Making a decision about **stable angina**

What is this document?

This document is called a decision aid. It is designed to help you decide between treatment options.

It is for people who have stable angina who have been asked to think about having treatment to help improve blood flow to the heart muscle. This is sometimes called **revascularisation**. This treatment would usually be in addition to taking medicines for angina.

You can use this decision aid to help you talk to the team of healthcare professionals looking after you. This includes your GP practice team and the team at the hospital. The hospital team might be called the MDT (short for multidisciplinary team) because it includes people from different health professions and specialties. In this decision aid we'll talk about your GP practice team and the hospital MDT as "your healthcare team".

This decision aid can only be a guide because everyone's situation is different.

This decision aid is not suitable for people who have unstable angina or who need urgent treatment after a heart attack.

Go to page 2 for more information on angina

Go to page 3 for more information on your options

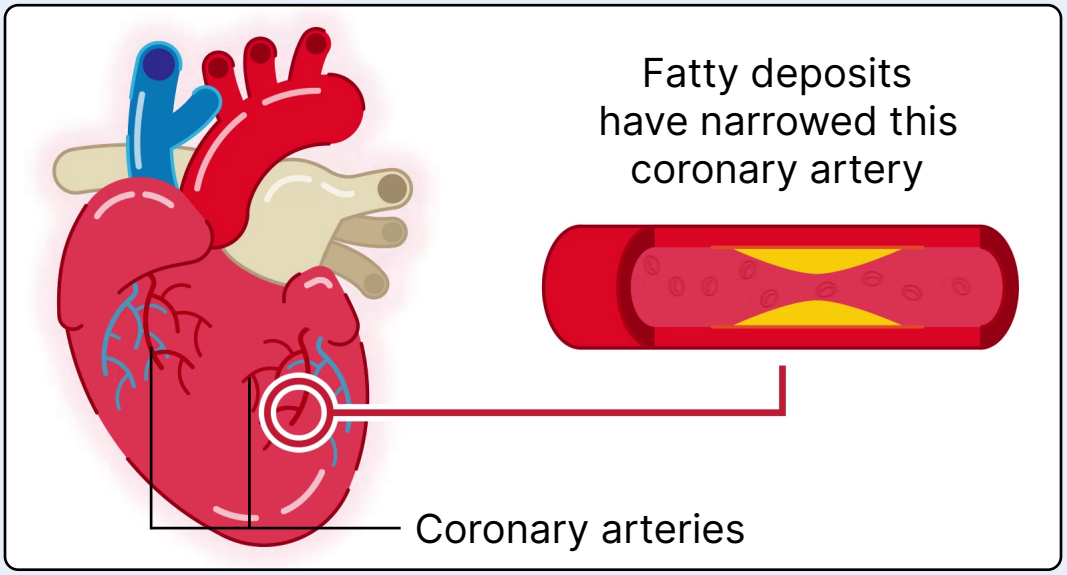
Go to page 4 for more information on medicines

Go to page 6 for more on other interventions

Go to page 11 for help with making your decision

1 What is stable angina?

Angina is chest pain or breathlessness caused by reduced blood flow to the heart muscle. This is usually caused by the blood vessels supplying the heart muscle (called the coronary arteries) becoming narrowed or blocked (see the diagram of a heart and blocked artery below). This is called **coronary artery disease**. There are 2 main coronary arteries and each one then divides into several smaller arteries. One or more of these can become affected.



In an angina attack the pain or discomfort usually feels tight, dull or heavy. Some people may have a sharper, stabbing pain. It may spread to your arms, neck, jaw or back. You might also feel sick, sweaty or short of breath. But not everyone will have the same angina symptoms.

There are 2 main types of angina:

- **Stable angina** is when a person's angina attacks usually have a trigger such as exercise or stress. An attack usually stops within a few minutes of resting or taking a medicine to treat it.
- **Unstable angina** is more serious and needs urgent treatment. Attacks are more unpredictable and may not have a trigger. An attack can continue even after resting or taking a medicine to try to treat it.

Some people with stable angina can go on to develop unstable angina. Tell your GP if your angina symptoms are becoming worse, happening more often or your medicines are not helping as much as they used to. Make sure you know what to do if you have an angina attack and the medicine you have been given to treat it does not work.

2 Your options at a glance

You have probably been asked to think about having further treatment because the medicines you are prescribed are not controlling your angina symptoms well enough, or they do not suit you.

You have 2 options going forward, and depending on the option you choose you may have to make some other choices about the type of treatment you would like. The options are listed below, and more information about each option is given in the rest of this decision aid.

You could:

- **Try different ways to get the best out of your medicines**, and not have other treatments to try to control your angina symptoms. There is more information about this on page 4.
- **Continue with medicines** and also have a procedure or surgery to try to improve the blood supply to your heart muscle. There are 2 ways this might be done:
  - A procedure called **coronary angioplasty**. This is sometimes called PCI (short for percutaneous coronary intervention). This is explained on page 6.
  - Surgery called a **coronary artery bypass graft (CABG)**. This is explained on page 7.

You will usually be asked to have a number of tests. Your healthcare team will explain the results and how they might affect your decision. The test results and things like your general health may mean that either angioplasty or CABG may be more suitable for you, if you are thinking about these options. Your healthcare team will advise you.

Your lifestyle

You can also help your angina by making changes to your lifestyle. These include stopping smoking, keeping active, maintaining a healthy weight and eating healthily. These things will also make it less likely you will have a heart attack or stroke.

Your healthcare team can help and support you with these things.

Taking medicines to help control your angina symptoms and reduce your risk of heart attack and stroke

Angina is caused by coronary artery disease. No treatment cures this so even if you decide to have angioplasty or CABG, you will be advised to continue to take some medicines.

Medicines are an important way of preventing or controlling angina symptoms. They are also an important way of reducing your chance of having a heart attack or stroke.

We have put some information about medicines that are often prescribed for people with angina in the panel on the next page. If you are not sure why you have been prescribed some of your medicines, ask someone from your healthcare team. You can also talk to them to make sure you are getting the most out of your medicines.

This might include:

- help with remembering to take your medicines at the best times
- help with any side effects that are troubling you.

If your current medicines do not suit you or do not work for you, there are other medicines you could try. Talk to someone from your healthcare team if you would like to think about making changes to your medicines. You can make a note below about any problems or questions you have about your medicines as a reminder.

Things I want to talk about regarding my medicines:

Medicines for stable angina

Medicines are a key part of treatment for stable angina.

Some medicines are used to treat or prevent angina attacks, most often these include:

GTN (glyceryl trinitrate)

GTN comes as either mouth sprays or tablets. You use these to treat an angina attack if it starts. You can also use these to prevent attacks (for example, before exercising). GTN is not a pain killer, like paracetamol or ibuprofen. It works by widening the coronary arteries and improving the blood supply to the heart muscle.

Beta or calcium channel blockers

Beta blockers or **calcium channel blockers** help prevent angina attacks. You might take one or both types of medicines. If they do not suit you or do not work for you, there are other medicines you could try. They will also help control your blood pressure. You might also be asked to think about taking further medicines to control your blood pressure.

Other medicines are used to help with preventing heart attacks. Most often these are:

Statins

Statins reduce the chance of heart attacks and strokes by reducing your cholesterol. If they do not suit you or do not work for you, there are other medicines you could try.

Aspirin or clopidogrel

Aspirin or **clopidogrel** are recommended for most people who have had a heart attack. They help prevent this from happening again by reducing the chance of blood clots.

Some people may be asked to take other medicines as well as these to help their angina and other conditions, if they have them.

Your healthcare team can explain the medicines you take and what they are for.

Coronary angioplasty

Coronary angioplasty is also sometimes called PCI (short for percutaneous coronary intervention). The aim of angioplasty is to widen or unblock coronary arteries. This will improve blood flow to the heart muscle.

Many people who have angioplasty will have far fewer angina attacks, or perhaps stop having them altogether and have an improved quality of life. But it does not work for everyone and there are some risks involved. There is more information on page 8.

If you have stable angina, it's thought that having angioplasty will not reduce your chance of dying from heart disease.

Having angioplasty will not cure your coronary artery disease. You will need to carry on taking some medicines and keep to a healthy lifestyle. If you do not, your angina will get worse.

Coronary angioplasty may not be suitable for everyone, depending on how many coronary arteries are affected.

What happens in coronary angioplasty?

Coronary angioplasty is usually done using local anaesthetic (you'll be awake while it is carried out). You might feel some short periods of discomfort or some pain, but these will not last long.

A thin, flexible tube called a catheter is inserted into one of your arteries through a cut made in your wrist, or sometimes the groin or arm. The cardiologist guides this catheter to the right place. A small balloon is placed in the narrowed or blocked section of coronary artery. This is then inflated to widen the artery so blood can flow through it more freely when the balloon is removed.

More than one artery might be treated. A short tube, called a stent, is usually inserted at the same time. This stays in place to keep the artery open and the blood flowing.

Sometimes, instead of a stent a balloon coated with a drug is used to open the artery and the drug is left behind in the widened artery.

After the procedure you will be asked to take medicines to help prevent blood clots forming.

Coronary artery bypass graft (CABG)

The aim of CABG is to divert the blood flow around the narrowing or blockage in the coronary artery. This will improve blood flow to the heart muscle.

Many people who have CABG will have far fewer angina attacks, or perhaps stop having them altogether and have an improved quality of life. But it does not work for everyone and there are some risks involved. There is more information on page 8.

Having CABG might reduce your chance of dying from heart disease, but this depends on the type of coronary artery disease you have. This means we cannot give numbers on how likely you are to benefit here. Your surgeon can advise you.

Having CABG will not cure your coronary artery disease. You will need to carry on taking some medicines and keep to a healthy lifestyle. If you do not, your angina will get worse.

CABG may not be suitable for everyone, depending on several things including your general health.

What happens in CABG?

CABG is carried out under general anaesthetic (you will be unconscious and will not feel pain). The surgeon will usually make a cut down the middle of your chest through the skin and breastbone allowing access to your heart.

A blood vessel is taken from another part of the body (usually the chest, leg or arm). This is attached to the coronary artery above and below the narrowed or blocked section. This new blood vessel is known as a graft.

More than one artery might be treated. The bone and skin on your chest will be repaired using permanent metal fixings and stitches. There will be a large scar on your chest after the operation, and on your leg or arm where the graft is taken from.

A different way of doing CABG using keyhole surgery, which leaves smaller scars, might be possible for some people. Your surgeon can advise you.

After the procedure you will be asked to take medicines to help prevent blood clots forming.

3 Comparing options to reduce symptoms

This page compares the results of research studies into how well the options reduce angina attacks. They were done in people who had stable angina with a narrowing or blockage of more than 1 coronary artery. This is called multivessel disease.

We cannot say for certain how likely it is any one person will benefit. Also, some things might affect your chance of benefiting. These include your age, how severe your symptoms are now, and how many coronary arteries need treatment. For example, if only one coronary artery is narrowed or blocked, called single vessel disease, then CABG may not be the best choice. Your healthcare team can advise you.

	After 1 year	After 5 years or more
Medicines only	Around 36 out of every 100 people taking medicines did not have angina attacks, but 64 did.  36 were helped / 64 were not	Around 28 out of every 100 people taking medicines did not have angina attacks, but 72 did.  28 were helped / 72 were not
Medicines plus coronary angioplasty	Around 52 out of every 100 people did not have angina attacks after angioplasty and continuing to take medicines, but 48 did.  52 were helped / 48 were not	Around 33 out of every 100 people did not have angina attacks after angioplasty and continuing to take medicines, but 67 did.  33 were helped / 67 were not
Medicines plus CABG	Around 59 out of every 100 people did not have angina attacks after CABG and continuing to take medicines, but 41 did.  59 were helped / 41 were not	Around 38 out of every 100 people did not have angina attacks after CABG and continuing to take medicines, but 62 did.  38 were helped / 62 were not

4 How do angioplasty and CABG compare?

These questions are the ones people often ask about the different types of treatment to improve blood flow to the heart. However, it is only a guide because everyone's situation is different. Your MDT can advise you.

	Angioplasty	CABG
How long will I have to stay in hospital afterwards?	You can usually go home later the same day or the day after you have the procedure.	Most people need to stay in hospital for 5 to 7 days. Some people may need to go to a high dependency unit or intensive care unit after the operation. If they do, this is usually for 1 to 2 days.

	Angioplasty	CABG
How long will it take me to recover?	Most people have fully recovered after about 1 week.	It can take between 2 and 6 months to recover. This will vary depending on your general health.

	Angioplasty	CABG
What is the chance of dying during the procedure or surgery, or soon afterwards?	On average, fewer than 1 in 100 people (0.3%) die in hospital after an angioplasty and more than 99 out of 100 do not. <1 99+ The risk of dying depends on things such as how many arteries are blocked, how old you are and your general health. Your cardiologist can explain your individual risks.	On average, fewer than 1 in 100 people (0.5%) die in hospital after CABG and more than 99 out of 100 do not. <1 99+ The risk of dying depends on things such as how many arteries are blocked, how old you are and your general health. Your surgeon can explain your individual risks.

	Angioplasty	CABG
What is the chance of having a heart attack or stroke during the procedure or surgery, or soon afterwards?	On average, fewer than 1 in 100 people have a heart attack or stroke in hospital after an angioplasty (less than 0.1% for each). So more than 99 out of 100 do not have these complications.  <1 99+ The risk of having a heart attack or stroke depends on things such as how many arteries are blocked, how old you are and your general health. Your cardiologist can explain your individual risks.	On average, fewer than 1 in 100 people (0.7%) have a stroke in hospital after CABG. So more than 99 out of 100 do not. (We do not have up to date numbers of the risk of heart attack).  <1 99+ The risk of having a heart attack or stroke depends on things such as how many arteries are blocked, how old you are and your general health. Your surgeon can explain your individual risks.

	Angioplasty	CABG
What are the other main risks? (The risk of complications depends on your general health. Your healthcare team will explain all the risks in more detail if you are thinking of these options.)	Complications tend to be less common after angioplasty than after CABG. These include: • bruising/bleeding under the skin where the catheter was inserted • rarely, heavy bleeding. More rarely, you can have an allergic reaction to the special dye used during angioplasty.	Complications tend to be more common after CABG than after angioplasty. These include: • pain at the operation site • heavy bleeding • a serious wound infection at the operation site • an irregular heart beat.

	Angioplasty	CABG
How likely am I to need a procedure to improve the blood flow to my heart in the future?	Studies have found that people who have angioplasty need further procedures more often than people who had CABG. This is the case in the shorter and longer term. The chance of needing further procedures depends on things like your age and how many coronary arteries are affected. This means we cannot give numbers on how likely you are to need one.	Studies have found that people who had CABG needed further procedures less often compared with people who had angioplasty. This is the case in the shorter and longer term. The chance of needing further procedures depends on things like your age and how many coronary arteries are affected. This means we cannot give numbers on how likely you are to need one.

5 What's important to you?

What matters to you is an important part of making a decision about treatment. It might help you to think about each of the topics shown on the following 2 pages, and put a mark on the scale underneath the statements relating to each topic to show which one you agree with and how much you agree with it, ranging from 'definitely' to 'no strong opinion'.

(If you are using this decision aid electronically, you can just click on the scale to add a mark.)

You can also write down your own thoughts or concerns at the end of each section. You might also want to talk about your answers with your healthcare team, and your family and friends.

Thinking about staying just with medicines, or having angioplasty or CABG

Definitely	No strong opinion	Definitely

Thinking about how much your angina troubles you

My angina stops me from doing daily activities or the things that really matter to me (for example, hobbies or pastimes), or I often need to use GTN

My angina does not stop me from doing most daily activities or the things that really matter to me (for example, hobbies or pastimes) and I do not often need to use GTN

Thinking about the risks of angioplasty or CABG

I am not especially worried about the risks of having angioplasty or CABG

I am very worried about the risks of having angioplasty or CABG

Thinking about recovery from angioplasty or CABG

Taking time out to recover from angioplasty or CABG would not be a big problem for me

Taking time out to recover from angioplasty or CABG would be a big problem for me

Thinking about help and support

I would have lots of practical help at home when I left hospital after angioplasty or CABG

I would find it difficult to get much practical help when I left hospital after angioplasty or CABG

More marks this side:

Leaning towards angioplasty or CABG

More marks this side:

Leaning towards continuing just with medicines for now

My thoughts, concerns and questions

Deciding between angioplasty or CABG

Often your healthcare team will advise you whether angioplasty or CABG is the more suitable option for you. This is based on a number of factors including your test results, the number of blood vessels that need attention, your age and general fitness. But what matters to you is also important.

Definitely	No strong opinion	Definitely

Thinking about the time to recovery from treatment

It does not matter if I take longer to recover from the treatment

It is very important that I recover from the treatment as quickly as possible

Thinking about the longer term

I would like to avoid future treatment if I can

I don't mind if I need to have another treatment in the future

Thinking about scars caused by the treatment

I am not especially worried about the scarring from CABG

I am very worried about the scarring from CABG

More marks this side:

Leaning towards CABG

More marks this side:

Leaning towards coronary angioplasty

My thoughts, concerns and questions

7 Making a decision

Where can I go for more information?

NHS information about coronary angioplasty:

https://www.nhs.uk/conditions/coronary-angioplasty/

NHS information about CABG:

https://www.nhs.uk/conditions/coronary-artery-bypass-graft-cabg/

The British Heart Foundation
- for information and support for people with angina:

https://www.bhf.org.uk/informationsupport/conditions/angina

- for people taking medicines for heart conditions:

https://www.bhf.org.uk/informationsupport/treatments/medication

- for more information about coronary angioplasty:

https://www.bhf.org.uk/informationsupport/treatments/coronary-angioplasty-and-stents

- for more information about CABG:

https://www.bhf.org.uk/informationsupport/treatments/coronary-bypass-surgery

The Society for Cardiothoracic Surgery, for information about CABG:

https://scts.org/patients/heart.aspx

The British Cardiovascular Intervention Society, for information about angioplasty (also known as PCI):

https://www.bcis.org.uk/public-information/the-pci-procedure/

Making the decision

Think about **which option is best for you** at the moment. You do not have to make this decision straight away. You can take some time to discuss it with family and friends or your healthcare team, and then decide.

Sometimes there might be a meeting between you and your family, your cardiology team and your surgeon to discuss the best way forward. This is more likely if the decision is more complex.

Things to check

I feel sure about the best choice for me	☐ Yes	☐ No
I know enough about the potential advantages and disadvantages of each option	☐ Yes	☐ No
I am clear about which potential advantages and disadvantages matter most to me	☐ Yes	☐ No
I have enough support and advice to make a choice	☐ Yes	☐ No

If you said 'no' to any of these, tell your healthcare team and ask them for help

My thoughts at the moment

☐ I'm not sure what to do

☐ I'm leaning towards .....

This is because .....

.....

.....

.....

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8 How this decision aid was produced

Who made this decision aid?

This decision aid was developed in line with the NICE process guide for decision aids. It was produced with a project group of clinical and patient experts. A wide range of stakeholders was invited to comment on an earlier draft. This included people with lived experience of angina and frontline healthcare professionals. It is based on the best available evidence and the project group's experience and expertise. The sources of further information were identified by the project group. NICE is not responsible for the content of external websites. Omission of a website in this decision aid does not imply that NICE has made a judgment about its content.

Information we used to make this decision aid

- NICE (2016) Stable angina: management. NICE guideline CG126; Full guideline (2011) and Evidence update (2016).
  (A 2023 updated search confirmed this was still the best evidence.)
- Open University (2024) CONNECT Patient Decision Aid. https://www.isrctn.com/ISRCTN13802038
- National Institute for Cardiovascular Outcomes Research (NICOR) (2023) National Adult Cardiac Surgery Audit (NACSA) 2023. http://www.nicor.org.uk/adult-cardiac-surgery-surgery-audit/. Accessed 2024.
- British Cardiovascular Intervention Society (BCIS) (2022) National Audit Adult Interventional Procedures 2021–2022. http://www.bcis.org.uk/audit-results/. Accessed 2024.

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