

Preventing another heart attack

NICE 'clinical guidelines' advise the NHS on caring for people with specific conditions or diseases and the treatments they should receive.

This booklet is about the care and treatment provided in the NHS in England and Wales to help people who have had a heart attack avoid further cardiovascular events such as heart attack, stroke or heart failure. It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence). It is written for people who have had a heart attack but it may also be useful for their families or carers or for anyone with an interest in the condition.

The booklet aims to help you understand the care and treatment options that should be available in the NHS. It does not describe what happens during a heart attack or the tests or treatments you may need in detail. A member of your healthcare team (such as your hospital doctor, specialist nurse or GP) should discuss these with you. There are examples of questions you could ask throughout this booklet to help you with this. Some sources of further information and support are on page 13.



Contents

| | |
|----------------------------------|----|
| Your care | 3 |
| What is a heart attack? | 4 |
| Lifestyle | 4 |
| Cardiac rehabilitation | 7 |
| Medicines | 10 |
| Procedures to restore blood flow | 12 |
| More information | 13 |
| About NICE | 14 |

The NICE guideline covers the treatment, advice and support that people who have had a heart attack should be offered by their general practice and hospital, in order to help them avoid a further heart attack.

This includes:

- lifestyle changes
- cardiac rehabilitation
- medicines
- surgery.

It does not cover:

- diagnosis or emergency treatment of a heart attack
- heart attacks that were not caused by coronary heart disease
- treatment of other conditions such as diabetes, heart failure or angina in people who have had a heart attack
- heart attacks in children or adolescents under 18 years old.

If you think that your care does not match what is described in this booklet, please talk to a member of your healthcare team.

Your care

Your treatment and care should take into account your personal needs and preferences, and you have the right to be fully informed and to make decisions in partnership with your healthcare team. To help with this, your healthcare team should give you information you can understand and that is relevant to your circumstances. All healthcare professionals should treat you with respect, sensitivity and understanding and explain your treatment and care simply and clearly.

The information you get from your healthcare team should include details of the possible benefits and risks of particular treatments. You can ask any questions you want to and can always change your mind as your treatment progresses or your condition or circumstances change. Your own preference for a particular treatment is important and your healthcare team should support your choice of treatment wherever possible.

Your treatment and care, and the information you are given about it, should take account of any religious, ethnic or cultural needs you may have. It should also take into account any additional factors, such as physical or learning disabilities, sight or hearing problems, or difficulties with reading or speaking English. Your healthcare team should be able to arrange an interpreter or an advocate (someone who supports you in putting across your views) if needed.

What is a heart attack?

The coronary arteries are blood vessels that supply the heart muscle with blood and oxygen. A heart attack happens when one of these coronary arteries suddenly becomes blocked. Your doctor may call this a myocardial infarction, or MI.

The blockage is usually caused by a small blood clot in an artery that has been hardened and narrowed by a build-up of fatty deposits in its walls. This is called atherosclerosis or coronary heart disease.

If you have already had a heart attack, you are at risk of having another heart attack because of the atherosclerosis in your blood vessels. You are also at risk of a stroke or heart failure.

NICE has recommended that your doctor or nurse should offer you the following information, support and care to help reduce your risk.

NICE has also recommended that you should receive a copy of your discharge summary, which is a brief report written by your hospital doctor when you leave hospital.

Lifestyle

There is evidence that lifestyle affects the likelihood of having a heart attack. Your doctor or nurse should talk to you about the lifestyle changes that you and your family can make to help reduce your risk. Here is a summary of the main points.

Diet

- Follow a Mediterranean-style diet, with more bread, fruit, vegetables and fish, less meat, and choose products made from vegetable and plant oils (such as olive oil) instead of products such as butter and cheese.

- Avoid foods that contain a lot of fat (especially saturated fat), salt and added sugar, such as fried foods, confectionery, takeaways, processed and prepackaged foods.
- Eat two to four portions of oily fish a week, such as herring, sardines, mackerel, salmon, trout and tuna. A portion is about 140 g (a small tin of oily fish or a small fillet of fresh fish). For further information, please refer to the Food Standards Agency website (www.food.gov.uk). If you have had a heart attack in the last 3 months and do not eat enough oily fish, your doctor may offer a medicine to supplement your diet.
- Choose healthy ways of cooking and preparing your food. Don't fry food or roast food in fat. Instead, steam, poach, bake, casserole, microwave or stir fry, and add flavour using spices, herbs and lemon juice instead of using buttery, cheesy or creamy sauces which tend to be high in fat.
- Do not take beta-carotene (a type of vitamin A) supplements. You should also be aware that taking vitamins C or E or folic acid will not help prevent another heart attack.

Alcohol

If you drink alcohol, you should stay within safe limits and not binge drink. Binge drinking can be defined as drinking more than 3 units of alcohol in 1–2 hours. Men should drink no more than 21 units of alcohol a week, and women should drink no more than 14 units of alcohol a week. A unit of alcohol is one half pint of ordinary strength beer or lager, or a small glass of wine or a single measure of spirits.

Exercise

Regular exercise can help your heart. You should aim to exercise for 20–30 minutes a day. Whatever exercise you choose should be enough to make you slightly breathless, but you should not feel any pain or discomfort. If you do, stop and rest immediately. It is a good idea to choose physical activities that are good for your heart. Walking, swimming and cycling are all excellent examples and can easily become part of your daily routine.

You should receive advice about whether you need to increase your activity levels, and how to do this safely. This will depend on how well you have recovered, how physically active you are now, how physically active you used to be and what type of exercise you enjoy.

Smoking

Smoking increases the risk of having another heart attack. If you smoke, your doctor or nurse can give you advice and support to help you stop. There are treatments available on the NHS for people who are giving up smoking.

Weight

If you are overweight, you are putting an extra strain on your heart and increasing your risk of another heart attack. If you need to lose some weight, your doctor or nurse can give you advice and support about reaching and maintaining your ideal weight.

Questions you might like to ask about lifestyle changes

- What information and support is available to help me make changes to my lifestyle?
- Are there any things that I should avoid doing?
For example, are there any types of exercise that I shouldn't do?
- How will I know if I am increasing my heart rate safely?
- Are there any support organisations in my local area?
- What could happen if I don't change my lifestyle?

Cardiac rehabilitation

Cardiac rehabilitation is a programme of education and activity to help people recover from a heart attack and lead their lives as normally as possible. You should be given advice about this and invited to attend a cardiac rehabilitation programme that includes exercise and a range of sessions such as health education and information, stress management and reassurance about sexual activity. You should be asked if you would prefer the sessions in your cardiac rehabilitation programme to be single sex or mixed. Your cardiac rehabilitation programme may involve different healthcare professionals, including a dietician, physiotherapist, cardiac rehabilitation nurse or smoking cessation adviser, depending on your individual needs.

If you agree, your partner or carer should be able to get involved in your cardiac rehabilitation programme.

Your doctor or nurse may telephone or write to you to remind you to join the cardiac rehabilitation programme.

You should receive information and advice that you can understand. If you do not understand what your doctor, nurse or other healthcare professional tells you, if you have any questions or if you would like the information in another format (information sheet or audio tape) or in a different language, ask your doctor, nurse or other healthcare professional.

Supervised exercise

Your cardiac rehabilitation programme should include supervised exercise sessions. If you have any heart problems or other conditions that get worse when you exercise (for example, angina or asthma), your doctor should treat these before you start the exercise part of the programme. If you have a condition called 'left ventricular dysfunction' or LVD (in which one of the heart's chambers does not work as well as it should), you should be able to attend the exercise sessions, providing your condition is stable.

Resuming normal activities

You will probably be able to return to your normal daily life and your job after your heart attack. This will depend on the treatment you have had since your heart attack, how well you have recovered and the activities or work you have planned.

You should receive information and advice about using a simple scale called a 'perceived exertion scale' which shows how easy or how hard you find it to do different activities.

Sport

If you play competitive sport, a specialist may need to decide whether it is safe for you to continue playing after your recovery. This will depend on the type of sport you play and how competitive it is.

Travel

If you drive, your doctor should advise you on the latest guidelines from the Driver and Vehicle Licensing Agency (DVLA).

You can usually travel by plane within 2 to 3 weeks. However, if your heart attack was complicated then your specialist should decide when you can safely travel by air.

If you hold a pilot's licence, you should seek advice from the Civil Aviation Authority (www.caa.co.uk).

Stress management

Your cardiac rehabilitation programme should include stress management sessions, but if you feel anxious or depressed after your heart attack your doctor should offer you counselling, self-help advice or sometimes medicine.

Sexual activity

If you have made a good recovery after your heart attack, you can resume sexual activity when you feel ready, usually after about 4 weeks. When you have recovered from a heart attack, your risk of another heart attack being triggered by sexual activity is no greater than for someone who has never had a heart attack.

If you have difficulty in getting or maintaining an erection (also known as erectile dysfunction), and if your heart attack was over 6 months ago and you have fully recovered, your doctor may offer you a medicine that can help.

Questions you might like to ask about cardiac rehabilitation

- Please tell me more about cardiac rehabilitation.
- How long will the programme last for?
- Where will the sessions be held and when?
- What if I don't want to go to all the sessions?
- Can I talk to you about sexual activity?

Some treatments may not be suitable for you, depending on your exact circumstances. If you have questions about the specific treatments and options covered in this booklet, please talk to a member of your healthcare team.

Medicines

As well as lifestyle advice and cardiac rehabilitation, NICE has recommended that you should be offered treatment with the following four types of medicines:

ACE inhibitors

ACE stands for 'angiotensin-converting enzyme'. ACE inhibitors have a protective effect on the heart and also widen the heart's arteries, making it easier for blood to get through.

Aspirin

Aspirin makes your blood less 'sticky' and less likely to form blood clots.

Beta-blockers

Beta-blockers prevent your heart from beating too quickly or too strongly, so it does not have to work as hard.

Statins

Statins lower the level of cholesterol in your blood, so fatty deposits are less likely to form in your blood vessels. Ask your doctor for more information about your target cholesterol level.

You may also be offered treatment with the following medicines:

Angiotensin receptor blockers

Angiotensin receptor blockers (also known as ARBs) act in a similar way to ACE inhibitors and are prescribed if you cannot take ACE inhibitors.

Aldosterone antagonists

Aldosterone antagonists block a hormone in your body called aldosterone, which can lead to heart failure. If you have heart failure, your heart is failing to pump enough blood to meet your body's needs.

Antiplatelet therapy

This medicine, similar to aspirin, may be offered if you cannot take aspirin, or if you have a heart problem called 'non-ST-segment-elevation myocardial infarction'.

Questions you might like to ask about medicines

- How long will I have to take the medicines for?
- What is the best time of day to take the medicines?
- Are there any serious side effects associated with the medicines?
- What should I do if I get any side effects?
- Are there any foods or drinks that I should avoid?
- What sort of improvements might I expect to notice?
- How long will it take to notice any effect?

Procedures to restore blood flow

'Coronary revascularisation' is a broad term given to any procedure that is used to restore the blood flow to the areas of the heart which are supplied by narrowed or blocked coronary arteries. This can be done either by making the narrowed arteries wider (coronary angioplasty), or by using another blood vessel to bypass the blocked or narrowed artery (coronary artery bypass graft).

After a heart attack, you should be offered an assessment to see whether coronary revascularisation could benefit you. This assessment will take into account any other conditions you may have, such as diabetes or angina.

Questions you might like to ask about coronary revascularisation

- Will revascularisation help me?
- Which is the best procedure for me?
- What does each procedure involve?
- What are the possible risks and benefits?
- Where can I get more information?
- What could happen if I choose not to have the recommended procedure?

More information

The organisations below can provide more information and support for people who have had a heart attack. Please note that NICE is not responsible for the quality or accuracy of any information or advice provided by these organisations.

- British Heart Foundation, Heart Information Line 08450 70 80 70, www.bhf.org.uk
- H-E-A-R-T UK, Helpline 0845 450 5988, www.heartuk.org.uk

NHS Direct online (www.nhsdirect.nhs.uk) may be a good starting point for finding out more. Your local Patient Advice and Liaison Service (PALS) may also be able to give you further information and support.

About NICE

NICE produces guidance (advice) for the NHS about preventing, diagnosing and treating different medical conditions. The guidance is written by independent experts including healthcare professionals and people representing patients and carers. They consider the best available evidence on the condition and treatments, the views of patients and carers and the experiences of doctors, nurses and other healthcare professionals working in the field. Staff working in the NHS are expected to follow this guidance.

To find out more about NICE, its work and how it reaches decisions, see www.nice.org.uk/aboutguidance

This booklet and other versions of this guideline aimed at healthcare professionals are available at www.nice.org.uk/CG048

You can order printed copies of this booklet from the NHS Response Line (phone 0870 1555 455 and quote reference N1252).

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