

Appendix 1: Information sheet for patients with benign (non-cardiac) chest pain

Accident and Emergency Department

Information for patients with benign (non-cardiac) chest pain

The results of your tests:

The blood tests we have taken today have shown no evidence of damage to your heart.
Your exercise treadmill test was normal.
If you have any further questions relating to these results telephone
9.00am to 5.00pm,
Monday to Friday, to speak to one of the chest pain nurses.
Alternatively telephone the hospital switchboard, and ask them to bleep the chest pain nurses.

What is benign chest pain?

Many people with chest pain who have tests are found to have normal hearts and no heart disease.

The results of your tests show that you do not have heart disease. This means that your chest pain is not caused by heart disease.

What causes benign chest pain?

There are several causes of benign chest pain.
These include:

- Pain in the muscles between the ribs caused by tension in these muscles.
- Pain in the chest wall caused by strains or tears in the muscles or ligaments.
- Breathing incorrectly, such as breathing too fast, or over-using the chest muscles to breathe.
- Spasm, tightening or inflammation of the oesophagus (the food pipe from the throat to the stomach).
- Pain coming from pinched nerves in the neck or back.

What does this mean?

These are all real physical causes of chest pain, but none of them are medically serious. This means that you can start to return to living a normal life, without letting your chest pain limit what you do.

All of the physical causes listed above can be made worse by *avoiding activity, by concern and worry, and by excessive focusing on the pain.*

- **Avoiding activities** such as work, hobbies, or exercise, can worsen pain, rather than making it better. Sometimes people avoid these activities because they think that activity will either bring on their symptoms or make their pain worse. In fact, avoiding activities means that chest pain becomes more likely in the long run. It also means that the chance of getting heart problems in the future is increased. Physical activity can keep you healthy and most people feel generally better when they are fit. Living a full life will help to keep your heart healthy.
- **Concern and worry** can lead to increases in muscle tension, which in turn causes more pain in the chest, which in turn can lead to more worry. A vicious circle of worry and chest pain can therefore be set up.
- **Excessive focusing on the body** means paying great attention to sensations such as pain or discomfort coming from the chest. This can worsen any discomfort that is present.

What can I do about the chest pain?

If you have benign chest pain there are several things you can do that can really make a difference, and help you to return to a normal life.

Four useful steps include:

- Increasing your activities and exercise
- Controlling your breathing
- Relaxing
- Dealing with worrying thoughts.

Some tips on what to do are detailed over the page. Do not expect an instant improvement, because practice and persistence are important. Generally, improvement occurs in fits and starts over a period of time.

What can I do now?

- **Increase your activity levels and take more physical exercise.**

Having chest pain may mean that you have been taking less exercise and avoiding doing certain things.

Remember, because you do not have heart disease, you can exercise when you get pain and **exercise cannot harm you**. In fact, exercise will help to keep your heart healthy and most people feel generally better when they are fitter. It is important to exercise and increase your physical activity otherwise there is a risk you will become less physically fit and your muscles will get smaller, less powerful and hurt more when you exercise.

It will help if you make a list of the activities you have been avoiding. Select one activity to start with. This might be the easiest to get back to, or the one that you really want to get back to. With this one activity, gradually increase your level of activity over a period of time. Then, choose another activity that you have been avoiding, and steadily return to that. Gradually reduce the list of things that you have been avoiding because of the chest pain.

Aim to return to a full and active life. There is no reason why you cannot.

For further help you may want to look at:

Local websites

- **Controlling your breathing**

Many people breathe too fast or too deeply. This can cause chest muscles to ache and become tense and painful. Try to breathe **slowly**, through your **nose**, allowing your **stomach** and not your upper chest wall to swell, at a rhythm of 8 to 12 breaths per minute.

To control your breathing place one hand on your chest and one hand on your stomach. Normally the hand on your chest hardly moves when you breath but the one on your stomach will. Concentrate on this pattern of breathing and attempt to slow your breathing gradually.

- **Relaxation**

Relaxation will help you to reduce muscle tension which can cause chest pain. Practise (using a relaxation tape if possible) for 30 minutes once or twice a day for the first few weeks. Decide on a time of day, choose somewhere quiet and comfortable, and record your progress in a diary.

For more advice on how to relax and manage stress, read 'Manage Your Mind' (Butler, G & Hope, T: Oxford University Press).

Alternatively, on the web, have a look at:

www.nhsdirect.nhs.uk

or

Local websites

- **Dealing with worrying thoughts**

Chest pain is often accompanied by worrying or alarming thoughts, such as "this could be a heart attack" or "I might die". Understandably, these thoughts can increase anxiety. Increased anxiety can make your pain worse.

There are several ways to deal with worrying thoughts. These include:

- Distraction by physical or mental activity, such as going for a short walk, or reading a good book, or meeting friends.
- Refocusing your attention, away from your pain, by, for example, counting the number of red objects you can see.
- Managing your worrying thoughts. If you have thoughts such as "*there is something seriously wrong causing this pain*", or "*it's my heart*", write them down in a Thought Diary.

Then, try to replace the worrying thought with an alternative thought such as, "*I know there is nothing wrong with my heart because the nurse has done all the tests and my heart is normal. The chest pain is caused by tension in my chest muscles*".

When you are out and about, you can use this 'positive self-talk' to manage your thoughts and to manage your chest pain.

What else can I do?

- **If you smoke – stop!** This is the most important thing that any smoker can do to improve their health. By giving up smoking you can reduce the risk of developing many smoking related illnesses.

For practical advice on stopping, contact your GP, contact the NHS Smoking Helpline on **0800 169 0169**, or have a look at their website at www.givingupsmoking.co.uk.

- **Reduce stress.** Identify situations that make you feel stressed at home or at work. Avoid them if you can or work out ways of dealing with them.

Use a stress-reducing technique that suits you, such as yoga, relaxation tapes, or physical exercise. 'Manage Your Mind' (Butler, G & Hope, T; Oxford University Press) is an excellent book that can help you to manage the stresses in your life.

If you prefer the web, have a look at:

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or

Local websites.

Appendix 2: Information sheet for patients with chest pain of uncertain cause who are suitable for expectant management

Accident and Emergency Department

Information for patients when the cause of their pain is uncertain - but serious heart disease has been ruled out

The results of your tests:

The blood tests we have taken today have shown that there is no damage to your heart.
Your exercise treadmill test showed no evidence of serious heart disease.
If you have any further questions relating to these results telephone
9.00am to 5.00pm,
Monday to Friday, to speak to one of the chest pain nurses.
Alternatively telephone the hospital switchboard, and ask them to bleep the chest pain nurses.

All the results from your tests have come back normal, which means that it is highly unlikely that you have any serious heart disease. However the tests cannot rule out heart disease completely or predict whether you will develop it in the future. Even if you have normal test results there is still a small possibility that your chest pain may be heart pain.

What does this mean?

The important thing to remember is that there are many causes of chest pain and many of these are not serious or life threatening. The most common causes of chest pain include spasm or indigestion in the gullet (food pipe) or muscular pains in the chest wall. Your pain is probably caused by one of these. Although we do not know the exact cause of your pain the tests we have done show us that you are at low risk of having a serious problem and there is no need to investigate your chest pain further at the present time.

What will happen next?

Because we are happy that your symptoms do not indicate a serious heart problem we are happy for you to go home. Once home you can resume your normal activities.

Your symptoms should settle within a month. If this is the case then there is no need to investigate your chest pain further and you can be reassured that your pain is nothing to worry about. If however your symptoms continue it is important to discuss this with your G.P.

What can I do now?

Simple changes in your lifestyle can significantly reduce the chance of you developing heart problems in the future.

- **If you smoke – stop!** This is the most important thing that any smoker can do to improve their health. By giving up smoking you can reduce the risk of developing many smoking related illnesses. For practical advice on stopping, contact your GP, contact the NHS Smoking Helpline on 0800 169 0169, or have a look at their website at www.givingupsmoking.co.uk or look at www.bhf.org.uk/hearthealth.
- **Keep working.** Whatever the cause most people with chest pain should be able to continue in their usual job. Some changes to what you do at work and how you do it may be needed. Staying at work can help to keep your heart healthy.
- **Be more physically active.** Physical activity can help to keep your heart healthy and help to keep your weight down. Also, most people feel generally better when they are fit. For further information look at www.bhf.org.uk/hearthealth
- **Control high blood pressure.** If you have high blood pressure it is important to control it. Things that can help to do this include:
 - Increasing physical activity
 - Losing weight
 - Cutting down on alcohol and salt intake.
- **Eat fish and fish oil.** Eating oily fish such as herring, kippers, mackerel, pilchards, sardines, salmon, fresh tuna, trout and anchovies twice a week may help to prevent blood clots from forming in the arteries that supply the heart. Eating them regularly may also reduce the risk of you having a stroke.
- **Eat more fruit and vegetables.** People who eat more than 5 portions of fruit and vegetables a day are less likely to have heart disease. There is no evidence however that taking vitamin tablets has the same effect.
- **Control your weight.** By keeping close to your recommended weight for your height you will keep your blood pressure down and reduce the amount of work your heart has to do. Remember that losing weight involves both eating healthily and increasing physical activity. The British Heart Foundation provides information, advice and even recipe books to help you lose weight and stay healthy: see www.bhf.org.uk/hearthealth or phone **020 7935 0185**.

- **Reduce stress.** Identify situations that make you feel stressed at home or at work. Avoid them if you can or work out ways of dealing with them. Use a stress-reducing technique that suits you, such as yoga, relaxation tapes, or physical exercise. *'Manage Your Mind'* (Butler, G & Hope, T; Oxford University Press) is an excellent book that can help you to manage the stresses in your life. If you prefer the web, have a look at www.nhsdirect.nhs.uk or local websites.
- **Relaxation** will help you to reduce muscle tension which can cause chest pain. Practise (using a relaxation tape if possible) for 30 minutes once or twice a day for the first few weeks. Decide on a time of day, ensure it is somewhere quiet and comfortable, and record your progress in a diary.
For more advice on how to relax and manage stress, read *'Manage Your Mind'* (Butler, G & Hope, T: Oxford University Press).

Alternatively, on the web, have a look at:

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Local websites

Appendix 3: Information sheet for patients with chest pain of uncertain cause who need further investigation

Accident and Emergency Department

Information for patients when the cause of their chest pain is uncertain and who need further investigation

The result of your tests:

You have not had a heart attack
The blood tests we have taken today have shown that there has been no damage to your heart
Your exercise treadmill test was inconclusive.

We have not been able to definitely say whether your pain is a cardiac (heart) problem or a benign (non cardiac) cause. Not being able to give a diagnosis after these tests is not uncommon.

The treadmill test does not always provide all the answers. We have therefore asked a Cardiologist (Specialist heart doctor) to see you.

If you have any further questions relating to these results please telephone
9.00am to 5.00pm,
Monday to Friday, to speak to one of the chest pain nurses.

Alternatively telephone the hospital switchboard and ask them to bleep the chest pain nurses on.

What does this mean?

The medical team are not quite sure what is causing your pain; they know that more tests are required to find out. The important thing to remember is that there are many causes of chest pain, and most of these are not serious or life threatening.

In the cardiology clinic only some of the patients having tests turn out to have angina (heart disease). Other patients have what is called benign chest pain, which is not caused by the heart.

What will happen next?

In your case the medical team have decided, because of the continuing uncertainty, to arrange an out-patient appointment with the consultant cardiologist. This should take place within the next 3 weeks. You will receive a letter within one week informing you of the date and time of this appointment. If you fail to receive a letter please contact the chest pain nurse on the number above.

What happens at my outpatient appointment?

During your outpatient appointment the cardiologist will ask specific questions and, if it is necessary, they will also arrange more tests and investigations.

After this visit it is hoped that we will be able to provide you with a more definite diagnosis and a plan for managing any condition that may be diagnosed.

In the meantime there is no need to change your lifestyle or avoid physical exercise or other activities unless you have been given specific advice to do so.

When will I get my results?

If you need to have some more tests, the cardiologist will arrange to see you again once they are complete. At this appointment the cardiologist will tell you the results of your tests and discuss with you what the results mean.

What if my pain turns out to be cardiac?

If your symptoms do turn out to be due to heart disease, the cardiologist will discuss with you the causes and symptoms of heart disease and the treatment you will need.

For further information see: www.bhf.org.uk/hearthealth.

The British Heart Foundation also provides leaflets that are available at G.P. surgeries and pharmacies.

What if it doesn't turn out to be cardiac?

If your symptoms have a benign cause then this will be discussed with you and appropriate treatment organised. Common benign causes include spasm or indigestion in the gullet or muscular pains in the chest.

What do I do whilst waiting for my outpatient appointment?

If your symptoms get worse or you become concerned about a change in the symptoms then you should seek medical advice immediately by telephoning your general practitioner or dialling 999. However, remember that you should attempt to live as normal a life as possible. You should remain active and eat a healthy diet. There are also several things that you can do to improve your general health and fitness. These are detailed over the page.

What you can do now ...

- **If you smoke – stop!** This is the most important thing that any smoker can do to improve their health. By giving up smoking, within 5 years you can reduce your risk of having a heart attack to approximately half compared to what it would be if you continue to smoke. For practical advice on stopping, contact your GP, contact the NHS Smoking Helpline on **0800 169 0169**, or have a look at their website at www.givingupsmoking.co.uk.
- **Keep working.** Most people with chest pain of whatever cause should be able to continue in their usual job. Some changes to what you do at work and how you do it may be needed. This applies particularly if you have a strenuous job. If you have concerns it may be beneficial to talk to your G.P. Staying at work however can help to keep your heart healthy.
- **Be more physically active.** Physical activity can help to keep your heart healthy and it helps to keep your weight down. Most people feel generally better when they are fit.

The type of activity recommended for the heart is moderate, rhythmic exercise, such as brisk walking, cycling or swimming. Intense exercise such as weight lifting and press-ups are not recommended, and vigorous competitive sports may be dangerous if you have a heart condition.

Find out what you can easily manage, and then gradually increase the amount of activity you do. Plan a weekly exercise programme based on walking and then gradually increase the distance you walk each day, writing it down on an activity chart. It is important that you plan your activities – use a diary to plan each week.

- **Control high blood pressure.** If you have high blood pressure it is important to control it. Things to help you achieve this include:
 - losing weight
 - increasing physical activity
 - cutting down on alcohol and salt intake
 - **Watch your Cholesterol.** If your blood cholesterol is high, you can greatly benefit from reducing it. Cut down on fats in general especially saturated fats which are found in meats and dairy produce and replace with food containing unsaturated fat. Try and eat more foods containing starch for example bread, pasta, rice or cereals. Losing weight and taking exercise will also help. For further information see: www.bhf.org.uk/hearthealth.
- The British Heart Foundation also produces information booklets that can be found in many G.P. surgeries and pharmacies.
- **Eat fish and fish oil.** Eating oily fish such as herring, kippers, mackerel, pilchards, sardines, salmon, fresh tuna, trout and anchovies twice a week may help to prevent blood clots from forming in the arteries that supply the heart. It may also reduce the risk of a stroke.
 - **Eat more fruit and vegetables.** People who eat more than 5 portions of fruit and vegetables a day are less likely to have heart disease. There is no evidence however that taking vitamin tablets has the same effect.

- **Control your weight.** By keeping close to your recommended weight for your height you will keep your blood pressure down and reduce the amount of work your heart has to do. Remember that losing weight involves both eating healthily and increasing physical activity.

The British Heart Foundation provides information, advice and even recipe books to help you lose weight and stay healthy: see www.bhf.org.uk/hearthealth or phone **020 7935 0185**.

- **Reduce stress.** Identify situations that make you feel stressed at home or at work and try to avoid them if you can. Use a stress-reducing technique that suits you, such as yoga, relaxation tapes, or physical exercise. *'Manage Your Mind'* (Butler, G & Hope, T; Oxford University Press) is an excellent book that can help you to manage the stresses in your life.

If you prefer the web, have a look at:

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Local websites

Appendix 4: Information sheet for patients with patients with angina

Accident and Emergency Department

Information for patients with Angina

What is Angina?

Angina is an uncomfortable feeling in the chest that is caused by a lack of oxygen to the heart muscles. It usually feels like a heaviness or tightness. This feeling may spread to the arms, neck, jaw, face, back or stomach.

The symptoms usually fade on resting.

Angina can be brought on by physical activity such as walking or by emotional upsets. If it is a cold day, or if you are walking after a meal, angina may be triggered more easily.

What causes Angina?

The muscle of the heart needs its own supply of oxygen so that it can pump blood around your body. The oxygen is supplied to the heart in its own blood supply. The coronary arteries deliver this blood to the heart's muscle. More blood – and, therefore, more oxygen – are supplied when demands are high, such as when climbing steps, gardening, or doing housework.

As we age, these arteries can become narrowed by a gradual build-up of fatty material on the artery wall. As the arteries narrow, the amount of blood that they can supply falls. Usually, the arteries can still supply plenty of blood and oxygen. However, during periods of hard work, the supply of blood and oxygen may not be sufficient. This temporarily starves the heart muscle of oxygen. The resulting heaviness or tightness caused by the heart muscle becoming short of oxygen is called Angina.

Angina is common; it affects 1 in 50 people and is much more common than that in older people.

Why me?

There are several 'risk factors' which make anyone more likely to develop angina. One of these is having close relatives with heart disease.

- Others include:
- Smoking cigarettes
 - Being physically inactive
 - Having a high blood pressure
 - Having a high cholesterol level
 - Being diabetic

What do I do if I get an Angina attack?

If you get an attack of Angina you should stop what you are doing and rest until the discomfort has passed. If the discomfort continues and you have a Glycerol Trinitrate spray (GTN) it is important to use it at this time. Make sure you have read the information leaflet provided with your spray. You can use your spray up to three times at 3-5 minutes intervals. Hopefully with rest and the use of medication the heart muscle will receive the oxygen that it needs, so that it can fully recover.

If the Angina does not settle within 15 minutes of resting, you should seek medical advice. Dial 999 **immediately**.

If the pattern of your angina attacks changes, if they become more frequent or severe or occur while you are resting, it is very important that you seek medical advice.

What can I do now?

If you have Angina there are several things you can do that can really make a difference. These are listed below, and focus on leading as normal a life as possible. Even though you have angina, you can lead an active life. Indeed, being active can help your heart, improve your symptoms and reduce your limitations. Being inactive can worsen the condition of your heart, and worsen symptoms.

A good general website for information is www.bhf.org.uk/hearthealth or there are leaflets freely available in G.P. surgeries or pharmacies, which will answer many common questions about heart disease and offer good advice about how to live a full and active life.

What can I do now?

- **If you smoke – stop!** This is the most important thing that any smoker can do to improve their health. By giving up smoking, within 5 years you can reduce your risk of having a heart attack to approximately half compared to what it would be if you continue to smoke. For advice on stopping, contact your GP, contact the NHS Smoking Helpline on **0800 169 0169**, or have a look at their website at www.givingupsmoking.co.uk.
- **Keep working.** Most people are able to continue in their usual job even after being diagnosed with angina. Some changes to what you do at work and how you do it may be needed. This applies particularly if you have a strenuous physical job. If you have concerns it may be beneficial to talk to your G.P. Staying at work however can help to keep your heart healthy.
- **Be more physically active.** Physical activity can help to keep your heart healthy and it helps to keep your weight down. Also, most people feel generally better when they are fit.

The type of activity recommended for the heart is moderate, rhythmic exercise, such as brisk walking, cycling or swimming. Intense exercise such as weight lifting and press-ups are **not** recommended, and vigorous competitive sports may be dangerous if you have a heart condition. Medication may be able to help you to do more without getting chest pain – ask your GP for advice.

If you have Angina find out what you can easily manage, then gradually increase the amount of activity you do. Plan a weekly exercise programme based on walking and then gradually increase the distance you walk each day, writing it down on an activity chart. It is important that you plan your activities – use a diary to plan each week.

- **Control high blood pressure.** If you have high blood pressure it is essential to control it. Things to help achieve this include:
 - losing weight,
 - increasing physical activity
 - cutting down on alcohol and salt intake
- **Watch your Cholesterol.** If your blood cholesterol is high, you can greatly benefit from reducing it. Most patients with angina will require medication. However healthy eating can help. Cut down on fats in general especially saturated fats which are found in meats and dairy produce and replace with food containing unsaturated fat. Try and eat more foods containing starch for example bread, pasta, rice or cereals. Losing weight and taking exercise will also help.

For further information see: www.bhf.org.uk/hearthealth

The British Heart Foundation also produce information booklets that can be found in many G.P. surgeries and pharmacies.
- **Eat fish and fish oil.** Eating oily fish such as herring, kippers, mackerel, pilchards, sardines, salmon, fresh tuna, trout and anchovies twice a week may help to prevent blood clots from forming in the arteries that supply the heart.
- **Eat more fruit and vegetables.** People who eat more than 5 portions of fruit and vegetables a day are less likely to have heart disease. There is no evidence however that taking vitamin tablets has the same effect.
- **Alcohol intake.** Drink alcohol only in moderation. No more than one to two drinks daily.
- **Control your weight.** By keeping close to your recommended weight for your height you will keep your blood pressure down and reduce the amount of work your heart has to do. Remember that losing weight involves both eating healthily and increasing physical activity.

The British Heart Foundation provides information, advice and even recipe books to help you lose weight and stay healthy: see www.bhf.org.uk/hearthealth or phone **020 7935 0185**.
- **Reduce stress.** If you have Angina it is important that you know how to relax. Identify situations that make you feel stressed at home or at work and try to avoid them if you can.

Use a stress-reducing technique that suits you, such as yoga, relaxation tapes, or physical exercise. 'Manage Your Mind' (Butler, G & Hope, T; Oxford University Press) is an excellent book that can help you to manage the stresses in your life.

If you prefer the web, have a look at:
www.nhsdirect.nhs.uk or Local websites
- **Medication.** Patients with Angina will need drug treatment to help control the symptoms. It is important that you take the medication as prescribed and ensure that you don't run out. Some of the medications have common side effects. If you feel that you are severely affected you should discuss this with your G.P.