Physical activity and your heart

FIGHT FOR EVERY HEARTBEAT

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The British Heart Foundation (BHF) is the nation’s heart charity, dedicated to saving lives through pioneering research, patient care, campaigning for change, and providing vital information.

We rely on donations of time and money to continue our life-saving work. If you would like to make a donation, please:

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For other ways to support our work, and for up-to-date information on heart disease, the BHF and our services, see bhf.org.uk

Together we can beat heart disease.
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About this booklet

This booklet is for people who have a heart condition, and for those who are at a high risk of developing heart disease, for example because they have high blood pressure or a high cholesterol level.

In most cases, physical activity can:

• help improve your heart health if you already have a heart condition
• help your recovery after having heart surgery or a heart attack, and
• help improve many of the ‘risk factors’ which increase the overall risk of coronary heart disease. (We explain more about risk factors on page 18.)

This booklet explains:

• why physical activity is so important for the heart
• how much activity adults should generally aim to do
• which sorts of activity are best for your heart, and
• how to get started and keep going.

It also gives some information about physical activity for people who already have particular heart conditions, and for those who have recently had treatment for their condition, such as heart surgery or an angioplasty, or who
have had a pacemaker or ICD fitted.

This booklet does not replace the advice that the health professionals looking after you may give you, but it should help you to understand what they tell you.
Why is physical activity so important for my heart?

The heart, like any other muscle, needs physical activity to help keep it in good condition.

The good news

- Physical activity can help to reduce the risk of getting coronary heart disease.
- If you have high blood pressure, a high cholesterol level or diabetes, physical activity can help to improve these conditions and help protect your heart.
- If you already have coronary heart disease (if you get angina or have had a heart attack), physical activity can help protect your heart and help to reduce your risk of having further heart problems.
- If you have another type of heart condition, regular physical activity can benefit your overall heart health.
- If you have recently had a heart attack or heart surgery, regular physical activity can help with your recovery.
About one in every five cases of coronary heart disease in developed countries is due to physical inactivity. Regular, moderate-intensity physical activity reduces the risk of developing coronary heart disease and can reduce the likelihood of dying from heart disease. However, about 7 out of every 10 women and 6 in every 10 men in the UK are not active enough to protect themselves against coronary heart disease.

**Other benefits of physical activity**

Regular physical activity can also help to improve health in other ways. The benefits can include:

- improving strength, flexibility and balance
- improving body shape and appearance
- having more energy
- improving mood
- helping to reduce stress and anxiety
- helping you to relax, and
- sleeping better.

It also helps to prevent osteoporosis (thinning of the bones) and some cancers.

Physical activity has particular benefits for older people. It can help prevent falls, and can help you stay mobile and independent as you get older. It also helps to slow down
the progression of osteoporosis.

As well as protecting your health, many people find that physical activity can help to improve their self-confidence and their social life, as it’s a way of meeting other people and having a good time.
What type of activity will help my heart, and how much should I aim to do?

The best type of activity to keep your heart healthy is aerobic activity. Aerobic activity is any repetitive, rhythmic movement that involves large muscle groups such as the legs, shoulders and arms – for example, walking or cycling. When you do an aerobic activity, your body needs more oxygen and so your heart and lungs have to work harder. This makes the heart and circulation more efficient. Aerobic activity also helps to develop your stamina.

Examples of aerobic activity include:

- brisk walking
- cycling
- aerobics
- dancing, and
- climbing the stairs.

Building activity into your everyday routine

You don’t have to join a gym or buy expensive equipment to get the benefits of activity. You can improve your health just by fitting more activity into your everyday life.
• Walk to the local shops rather than taking the bus or car.
• Park further away from the entrance to the supermarket than you would usually.
• Use the stairs instead of the lift or escalator.
• Get off the bus one stop earlier and walk the rest of the way.
• Walk with your children or grandchildren instead of taking the car or bus.
• Do some gardening.

Other ways of becoming more active

Some people enjoy going to classes or groups to exercise. This can help you feel motivated and can be more fun than exercising on your own. Many local authorities and community groups run activity programmes, fitness classes and walking groups for different ages. To find out what’s available in your local area, ask at your local library, leisure centre or community centre. Some people prefer to join a gym. However, if you want to use a gym or do exercise classes, you should check with your doctor that the activities are suitable for you and your heart condition.
How much activity should I aim to do?

You should aim to do some activity every day.

Over a week, you should do a total of at least 150 minutes (2½ hours) of moderate-intensity activity. Moderate-intensity activity means activity that makes you feel warmer and breathe harder, and makes your heart beat faster than usual, but you should still be able to carry on a conversation. You can do the 150 minutes in bouts of 10 minutes or more. One way to achieve the 150 minutes is to do 30 minutes’ activity on five days a week.

As well as the 150 minutes of moderate-intensity activity a week, you should also do some activity to improve your muscle strength on at least two days a week. We explain more about this on the next page.

If you’re over 65, you should also do some activity to improve your balance and co-ordination on at least two days a week, to help reduce the risk of falls. We explain more about this type of activity on the next page.

Some people may not be able to do much activity. However, some activity is better than none and can still benefit your heart health. A good way to start is to aim to do some 10-minute sessions of moderate-intensity physical activity. If you’re not sure about how much activity you should aim to do, check with your doctor.
Activities for muscle strength

You should do physical activity to improve your muscle strength on at least two days a week. This is in addition to the recommended 150 minutes’ activity a week.

As well as improving muscle strength, these activities also help with good posture and balance. And they can help with your body shape, improving the way you look and feel.

Examples of activities for muscle strength include using resistance bands, climbing stairs, digging the garden, lifting and carrying shopping, pilates, yoga, Tai Chi and lifting weights.

Activities for balance and co-ordination

If you’re over 65, you should also do some physical activity to improve your balance and co-ordination on at least two days a week. This will help reduce your risk of falls.

Balance and co-ordination activities include dancing (for example, ballroom or line dancing), Tai Chi, rambling, cycling, bowls, and exercise classes that include standing and moving exercises.

Some activities – such as dancing and cycling will improve your balance and co-ordination and may also
count towards your 150 minutes’ activity a week.

For more information on all the different types of activity, see our booklet *Get active, stay active* or, for those aged over 50, our booklet *Be active for life.*

**If you have high blood pressure or a heart condition**

If you have high blood pressure or a heart condition, it is very important that you check with your doctor or cardiac rehab team before doing the exercises listed on pages 10 to 13 or any new type of exercise, in case they are not suitable for you.
Getting started … and keeping going

Any increase in your physical activity can benefit your health, including your heart health. But it’s important to build up your activity level gradually – especially if you have not been active for a while.

Here are some tips to help you get started … and keep going.

• Start slowly and at a level that suits you. Don’t be over-ambitious. Just set yourself small, achievable goals to start with.
• Gradually build up how long you exercise for, how often, and how intense the activity is. As you get fitter, you will be able to do more.
• Try and do something every day and build a healthy habit. Plan a time in your day when you will do your activity. Use your diary or a calendar if it helps.
• Choose activities you enjoy. We’re all more motivated if we’re doing something we enjoy.
• Vary your activities. This will help to maintain your interest and avoid boredom. Or maybe try a new activity.
• You may want to involve your partner, family or friends to make it more fun. You can support each other, and
you’ll have company as well.
• Use reminders. Put a note where you will see it – by the front door, on the fridge or by the kettle – to remind you to do some activity. Or keep your walking shoes near the door.

For more information on ways of building up your activity level, see our booklet Get active, stay active or, if you’re over 50, our booklet Be active for life.

**Warming up and cooling down**

Each time you do any physical activity, it’s very important that you warm up first and cool down afterwards. Warming up means beginning your activity slowly for the first few minutes and building up gradually, to prepare your heart and body for exercise. When you come to the end of your activity, take time to slow down, and make sure you don’t stop suddenly. Cooling down is very important for ending your exercise session safely.

**Physical activity for older people**

Physical activity is important for heart health in people of all ages, including older people. For more information on staying active as you get older, see our booklet Be active for life.
If you have difficulty walking or have mobility problems

If you have difficulty walking, or if you have mobility problems, it is still important to be as active as possible, to help keep you and your heart healthy. Even a small amount of physical activity is good for you and is better than doing none at all.

Ask one of the health professionals looking after you – such as your doctor, cardiac rehab team or exercise specialist – about what types of activity you could do.

Ask at your local library or local authority leisure services department what’s available locally that would be suitable for you.

For more information about physical activity for people who are disabled or have mobility problems, contact one of the organisations on page 63.
How physical activity can help reduce your risk of coronary heart disease

Physical activity can reduce the risk of developing coronary heart disease. And, if you already have the disease, regular physical activity can help protect your heart. To understand why physical activity is so important, it helps to know about what causes coronary heart disease, and what increases the risk of getting it.

What causes coronary heart disease?
Coronary heart disease is caused when the coronary arteries (the arteries that supply blood to the heart muscle) become narrowed by a gradual build-up of fatty material – called atheroma – within their walls. This can cause angina (chest pain). Or, if a coronary artery becomes blocked by a blood clot, it can cause a heart attack.

The ‘risk factors’ for coronary heart disease
A ‘risk factor’ is something which increases your risk of getting a disease. There are several known risk factors for coronary heart disease. These are:

• physical inactivity
• smoking
• high blood pressure
• high cholesterol levels
• being overweight
• diabetes, and
• having a family history of coronary heart disease.

Regular physical activity can have a dramatic effect on reducing many of the risk factors above. Below we explain more about some of these risk factors, and about how physical activity can help with each one.

**High blood pressure**

**What is it?**

High blood pressure – also called **hypertension** – is when the pressure of blood in the arteries is too high. High blood pressure can increase the risk of having a heart attack or a stroke, and over time it can cause the heart muscle to become less efficient.

**What causes it?**

Two common causes of high blood pressure are physical inactivity and being overweight.

**How physical activity can help**

Research shows that regular, moderate-intensity physical activity can prevent high blood pressure from developing.
If you already have high blood pressure
People who already have high blood pressure also benefit from being physically active. Research shows that regular, moderate-intensity physical activity can reduce or help control high blood pressure. For example, 30 minutes of moderate-intensity physical activity on most days of the week can help you to control your blood pressure.

If your blood pressure is not well controlled, or if you have high blood pressure and are planning to start any new activity, it is important to check with your doctor about how much activity you should do, and whether the activity you are planning to do is suitable for you. Also, there are some types of activity you should avoid. See page 25 for more on this.

See also the Safety tips on page 54. And for more information about high blood pressure, see our booklet Blood pressure.

High cholesterol levels
What is cholesterol?
Cholesterol is a fatty substance mainly made in your body. Having too much cholesterol in your blood can increase your risk of developing coronary heart disease. And if you already have a heart condition, a high
cholesterol level can increase your risk of having further heart problems.

There are two main types of cholesterol:

- **LDL** is the harmful cholesterol.
- **HDL** is a protective cholesterol, because it helps remove the harmful LDL cholesterol from the bloodstream.

**What causes high cholesterol levels?**

A common cause of high cholesterol levels in people in the UK is eating too much fat, especially saturated fat. Some people have a high cholesterol level because they have an inherited condition called **familial hypercholesterolaemia** – or **FH** for short.

**How physical activity can help**

Physical activity can help to raise the level of HDL cholesterol – the ‘protective’ cholesterol. To maintain this benefit of improving HDL cholesterol, you have to make sure you do regular physical activity of at least moderate intensity.

If you have FH, your cholesterol level is unlikely to be improved with physical activity alone. However, being active will still help to keep your heart healthy.
For more information, see our booklet Reducing your blood cholesterol.

**Being overweight**

Being overweight – and in particular having lots of fat around your middle – can greatly increase your risk of developing coronary heart disease, having a stroke or developing type 2 diabetes. It can also lead to problems with the bones and muscles – such as osteoporosis, osteoarthritis and low back pain – all of which make it more difficult to stay active.

Most people can achieve a healthy weight when there is a balance between the energy (calories) from the food that they take into their body, and the energy they use up in activity.

**If you are overweight**

If you are overweight, the best way to lose weight is through a combination of physical activity and eating a healthy diet. Research has shown that between 150 and 250 minutes of moderate-intensity physical activity a week will improve weight loss when combined with healthier eating habits. This may seem like a lot, but the activity can be spread across the whole week by doing several shorter amounts of physical activity – for
example, bouts of activity of at least 10 minutes. Build up the amount you do gradually and try to fit more activity into your daily routine. Research has shown that, even without weight loss, physical activity improves health. See page 7 for more information on this.

**Diabetes**

Having diabetes substantially increases the risk of developing coronary heart disease.

**What is it?**

There are two types of diabetes. **Type 1 diabetes** is when the body cannot make any insulin. **Type 2 diabetes** is when you can’t produce enough insulin, or the insulin doesn’t work properly. Your body needs insulin to help control the level of glucose in your blood.

Type 2 diabetes is more common than type 1. Type 2 diabetes tends to develop gradually after the age of 40, and in many cases is linked to being overweight and not being physically active.

**How physical activity can help**

If you are at risk of developing type 2 diabetes – for example, because you are overweight or not physically active, or have a family history of type 2 diabetes –
physical activity can greatly reduce your overall risk of developing the disease.

**If you have type 2 diabetes**

If you already have type 2 diabetes, being physically active can help to control your blood glucose levels, and reduce your risk of developing coronary heart disease.

When you are active, make sure that you wear properly fitting footwear that provides good cushioning.

If your diabetes is treated with insulin or certain medicines, you may need advice on how to manage your blood glucose level before, during and after physical activity.

For more information, see our booklet *Diabetes and your heart*.

For more information on all the risk factors for coronary heart disease, see the booklets listed on page 61.
If you already have a heart condition

If you have a heart condition, it is still very important to keep physically active, as this will help to maintain your heart health or may help to prevent your heart condition from getting worse.

If you already have a heart condition, it is important to talk with your doctor, nurse, cardiac rehab team, physiotherapist or exercise specialist about the best way to increase your level of physical activity. This is especially important if you’re not used to doing physical activity. There are many different ways to keep active, and it’s important to find activities that are safe and right for you. It’s also important that you build your activity level up gradually. For more on this, see page 15.

You may have already had an ECG (electrocardiogram) exercise test, either on a treadmill or exercise bike. The results of this test can help the medical team work out how much activity you can safely do at first.

Are there any activities I should avoid?

If you have a heart condition, you may be advised to avoid strenuous everyday activities such as carrying very heavy objects or heavy DIY or heavy gardening, such as digging. You may also be advised to avoid competitive,
vigorous sports such as squash. Ask your doctor or cardiac rehab team what sort of activities you can safely do, and how much you should do.

As a general rule, it is better for people with a heart condition or high blood pressure to avoid strenuous activities that cause breath-holding, grunting or straining. There is often a tendency to do this when lifting heavy weights, doing sit-ups, push-ups or chin-ups, or when holding the breath during stretching exercises. This type of activity can be harmful as it causes a sudden rise in blood pressure, which puts strain on the heart. If you enjoy weightlifting or weight training, you may still be able to take part in these activities, as long as you try to avoid holding your breath while keeping your mouth and nose closed.

You should also avoid doing static exercises that require you to exert force against a fixed object or hold the body in a fixed position for a short time – for example, pushing against a wall, or holding a weight steady out to the side. If you’re taking medicines which lower your blood pressure, you should avoid sudden changes in posture – for example, standing up quickly, or suddenly moving from floor-based activities to standing, as this can cause dizziness. You should also extend your cool-down period because the medicines may cause your blood pressure to
drop too much if you end your workout abruptly. If you have high blood pressure, you should also avoid physical activity that involves lots of overhead arm work.

**Is swimming OK?**

Swimming is OK for many people with a heart condition, but for some people it can increase the strain on the heart. If you have a heart condition and you want to take up swimming, it is very important that you check with your doctor or nurse first. If you have recently had a heart attack or heart surgery, but you used to swim regularly before that, you may eventually be able to go back to swimming. However, it’s important that you check with your doctor or cardiac rehab team before you start again.

**If you’re taking medicines for your heart condition**

If you’re taking medicines for your heart condition and are thinking of starting a new activity, check with your doctor whether it is OK for you to do that activity and how much it is safe to do.

If your doctor ever gives you any new medicine, ask whether it affects what sort of activity you can do. This applies particularly to medicines such as beta-blockers which slow down the heart rate.

If you go to a cardiac rehab exercise class, you should also
tell your exercise instructor if your doctor changes your medicines or about any changes in your heart condition.

On the next pages we give some specific information for people who have particular heart conditions or who have had certain types of treatment.

If you get angina

Angina is the pain or discomfort that you get as a result of coronary heart disease (see page 18). People describe it as a heaviness or tightness in their chest which can often make them feel breathless. For some people, angina can be severe and limiting, while other people experience no more than mild discomfort. The pain or discomfort often happens when the person is being active – when the heart muscle’s demand for oxygen is high but the narrowed coronary arteries cannot deliver enough oxygen-containing blood.

How physical activity can help you

Regular physical activity can help with your angina symptoms as it helps to improve the blood supply to the heart. It also increases your exercise capacity, which can lead to a reduction in how often you get angina, and how severe it is. It can also help prevent your coronary heart disease from getting worse.
What you can do

It is important to find out how much activity you can manage to do easily without getting your angina symptoms. To begin with, it may be helpful to plan a weekly exercise programme based on walking. Walking is an ideal activity which you can include in your everyday life, and it’s free!

Choose a walking distance and speed that you know you can manage easily without getting angina. Make this your target. Do this amount twice a day for two days. Each time, judge whether the activity was easy or difficult. If it was fairly easy or easy, very gradually increase the distance each day for the next two days. If the activity was difficult, limit yourself to a slower speed or a shorter distance, until you find it easy.

Make sure that you can do the activity comfortably without bringing on your angina symptoms before increasing your target. And keep your activity regular and frequent and within, rather than beyond, your limits.

For more information, see our booklet *Angina*. 
Sensible precautions

For people who get angina

- It is particularly important to warm up before you start your activity. Your warm-up should be at least 15 minutes and you should cool down for at least 10 minutes at the end. (See Warming up and cooling down on page 16.) This may reduce the chance of you experiencing your angina symptoms.
- Try to avoid doing physical activity after a heavy meal or in either very cold or very hot weather.
- Your doctor may have given you a GTN spray or tablets. Have these with you when you are doing any physical activity.
- If you are about to do any activity which you know is likely to bring on angina symptoms – for example, climbing a hill – you might want to take your GTN spray or tablets beforehand to try and avoid having an angina episode. Ask your doctor about what dose to take.
- If you notice a change in pattern in your angina – for example, if it happens more frequently, or if it is happening while you are resting – and you find you are not able to do what you once could, stop the activity and speak to your doctor as soon as possible about the changes.
• If you have recently been diagnosed with angina, you may want to talk to your doctor about how much physical activity you can do.

For information on what to do if you get chest pain while you are exercising, see the next page. See also *If you already have a heart condition*, on page 25.
What to do if you get chest pain

The information below is for people who already have coronary heart disease and who are taking GTN (glyceryl trinitrate) spray or tablets for their angina symptoms.

As you already have coronary heart disease, you may get chest pain or discomfort now and then. Sometimes this will be angina, which you will be able to manage at home with your GTN. However, it could also be a symptom of a heart attack.

This is what to do.

1. **Stop** what you are doing.
2. **Sit down** and rest.
3. **Use your GTN spray or tablets.** Take the GTN as your doctor or nurse has told you. The pain should ease after a few minutes. If it doesn’t, take your GTN again.
4. If the pain does not ease within a few minutes of taking the GTN the second time, **call 999 immediately.**
5. If you’re not allergic to aspirin, chew an adult aspirin tablet (300mg) if there is one easily available. If you don’t have an aspirin next to you, or if you don’t
know if you are allergic to aspirin, just stay resting until the ambulance arrives.

If you have symptoms that do not match the ones we have described above, but you think that you are having a heart attack, call 999 immediately.

If you have recently had a heart attack
A heart attack happens when one of your coronary arteries (the arteries that supply your heart muscle with oxygen-containing blood) becomes blocked with a blood clot. Part of your heart muscle becomes starved of oxygen and may become permanently damaged.

How physical activity can help you
Physical activity plays an important part in helping you to recover after a heart attack. It improves the body’s ability to take in and use oxygen, which means that you should be able to do regular daily activities without feeling so tired. This is particularly important because a heart attack can often cause a reduction in your capacity to exercise. Physical activity also builds up your strength, stamina and confidence and can help to improve feelings of wellbeing.

In people who have had a heart attack, regular physical
activity can reduce the risk of dying from a further heart attack.

**What you can do**

It is natural to feel a bit nervous about starting to do physical activity again after a heart attack. However, it is important to gradually start being active again. Start with light activities and gradually increase how much you do as you become stronger and more confident. When you first get back from hospital after your heart attack, start doing light activities at home as soon as you feel fit and able – for example, washing up and dusting. After a few weeks, you may feel well enough to do other housework such as light vacuuming. You can do light gardening, but avoid digging and heavy lifting in the first few weeks.

**Walking** is an ideal form of activity during the early weeks after a heart attack. If the weather is OK, go out with a friend or relative for a short walk, ideally somewhere fairly flat. As well as helping your recovery, getting into the fresh air and taking some exercise can help to lift your spirits.

Gradually increase the amount of walking you do over the first two or three weeks after your heart attack. After two or three weeks, you should be able to walk longer distances.
Many people find that they tire easily in the early weeks after a heart attack. This is normal and will pass as your strength and confidence return.

Avoid walking outdoors when it is either very hot or very cold, as extremes of temperature affect the heart and circulation. Instead, try walking on the spot or up and down the hallway at home for the same length of time, or do some walking in your local shopping centre or supermarket.

You should be invited to take part in a cardiac rehabilitation programme after you are discharged from hospital. Cardiac rehabilitation classes are usually run by specialist cardiac nurses, physiotherapists and exercise instructors. They give you the opportunity to become more active in a safe and supportive setting. For more on this, see page 48.

For more information, see our booklet *Heart attack*. 
Sensible precautions

If you have recently had a heart attack

If you get symptoms such as angina or breathlessness while you are doing your physical activity, it is important to stop and rest. Have your GTN spray or tablets with you and use them when you need to. See page 32 for information on what to do if you get chest pain.

There are many other activities that you can do as you get stronger and more confident. But before starting any new activity or sport, you should ask the health professional looking after you – for example, your doctor, cardiac rehab team or exercise specialist – about what it is safe for you to do.

The advice you are given about physical activity may be different to the advice that other people get. This is because everyone is different. Follow carefully the advice that your doctor or health professional gives you.

See also If you already have a heart condition, on page 25.
If you have heart failure

Heart failure is the term used when the heart becomes less efficient at pumping blood round the body, either when you are resting or active. The main symptoms of heart failure are breathlessness, swollen ankles and feet, and tiredness.

The most common causes of heart failure are a previous heart attack, and high blood pressure.

How physical activity can help you

Regular physical activity will improve your stamina and fitness, which can help you cope with the symptoms of heart failure. Physical activity can also improve quality of life and mental wellbeing in people with heart failure.

What you can do

Ask your doctor, nurse, cardiac rehab team or exercise specialist about the best type of activity for you, and how much activity you should be doing, so that you can make sure you are active at a level that is safe and right for you.

Walking is a good activity as you can build it into your daily routine.

Sometimes you may feel like you can’t do much at all, but think about what you already do – like going to the shops or walking in the garden, or moving around the
house to do housework or to make a cup of tea. Gradually increase your activity if you can, until you reach the level which is best for you.

If you have heart failure, you may have good days and bad days. On the good days, you may feel that you can do lots of things. But you need to find a balance between doing too much and too little. Plan what you know you can achieve in a day. Then, each day, stick to your plan, rather than doing what you feel you can do. If you overdo it, you may feel very tired for the next day or so, and may be limited in your activity.

If you have heart failure, you may find it helpful to spread your activity throughout the day. Doing a small amount of activity each time, along with regular rest periods, can often be helpful.

If, when you are doing your activity, you notice that you’re getting more breathless than usual, or that your ankles are more swollen than usual, stop doing your activity and speak to your GP.

See also If you already have a heart condition, on page 25.

For more information on heart failure, see our booklets Living with heart failure and The heart failure plan.
If you have heart valve disease

A diseased or damaged heart valve can affect the flow of blood in your heart in two ways. ‘Stenosis’ is when a valve does not open fully. ‘Regurgitation’ is when a valve does not close properly and allows blood to leak backwards. Both of these may put extra strain on your heart.

The causes of heart valve disease include being born with an abnormal valve, having had rheumatic fever, ageing of the heart, and certain infections.

The symptoms of heart valve disease vary from one person to another. People who have mild heart valve disease may have few or no symptoms. However, others may suffer from feeling tired, feeling breathless, or swollen ankles and legs.

What you can do

Many people with a heart valve problem can achieve a good level of physical activity, especially if their heart valve disease is only mild. However, others may find that they cannot do as much activity as they used to, or may feel restricted in the types of activities they feel able to do.

If you have heart valve disease, it is very important that you ask your cardiologist or GP about the level and type of physical activity that you can safely do. See also If you
already have a heart condition, on page 25, and page 15 for information on how to build up your activity gradually.

Some people who have had a heart valve replacement need to take anticoagulants (blood-thinning medicines) – such as warfarin – to reduce the risk of blood clots forming on their heart valve. If you are taking anticoagulants and you take part in contact sports or sports where there is a high risk of physical injury (even minor injury), you will need to discuss this with your doctor, because of the risk of bleeding.

For more information, see our booklet *Heart valve disease*.

**If you have recently had heart surgery**

**How physical activity can help you**

If you have recently had coronary bypass surgery, or surgery to repair or replace one of your heart valves, it is important to gradually start being active again as soon as you can. This will help with your recovery and also improve your overall heart health.

**What you can do**

You may be surprised at how soon after heart surgery you’ll be able to move around again. The physiotherapist will make sure that you are walking up and down stairs
comfortably before you go home from hospital.

When you go home, walking is an ideal form of exercise. Start slowly and build up gradually as you feel able. Gradually you will be able to walk longer distances. Before you leave hospital, ask your cardiac rehab team or physiotherapist how much activity you should do when you go home and how to gradually increase the amount you do.

If you had open-chest surgery, you will not be able to lift, push or pull anything heavy or do heavy work in the home until your breastbone is healed.

It is important to speak to your doctor, nurse or cardiac rehab team before you start any new or strenuous activity. They will be able to offer you advice and assess how much you can do after the particular type of surgery you have had.

You may be invited to take part in a cardiac rehabilitation programme after you go home from hospital. This will help you to recover more quickly and improve your fitness. For more on this, see page 48.

For more information, see our booklet *Having heart surgery.*
If you have had an angioplasty that was planned in advance

You may feel tired after having your angioplasty, but most people find that they’re back to normal within a few days.

It’s best to avoid doing any demanding activities, like heavy lifting, for at least a week.

If your doctor or nurse says it’s OK, you should gradually increase your activity.

However, if you have had an angioplasty because you recently had a heart attack, you will need to build up your activity at a slower rate than this. For more information, see If you have recently had a heart attack, on page 33.

You may be invited to take part in a cardiac rehabilitation programme after you go home from hospital. This will help you to recover more quickly and improve your fitness. For more on this, see page 48.
Paul’s story

Paul Worstenholme, aged 48, was diagnosed with angina and went on to have an angioplasty and a stent fitted in one artery, to treat the narrowing that was causing his symptoms. Afterwards he went to cardiac rehab where the physio tailored an exercise programme to suit his needs.

“After five or six weeks I was confident enough to get my road bike out of the garage and start cycling again. That was three years ago. Since then I’ve ramped up my cycling, covering 70 to 100 miles a week in summer. I go skiing twice a year and became a dad for the third time last May.

I also read as much as I could find, including the BHF material, which was really useful. It was helpful to know that I should get back to exercising every day. For me, the biggest thing was getting over the mental barrier of having had a heart problem and worrying about what I should and shouldn’t do. Reading about the subject and talking to people who had been in a similar position was invaluable in getting my head back in the right place.”
If you have a pacemaker or an ICD

Pacemakers and ICDs are devices that are implanted in the chest wall to help treat certain abnormal heart rhythms. A **pacemaker** may be used if there is a problem with the electrical conduction system in your heart. The pacemaker sends out electrical impulses to stimulate the heart to contract and produce a heartbeat. An **ICD** (implantable cardioverter defibrillator) is used for people who are at risk of having a dangerous abnormal heart rhythm. It can deliver either pacing treatment (like a pacemaker does) or an electrical shock, to get the heart rhythm back to normal.

How physical activity can help you

Building physical activity into your everyday routine will help you to recover after you have had your pacemaker or ICD fitted. It will also help protect your heart health and help prevent further heart disease.

What you can do

**If you have either a pacemaker or ICD**

It is best to avoid strenuous physical activity until after your first pacemaker or ICD check, which is about four to six weeks after you have the device fitted. As a general guide, for the first six weeks don’t lift above shoulder
height the arm on the same side as your pacemaker or ICD. This is because there is a very small risk that one of the leads of the device might move out of position. However, during these first weeks it is very important to keep your shoulder mobile by gently moving the arm on the side of the pacemaker or ICD.

If you have a pacemaker or an ICD, it is better for you to avoid activities or contact sports where there is a repeatedly high risk of body collision – either with other people or with hard surfaces or equipment. This includes, for example, hockey, rugby, football, judo and kick-boxing. This is because there is a small risk of damaging the leads of the pacemaker or ICD.

If you do play sports such as football, you should take care to avoid collisions. You should discuss any contact sports with the staff at your pacemaker or ICD clinic. They might advise you to use a protective pad over the pacemaker or ICD site.

Most other activities should be fine, but check with your pacemaker clinic or ICD clinic or your doctor first. Also, see page 15 for information on how to build up your physical activity gradually, and also the Safety tips on page 54.

For more information on pacemakers, see our booklet Pacemakers.
If you have an ICD

There are lots of activities that you can do safely with an ICD. Moderate-intensity physical activity is safe for most people who have an ICD. It is important that you warm up before doing your activity and cool down for a few minutes afterwards. (See *Warming up and cooling down*, on page 16.) The amount and type of activity you are able to do will depend on your condition. Ask your cardiologist, nurse or cardiac physiologist about how much and what type of activity you can do.

Most of the arrhythmias that trigger ICDs to discharge an electrical shock are significantly faster than your normal heart rate would reach, even with strenuous exercise. However, occasionally the ICD needs to be programmed to recognise the difference between a normal fast heart rate that you may achieve through strenuous exercise, and an abnormal fast heart rhythm. If you are concerned about this, ask about it at your ICD clinic.

Avoid doing activities that could be dangerous if your ICD were to deliver its defibrillation treatment – for example, scuba diving, or swimming on your own. Also, if you have an ICD, it may be difficult for you to get insurance to cover skiing or sports classed as ‘extreme sports’.

Some people who have an ICD are limited in the type of
activity or level of activity they can do, because of the underlying health condition which caused them to need the ICD in the first place. If you think this might apply to you, ask the health professional looking after you.

For more information on ICDs, see our booklet *Implantable cardioverter defibrillators (ICDs).*
Physical activity as part of cardiac rehabilitation

Cardiac means to do with the heart. Rehabilitation is the process of getting you back to as full a life as possible. ‘Cardiac rehabilitation’ is sometimes called ‘cardiac rehab’.

If you have had a heart attack or heart surgery, or if you have been diagnosed with a heart condition, you may be invited to go on a cardiac rehabilitation programme. This may be either at your local hospital or in the community. If you haven’t already been invited to a programme, ask your GP or practice nurse if they can refer you to one. Or, see page 50 for how to find out what programmes are running in your area.

A cardiac rehabilitation programme often includes advice on lifestyle including healthy eating and relaxation techniques, as well as specially designed exercise sessions which will give you the confidence to build up your level of physical activity gradually and safely.

The aim of the exercise part of the programme is to help your recovery and improve your fitness and strength. It can also improve your confidence. By going to a cardiac rehabilitation programme, you can reduce the chance of any further heart problems. It can also help
to promote your health and help you to live longer.

Before you start the programme, you will have an assessment to find out how much exercise you can safely do. A nurse, physiotherapist or an exercise specialist can then work out a programme of exercises for you, tailoring the programme to your particular needs.

If you are quite limited by your heart disease, or if you have another condition that affects your movement – such as arthritis – they will be able to work out a special activity programme for you.

You will be encouraged to start slowly and gently, and to increase your activity gradually over the weeks of the programme. It is very important that you work within your limits and follow the advice given to you.

The types of activities and exercise sessions vary from one programme to another. Most programmes offer exercise sessions for groups, but some can provide one-to-one sessions.

The main exercises will be ‘aerobic’. These are exercises that help to improve your heart and circulation. (See page 10.) Most cardiac rehabilitation programmes include a number of different types of exercises. Some use equipment such as exercise bikes, and some may include chair-based exercises.
If you have uncontrolled symptoms – for example, if you have very high blood pressure – you may not be able to do the exercise session, but you can still benefit from the other parts of the cardiac rehabilitation programme.

For more information on cardiac rehabilitation programmes, see our booklet *Cardiac rehabilitation*.

To find out if there is a cardiac rehabilitation programme in your area:

- ask your GP, nurse or cardiologist
- call the Heart Helpline on 0300 330 3311, or
- visit the Cardiac Rehabilitation website www.cardiac-rehabilitation.net

**After your cardiac rehabilitation programme**

At the end of your cardiac rehabilitation programme, there is sometimes the opportunity to be referred to a long-term activity programme. This may consist of **fitness classes**, at leisure centres or community centres, which are specially tailored for people with heart conditions. You can ask one of the cardiac rehab team about this.

In some local areas there is an **exercise referral programme**. These programmes are usually aimed at people who are not used to physical activity or people who are at risk of heart disease. The programmes may
offer exercise classes or walking groups. Or sometimes a trained exercise professional will create a gym programme tailored to your needs. You will need to be referred by your GP or nurse to this service. To find out if there is an exercise referral programme in your area that is suitable for you, ask your GP, nurse or cardiac rehab team.

There are probably many other different activity groups that run independently in your local area, and that anyone can join – such as walking groups, dancing classes or gardening work. (See page 63 for more about these.) Before you go along, you will need to check with your doctor that the activity is OK for you. You will also need to let the staff at the group know about your heart condition.
Sex and heart disease

People with a heart condition and their partners are often understandably anxious about how sex may affect the heart. However, many people with heart conditions continue to enjoy sex, and most of those people who have had a treatment for their heart condition can return to their sex life. Like any other physical activity, having sex can temporarily increase the heart rate and blood pressure. This increases the work of the heart and, in people with coronary heart disease, may occasionally lead to breathlessness or chest pain. However, sex is just as safe as other equally energetic forms of physical activity or exercise.

If you have had heart surgery, you can have sex as soon as you feel you have recovered. For most people this is within a few weeks, but some people prefer to wait longer until they feel ready. If you have had heart surgery, be careful not to put the chest wound under too much pressure. If you’re not sure when you can start having sex, talk to your GP.

To reduce the chance of having angina symptoms during sex, avoid having sex after a heavy meal, and try not to be too energetic at the start of your sexual activity. Also, if you have a GTN spray or tablets, keep it nearby in case
you need it.

Loss of sex drive is not uncommon after illness. Some men may experience impotence (the inability to get or keep an erection). This may be the result of the emotional stress you are feeling. However, occasionally it can also be the result of certain medicines, such as beta-blockers, which can affect your sex drive. It may also be the result of poor blood circulation or diabetes. Impotence is a common problem so, if you are having difficulties, talk to your doctor about it.

If you have a heart condition, you should be cautious about taking PDE-5 inhibitors such as Viagra. You should not take these medications if you are taking GTN or any other medicine containing nitrates. PDE-5 inhibitors can also interfere with other medicines for your heart, so always check with your doctor beforehand.
Safety tips

• It is very important to increase your physical activity gradually. This means both the amount of time you spend doing it, and how intense the activity is.

• **Warm up and cool down each time you do any physical activity.** Begin slowly for the first few minutes and build up gradually. When you come to the end of your activity, take time to slow down, and make sure you don’t stop suddenly.

• Avoid doing activities after a large meal, or when it is very hot or very cold, or at high altitudes.

• If you are doing any activity outdoors in cold or windy weather, dress warmly, with a hat and a scarf.

• Don’t exercise if you have a viral infection (for example, a sore throat) or a temperature.

• If you are doing sport or activity, make sure your clothing and footwear are comfortable and fit well. Wearing well-fitting footwear is especially important if you have diabetes.

• If you have a heart condition or high blood pressure, or if you are taking medication for these conditions, don’t start any new activity without discussing it first with your doctor.

• If you get angina, take your GTN spray or tablets with
you when you do any physical activity. If, while you are exercising, you get an episode of angina or think you may be about to get an episode, take your GTN as prescribed. See page 32 for more on this.

- Stop exercising if you get any pain, or feel dizzy, sick or unwell, or very tired. If the symptoms don’t go away, or if they come back later, see your doctor or go to your nearest accident and emergency department.
Do I need to measure my pulse or heart rate while I’m exercising?

You don’t need to take your pulse or measure your heart rate to find out if you are exercising at moderate intensity.

To find out if you are exercising at moderate intensity, you can simply do the talk test. If, while you are doing the activity, you feel warm and are breathing more heavily than normal, but you can still talk, you are probably working at a moderate level.

Some people do choose to check their pulse when they exercise. Measuring your own pulse tells you the number of times your heart beats in one minute. You can check your pulse either by hand or using a special monitor. Ask the health professional looking after you for advice about what pulse or heart rate you should aim for.

Some medicines that are used to treat heart conditions – such as beta-blockers – slow down the heart rate and prevent the heart from responding to exercise as it normally would. So, if you are taking these medicines, it may be easier and more effective to do the ‘talk test’ while you are exercising, rather than monitoring your heart rate.
How your support can help

Over recent decades, research funded by the BHF has made a substantial contribution in the fight against heart disease. For example, we fund the BHF Health Promotion Research Group at the University of Oxford. The group was set up in 1994 and regularly carries out research into the importance of physical activity.

We aim to play a leading role by continuing to support vital research. The number of people dying from heart and circulatory disease each year in the UK is falling. But this means that more people are living with the disease, so there is still a great deal to be done.

Our next big challenge is to discover how to help the heart muscle repair itself, and find a cure for heart failure. Visit our website bhf.org.uk/findthecure to find out about our Mending Broken Hearts Appeal and see how your support can help make a difference.
Heart attack? Know the symptoms … and what to do

A heart attack is when a part of the heart muscle suddenly loses its blood supply. This is usually due to coronary heart disease.

The symptoms of a heart attack

- Pain or discomfort in the chest that doesn’t go away.
- The pain may spread to the left or right arm …
- … or may spread to the neck and jaw.
- You may feel sick or short of breath.

Think quick … act fast. Call 999 immediately.
What to do if you think someone is having a heart attack

1. Send someone to call 999 for an ambulance immediately.

2. If you are alone, go and call 999 immediately and then come straight back to the person.

3. Get the person to sit in a comfortable position, stay with them and keep them calm.

4. If the person is not allergic to aspirin, give them an adult aspirin tablet (300mg) to chew if there is one easily available. If you don’t have an aspirin next to you, or if you don’t know if the person is allergic to aspirin, just get him or her to stay resting until the ambulance arrives.
For more information

British Heart Foundation website
bhf.org.uk
For up-to-date information on heart disease, the BHF and its services.

Heart Helpline
0300 330 3311 (a similar cost to 01 or 02 numbers)
For information and support on anything heart-related.

Genetic Information Service
0300 456 8383 (a similar cost to 01 or 02 numbers)
For information and support on inherited heart conditions.

Booklets and DVDs
To order our booklets or DVDs:
• call the BHF Orderline on 0870 600 6566, or
• email orderline@bhf.org.uk or
• visit bhf.org.uk/publications

You can also download many of our publications from our website. For a list of resources available from the BHF, ask for a copy of Our heart health catalogue. Our booklets are free of charge, but we would welcome a donation. (See page 2 for how to make a donation.)
Heart Information Series

This booklet is one of the booklets in the *Heart Information Series*. The other titles in the series are as follows.

Angina
Atrial fibrillation
Blood pressure
Cardiac rehabilitation
Caring for someone with a heart condition
Coronary angioplasty
Diabetes and your heart
Having heart surgery
Heart attack
Heart rhythms
Heart transplantation
Heart valve disease
Implantable cardioverter defibrillators (ICDs)
Keep your heart healthy
Living with heart failure
Medicines for your heart
Pacemakers
Peripheral arterial disease
Physical activity and your heart
Primary angioplasty for a heart attack
Reducing your blood cholesterol
Returning to work with a heart condition
Tests for heart conditions
Our services

For more information about any of our services, contact the Heart Helpline on 0300 330 3311 or visit bhf.org.uk

Emergency life support skills
For information about Heartstart – a free, two-hour course in emergency life support skills, including what to do if someone seems to be having a heart attack – call the BHF Helpline on 0300 330 3311 or visit bhf.org.uk

Heart Matters
Heart Matters is the BHF’s free, personalised service that provides support and information for people who want to improve their heart health. Join today and enjoy the benefits, including heart matters magazine and an online members’ area. Call the Heart Helpline on 0300 330 3311, or join online at bhf.org.uk/heartmatters

Heart support groups
Local heart support groups give you the chance to talk about your own experience with other heart patients and their carers. They may also include exercise classes, talks by guest speakers, and social get-togethers. To find out if there is a heart support group in your area, contact the Heart Helpline on 0300 330 3311.
Make yourself heard – Heart Voices

Heart Voices gives you the skills, confidence and knowledge you’ll need to influence health services for the benefit of heart patients and their families across the UK. It aims to develop a nationwide network of representatives to speak out on behalf of heart patients and their carers, and to provide them with training and opportunities to have their say and get involved.

Useful organisations and websites

British Cycling
www.britishcycling.org.uk
For information about cycling, places to ride and cycling events.

Countryside Council for Wales
Phone: 0845 130 6229
www.ccw.gov.uk

Let’s Walk Cymru
http://letswalkcymru.community.sequence.co.uk
Phone: 02920 644308
For information about health walk programmes in Wales. Also provides information on training.

Paths for All
Phone: 01259 218888 or 01463 725152
www.pathsforall.org.uk
Walking for health in Scotland.

**Ramblers**
Phone: 020 7339 8500
www.ramblers.org.uk

**Spogo**
www.spogo.co.uk
Allows you to search for a wide range of sports facilities in England.

**Sustrans**
Phone: 0845 113 00 65
www.sustrans.org.uk
Sustainable transport charity. Encourages people to walk and cycle.

**TCV (The Conservation Volunteers)**
Phone: 01302 388 883. www.tcv.org.uk
TCV runs Green Gym – a scheme to help improve both your health and the environment at the same time.

**Walking for Health**
Phone: 020 7339 8541. www.walkingforhealth.org.uk
Encourages people to do regular short walks in their local communities. They support many walk schemes and can tell you where your nearest walks are.
For people with mobility problems or a disability

**Disability Sport Wales**
Phone: 0845 846 0021
www.disabilitysportwales.org

**English Federation for Disability Sport**
www.efds.co.uk

**Extend**
Phone: 01582 832760. www.extend.org.uk
Offers local exercise classes for those aged over 60 and for anyone of any age with a disability.

**Inclusive Fitness Initiative**
Phone: 01509 227750. www.efds.co.uk
For details of centres, with special equipment and specially trained staff, offering fitness programmes for disabled and less mobile people.

**Thrive**
Phone: 0118 988 5688. www.thrive.org.uk
A charity which helps people with disabilities to take part in, benefit from and enjoy gardening.

**WheelPower/British Wheelchair Sport**
Phone: 01296 395995
www.wheelpower.org.uk
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Have your say

We would welcome your comments to help us produce the best information for you. Why not let us know what you think? Contact us through our website bhf.org.uk/contact. Or, write to us at the address on the back cover.

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The British Heart Foundation would like to thank all the GPs, cardiologists, nurses and other health professionals who helped to develop the booklets in the Heart Information Series, and all the patients who commented on the text and design.

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Coronary heart disease is the UK’s single biggest killer.

For over 50 years we’ve pioneered research that’s transformed the lives of people living with heart and circulatory conditions. Our work has been central to the discoveries of vital treatments that are changing the fight against heart disease.

But so many people still need our help.

From babies born with life-threatening heart problems to the many Mums, Dads and Grandparents who survive a heart attack and endure the daily battles of heart failure.

Join our fight for every heartbeat in the UK. Every pound raised, minute of your time and donation to our shops will help make a difference to people’s lives.

**FIGHT FOR EVERY HEARTBEAT**
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