Pain' by David Butler and Lorimer Mosley

'Explain Pain' by David Butler and Lorimer Mosley

How to get help

If you are a cardiac patient, or a relative/friend of a patient, you can talk to the Cardiac Rehabilitation Nurse for advice. They may recommend that you purchase a copy of a relaxation CD or can refer you to the psychologist. We can also tell you about other sources of help.

Alternatively, you can obtain further information or advice from:

- your GP or practice nurse
- the Samaritans
- Citizens Advice Bureau
- Relate
- Cruse bereavement support.

Oxfordshire MIND

Website: www.oxfordshiremind.org.uk

Oxfordshire MIND is an excellent source of information, help and support for all kinds of psychological difficulties and mental health problems. It runs groups on depression, anxiety, and improving self-esteem. Groups are run around the county.

For information about the next local group, or to join the mailing list, please visit their website or call 01865 247 788.

NHS Oxfordshire Talking Therapies

Oxfordshire Talking Therapies service supports people who are suffering from mild to moderate symptoms of anxiety or depression. The service is provided by Oxford Health NHS Foundation Trust in partnership with Oxfordshire MIND.

If you need any further details please get in touch on 01865 901222 or via email at oxon-talking-therapies@oxfordhealth.nhs.uk

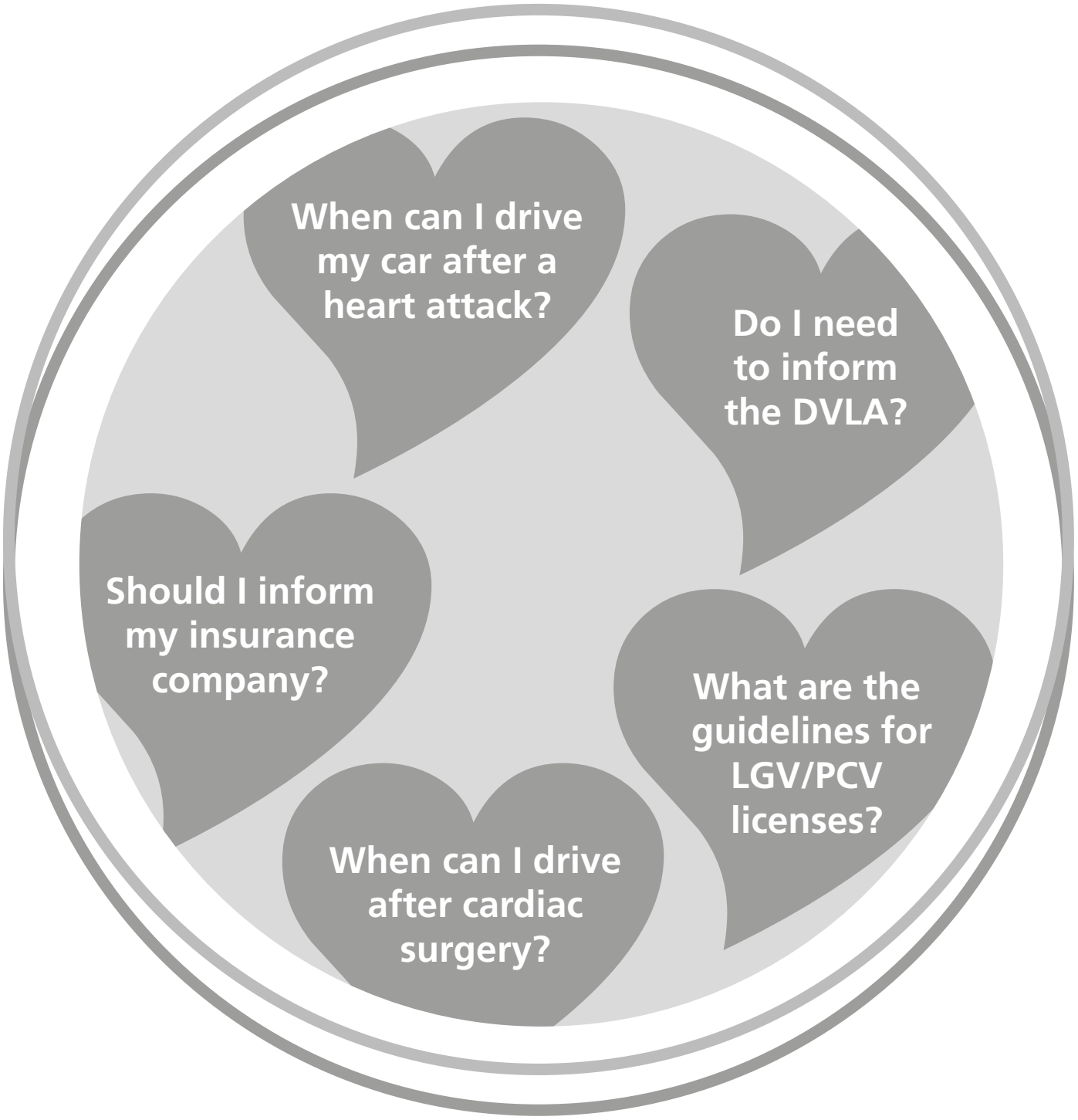
Stress and anxiety action plan

- Identify triggers (things which cause you stress).
- Learn to recognise the signs of stress.
- Reduce avoidable stress.
- Practice relaxation exercises.
- Written/audio information may help (ask your Cardiac Rehabilitation Nurse).
- Request professional counselling.
- Come to the Cardiac Rehabilitation information session.

Use this Change Planner to help you set and achieve your goals!

Week	Weekly goal	Tick if goal is met	What can I do to achieve my goal next week?

Driving


When can I drive my car after a heart attack?
Do I need to inform the DVLA?
Should I inform my insurance company?
What are the guidelines for LGV/PCV licenses?
When can I drive after cardiac surgery?

Car / motor cycle licence holders (Group 1 entitlement)

If you have a Group 1 licence, with no other disqualifying conditions, the DVLA guidelines are as follows:

If you have angina

You must stop driving if you have angina symptoms whilst driving, or if your symptoms occur whilst resting or with emotion. You may start driving again when symptoms are relieved. You do not need to inform the DVLA. **If you have angina whilst driving you must stop the car and take your GTN tablets / spray. Remember to take your GTN tablets / spray with you whenever you go out**.

If you have had a heart attack (myocardial infarction), ACS (acute coronary syndrome) or unstable angina

You must stop driving for 4 weeks if you have had a heart attack, ACS or unstable angina. In some cases, if you have been treated with an angioplasty and there has been little damage to your heart, driving can resume after 1 week, but strict guidelines must be adhered to. Your Cardiac Rehabilitation Nurse or Doctor will discuss this with you. You do not need to inform the DVLA.

If you have had an elective PCI (Percutaneous Coronary Intervention) (with or without a coronary stent)

You must stop driving for 1 week. You do not need to inform the DVLA.

If you have had heart surgery

You must stop driving for at least 4 weeks. However, you should wait until your sternum has been checked. Your surgeon will do this at your follow-up appointment. This appointment is usually around 6-8 weeks after your discharge from hospital. You do not need to inform the DVLA.

If you have diabetes

If your diabetes is controlled by diet alone you do not need to inform the DVLA, unless you develop complications from your diabetes, such as diabetic eye problems. If your diabetes is controlled by tablets or insulin you should contact the DVLA for further advice, as there are criteria that need to be met in order for driving to continue.

If you are diabetic and feel unwell whilst you are driving you must stop the car and take the keys out of the ignition. It is possible your blood sugars may have dropped and you are having a 'hypo'. In this situation you should have a snack or take glucose tablets. Wait until your blood sugar is above 4mmol / l before you continue with your journey.

Insurance

You should inform your car insurance company of your diagnosis, as it is a change to your medical condition. This should not affect your premiums in any way but will help prevent problems in the future if you need to make a claim.

When you start driving again

When you start driving again you may find you are still quite tired and may have lost some of your confidence. It is best to avoid long journeys or peak hour traffic. You may prefer to drive with a friend or partner until you are more confident.

If you have any questions please speak to your doctor, Cardiac Rehabilitation Nurse, GP or the DVLA.

LGV /PCV licence holders (Group 2 entitlement)

If you have a Group 2 licence, with no other disqualifying conditions, the DVLA guidelines are as follows:

If you have angina

You must stop driving and inform the DVLA. Re-licensing may be permitted provided you are free from angina for at least 6 weeks and exercise tests and other functional tests meet their requirements.

If you have had a heart attack (myocardial infarction), ACS (acute coronary syndrome) or unstable angina

You must stop driving and inform the DVLA. You will be disqualified from driving for at least 6 weeks. Re-licensing may be permitted provided exercise tests and other functional tests meet the requirements. **Please be aware that these tests are rarely completed within 6 weeks and may take several months to complete**.

If you have had an elective PCI (Percutaneous Coronary Intervention) (with or without a coronary stent)

You must stop driving and inform the DVLA. You will be disqualified from driving for at least 6 weeks. Re-licensing may be permitted provided exercise tests and other functional tests meet the requirements. **Please be aware that these tests are rarely completed within 6 weeks and may take several months to complete**.

If you have had heart surgery

You must stop driving and inform the DVLA. You will be disqualified from driving for at least 3 months. Re-licensing may be permitted provided exercise tests and other functional tests meet the requirements. **Please be aware that these tests are rarely completed within 6 weeks and may take several months to complete**.

If you have diabetes

If your diabetes is controlled by diet alone you do not need to inform the DVLA, unless you develop complications from your diabetes, such as diabetic eye problems.

If your diabetes is controlled by **tablets** you should inform the DVLA. A strict criteria needs to be met in order for driving to continue.

If your diabetes is controlled by **insulin**, even on a temporary basis, you must inform the DVLA and stop driving. It is possible your licence will be withdrawn whilst you are taking insulin.

You must inform the DVLA as soon as you are discharged or diagnosed. The DVLA will advise you on what you need to do next. This may involve filling out forms which they will either send to you or you can download from their website. The DVLA will request medical information from your consultant and functional tests if required. This may take some time so please contact the DVLA as soon as possible.

DVLA guidance is regularly updated and the information given in this booklet may change. Please see the DVLA website for the most up to date information:

Website: www.gov.uk/dvla-medical-enquiries

If you have any questions please speak to your doctor, Cardiac Rehabilitation Nurse, GP or the DVLA.

DVLA contact details
Website: www.gov.uk
Drivers Medical Enquiries, DVLA, Swansea, SA99 ITU
Car or motorcycle, telephone: 0300 790 6806

Moving on

By the time you have completed your Cardiac Rehabilitation programme, the support and information you will have received from your local team, your cardiologists and your GP will have answered your questions and helped you address the issues identified above, and you will have returned to your normal life.

Returning to work

You should be able to return to your previous job. This is an individual decision and will depend on your heart condition, the type of job you do and the amount of physical and emotional stress involved. You may be able to return after 4 to 6 weeks. If you have had heart surgery you will require longer, possibly 6 to 12 weeks. Initially you may need to modify your work. It is a good idea to consider returning to work on a part time basis initially, building up your hours gradually in order to give yourself time to readjust.

It is a good idea to discuss this with your employer, human resources department or occupational health service. If you are an HGV driver and need a driving licence for your job you will require relicensing from the DVLA.

For further advice see the Returning to Work with a Heart Condition booklet (British Heart Foundation).

Financial concerns

We are unable to give specific advice about money or benefits. For information regarding financial concerns and benefits advice please contact your local Job Centre, the Benefit Enquiry Line, Citizens Advice Bureau, or AGE UK. The contact details are at the end of this information booklet.

Looking forward

On completion of your Cardiac Rehabilitation programme you will have an appointment either at the Cardiac Rehabilitation gym or by telephone, where your long term goals and plans will be discussed.

At this appointment the Cardiac Rehabilitation staff will discuss further options that are available to you to maintain the lifestyle changes you have already started to make. This will include continuing with your individual goals; for example, maintaining current weight loss and continuing with regular exercise or physical activity.

After you have completed your Cardiac Rehabilitation programme your Cardiac Rehabilitation team will make sure that you are referred to your practice nurse or GP, who will take over your care. They will then invite you to your local GP practice for an annual heart review.

My self-care plan

The NHS wants everybody with a long term condition such as coronary heart disease to have a personal self-care plan. This will carry on from the goals you will have already set with your

Cardiac Rehabilitation team. Your Cardiac Rehabilitation Nurse, GP or Practice Nurse will talk to you about this.

Holidays

A holiday is a great opportunity to relax and unwind. If you have a holiday planned very shortly after your cardiac event you may wish to talk your holiday plans over with your Cardiac Rehabilitation Nurse. This advice can vary from one person to another.

It is important to plan your holiday carefully so that you will be able to relax, enjoy and get the maximum benefit from it.

- carefully plan how you will get there and back
- allow plenty of time
- avoid carrying heavy bags and suitcases
- make sure that your accommodation is not on a steep hill
- check local transport options and availability
- take enough tablets and carry your supply in your hand luggage if travelling abroad.

It is advisable not to travel to countries which are very hot or very cold or places of high altitude immediately after your recent heart condition. It is very important to inform your travel insurance company about your heart condition to ensure you have sufficient cover.

Flying

The guidelines set out by the British Cardiovascular Society (2010) now advise:

1. Low risk – If you have had a heart attack but are less than 65 years in age, the blocked artery has been opened and no further tests or treatments are planned, you can fly after three days.
2. Medium risk – If you have had a heart attack and your heart pump is quite good and you have no symptoms or other tests or treatments planned you can fly after ten days.
3. High risk – If you have had a heart attack and the pumping of your heart is affected and you are awaiting further treatment you are advised to defer travel until your condition is stable.

   For further information or advice, speak with your Cardiac Rehabilitation Nurse, Cardiologist or GP.
4. Heart Surgery (Coronary Artery Bypass Grafting) – You can fly after 10 days if you have no complications. If symptomatic, e.g. breathless, dizzy or having a lot of chest pain, talk to your GP.

However, above all enjoy your holiday.

Test and appointment log

What tests and treatments have you had?

Investigation / Treatment	Date	Result
Angiogram		
Angioplasty (with or without a stent) (PCI)		
Bypass Surgery		
Echocardiogram		
Other		

What tests and treatments have you had?

Date and time	Who appointment is with:	Reason for and outcome of appointment:

Your feedback

If you wish make a comment (good or bad!), make a suggestion, or a complaint, initially please talk directly to the staff involved in your care. We also have a feedback questionnaire that you can complete anonymously whilst you are on the ward or when you return home. Please ask a member of staff if you haven't already received this.

You can also contact the Patient Advice and Liaison Service (PALS):

John Radcliffe Hospital PALS

Telephone: 01865 221 473 or via switchboard 0300 304 7777

Email: PALS@ouh.nhs.uk

Address: PALS Office
John Radcliffe Hospital
Headley Way, Headington
Oxford, OX3 9DU

Horton General Hospital PALS

Telephone: 01295 229 259

Email: PALS@ouh.nhs.uk

Address: PALS Office
Horton General Hospital
Oxford Road
Banbury, OX16 9AL

Questions or concerns

We hope that this information booklet and your Cardiac Rehabilitation team have answered all your questions on your heart condition.

If, in the future, you or your partner needs further help or advice, please do not hesitate to contact your local Cardiac Rehabilitation team.

If you have any questions or concerns about any of the information in this booklet, please contact your Cardiac Rehabilitation Nurse.

John Radcliffe Hospital

Telephone: 01865 220 251

Horton General Hospital PALS

Telephone: 01295 229 426

Useful contacts

Useful contacts

Arrhythmia Alliance

24 hour Helpline: 01789 867 501
Website: heartrhythmalliance.org
Email: info@heartrhythmalliance.org

British Dietetic Association

Telephone: 0121 200 8080
Website: www.bda.uk.com
Email: sent@bda.uk.com

British Heart Foundation

Heart helpline: 08088 021 234
Website: www.bhf.org.uk
Email: hearthealpline@bhf.org.uk

Oxfordshire County Council – Accessible transport

Website: www.oxfordshire.gov.uk/cms/public-site/accessible-transport

Prescription Pre-payment Certificate (PPC)

Telephone: 0300 330 1341
Website: www.nhsbsa.nhs.uk/ppc

Healthy eating

Food Standards Agency

Website: www.food.gov.uk

NHS Choices Healthy Eating

Information about food and diet, with healthy recipes and advice.
Website: www.nhs.uk/live-well/eat-well

Health and fitness

Green Gym

A way to enhance your fitness and health whilst helping to improve the outdoor environment.
Website: www.tcv.org.uk/greengym

Generation Games

Oxfordshire's activity network for the over 50s.
Telephone: 0345 450 1276
Website: https://www.ageuk.org.uk/oxfordshire/our-services/
Email: contactus@ageukoxfordshire.org.uk

Community Type 2 Diabetes Service for Oxfordshire

Courses to promote self-management of type 2 diabetes.
Telephone: 01865 903 380
Email: diabetes.education@.nhs.net

NHS 111

Dial 111 from any landline or mobile for free NHS advice and out of hour's appointments.

Oxford University Hospitals NHS Trust

Switchboard: 0300 304 7777
Website: www.ouh.nhs.uk

Help and advice services

Oxfordshire Talking Therapies

A service that provides talking therapies for people who live in Oxfordshire coping with mild to moderate levels of anxiety and depression.

Telephone: 01865 901 222

Website: www.oxfordhealth.nhs.uk/oxon-talking-therapies

Samaritans

Confidential listening service which can give you support to make decisions and put you in touch with other specialist organisations.

Telephone: 116 123

Email: jo@samaritans.org

Website: www.samaritans.org

Relate

The UK's largest provider of relationship support.

Telephone: 0300 100 1234

Website: www.relate.org.uk

Cruse Bereavement Care

Support for people who have experienced or been affected by bereavement.

Website: www.cruse.org.uk

Telephone: 0808 808 1677

Cruse Bereavement Care Oxfordshire

Telephone: 01865 245 398

Email: oxfordshire@cruse.org.uk

Website: oxfordshire@cruse.org.uk

Support for carers

Carers UK

Telephone: 0808 808 7777

Website: www.carersuk.org

Benefits

Citizens Advice Bureau

Telephone: 08444 111 444

Website: http://www.citizensadvice.org.uk

Government Benefits Adviser Benefit

Website: www.gov.uk/benefits-adviser

Disability Employment Advisor Oxford

Website: www.gov.uk/looking-for-work-if-disabled/looking-for-a-job

Jobcentre Plus

Website: www.gov.uk/contact-jobcentre-plus

Age UK

Telephone: 0345 450 1276 (If urgent call: 0800 678 1602)

Website: www.ageuk.org.uk

Emergency life support skills

You and your family may be interested to learn how to perform basic life-support skills. This training takes place at the Cardiac Rehabilitation Department, Horton Hospital, or you can look on the following websites:

St John Ambulance

Website: www.sja.org.uk/courses

British Red Cross

Website: www.redcross.org.uk/first-aid

Driving

DVLA

Car or motorcycle

Telephone: 0300 790 6806

Website: www.gov.uk

Address: Drivers Medical Enquiries, DVLA, Swansea, SA99 ITU

Smoking

NHS Smokefree

National Helpline: 0300 123 1044

Website: www.nhs.uk/better-health/quit-smoking

The Cardiac Rehabilitation Department is always very grateful for donations received from patients, families and members of the public. In the past we have used these gifts to buy gym equipment for the exercise facilities and supported specialist staff training.

If you would like to support the Cardiac Rehabilitation Team, please speak to your Cardiac Rehabilitation Nurse or Exercise Physiologist who will be please to give you details. You can also contact the OUH Charitable Funds Team on: 01865 743 444.

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.

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www.ouh.nhs.uk/information

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