

Patient information from the BMJ Group

Atrial fibrillation

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Atrial fibrillation

When you have atrial fibrillation, your heart beats very quickly and in an irregular way. This can be alarming, but it often gets back to normal by itself. If it doesn't, you can have treatment to slow down your heart and make it beat regularly. You can also have treatment to prevent blood clots.

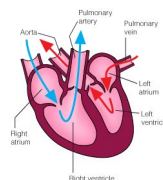
We've brought together the best research about atrial fibrillation and weighed up the evidence about how to treat it. You can use our information to talk to your doctor and decide which treatments are best for you.

What is atrial fibrillation?

There are several kinds of irregular heartbeats. The one we look at here is called atrial fibrillation.

It can last for less than two days (called acute atrial fibrillation), or it can come and go. It may last for a long time (chronic atrial fibrillation).^[1]

Atrial fibrillation can be frightening, especially the first time it happens to you. But atrial fibrillation itself is not usually harmful. It doesn't mean you are having a heart attack. However, it may make you more likely to have problems with blood clots. So, atrial fibrillation that doesn't go away needs treating.



The heart consists of four main parts.

Your heart has four main parts (called **chambers**). The two smaller chambers at the top of your heart are called the **left atrium** and the **right atrium**. Blood enters your heart by flowing into these top chambers, which pump it onwards into the two bigger, lower chambers.

The two lower chambers in your heart are called the **left ventricle** and the **right ventricle**. Their job is to pump blood out of your heart and around your body.

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The right ventricle pumps blood to the lungs, and the left ventricle pumps blood to the rest of the body.

The top right chamber of your heart (right atrium) contains a control area (the **pacemaker**), which sends an electrical signal to make the muscles in the heart contract to push the blood through it.

If you have atrial fibrillation, the pacemaker sends out too many electrical signals at once. This makes the muscles of the right atrium and the left atrium contract far too fast, which means that the ventricles then pump blood out in an irregular way. This results in a very fast, irregular heartbeat.

Some people are more likely to have atrial fibrillation than others. For example, men are one-and-a-half times more likely to get it than women. ^[2]

Other things that can increase your risk of atrial fibrillation are: ^[3]

- Getting older
- High blood pressure
- Heart disease
- A heart attack
- Heart failure
- Heart valve problems
- Diabetes
- Too much alcohol
- Lung disorders
- Thyroid gland disorders
- Use of steroid pills, such as prednisolone. ^[4]

It is rare for young people (under 45) to get atrial fibrillation. But it is more likely for young people who drink too much alcohol, or take illegal drugs. In one study, about one-third of people under 45 who went to hospital with atrial fibrillation had it because of alcohol or illegal drug use. ^[5]

Atrial fibrillation is different from **ventricular fibrillation**. Ventricular fibrillation is a dangerous emergency that affects the main chambers of the heart (the ventricles). To read more about ventricular fibrillation, see [What is a cardiac arrest?](#)

What are the symptoms of atrial fibrillation?

If you've got atrial fibrillation, you may feel your heart beating very fast and irregularly. This can be alarming, especially if it's the first time you've had atrial fibrillation.

If you take your pulse when you are sitting still it will probably be more than 140 beats a minute, and the beats may be irregular. Normally, your pulse would be 60 to 80 beats a minute, at a steady rate.

If you've had it for some time, you may not realise that your heart is beating fast, because you have got used to it.

You may get some other symptoms, including:

- Chest pain
- Feeling breathless
- Feeling dizzy.

If you get these symptoms, you should see your doctor straight away. They can also be signs of more serious heart problems.

To help decide if you might have atrial fibrillation, your doctor will: ^[6]

- Examine you
- Ask about your symptoms
- Take your pulse
- Give you an ECG (**electrocardiogram**), which shows how your heart is beating. If your doctor thinks you might have atrial fibrillation that comes and goes, you may wear a device that records your heartbeat over a day or more.

Your doctor might also recommend an **echocardiogram**. This is a kind of **ultrasound**. It uses soundwaves to let your doctor see a detailed image of your heart.

How common is atrial fibrillation?

Atrial fibrillation is quite common.

It tends to affect older people. About 1 in 200 middle-aged people and about 1 in 10 of those aged 80 or older have atrial fibrillation. ^[3]

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What treatments work for atrial fibrillation?

The treatment you get for atrial fibrillation will depend on how long you have had it, how much it affects you, and what other illnesses you have.

Key points about treating atrial fibrillation

- For some people, atrial fibrillation goes away on its own. But many people need treatment to get their heart beating normally again.
- Medicines can be used to get your heart beating regularly. There are two main types: one slows down your heartbeat, and the other corrects your heart's abnormal rhythm. Your doctor will help you decide which is best for you.
- Electric shock treatment can also be used to make your heart beat regularly. You'll be given a general anaesthetic so you don't feel the shock.
- Atrial fibrillation can put you at risk of blood clots. These can lead to serious health problems, such as a stroke. Your doctor is likely to recommend treatment to help prevent blood clots.

Doctors in the UK have guidelines about which treatments should be used to treat atrial fibrillation. To read more, see [How atrial fibrillation is treated](#) . If you are overweight, losing weight may help. You might have less episodes of atrial fibrillation and it may be less severe. ^[8]

How atrial fibrillation is treated

The National Institute for Health and Care Excellence (NICE) advises the government about which treatments work best. It has written guidelines for doctors about how to treat atrial fibrillation. ^[9] These guidelines say that the treatment you have will depend on several things, such as how long you've had atrial fibrillation, your risk of having a stroke, and your risk of bleeding from anti-clotting drugs. Your treatment will also depend on which treatment you'd prefer. If there's a choice of treatments, your doctor will explain the risks and benefits of each one. The guidelines say you should be offered a package of care personalised to your needs and preferences.

For more information on the treatments we mention here, see [What treatments work for atrial fibrillation?](#)

Here's what the guidelines say. ^[9]

Controlling heart rate

Drugs to control how fast your heart beats are usually the first treatment offered to people who have had atrial fibrillation for a while. The drugs that are usually used are **beta-blockers** and **calcium channel blockers**.

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Doctors may sometimes use a different drug, called digoxin, for people who do very little exercise. Some people need a combination of drugs to keep heart rate under control.

Controlling heart rhythm

Sometimes, controlling the rate of heart beat is not enough to control the symptoms of atrial fibrillation. If this happens, you may be offered drug or electrical rhythm control. If your atrial fibrillation has lasted longer than 48 hours, you should be offered electrical treatment instead of drug treatment. You may be offered drug treatment as well, to keep your heart rhythm steady. This will probably be with a drug called amiodarone.

Some people need long-term drug treatment to keep their heart rhythm steady. This will probably be with a beta-blocker.

If you get atrial fibrillation only occasionally and your symptoms are mild, your doctor might suggest you don't have regular treatment. You might be given a drug to take only when you get symptoms, or no treatment at all. If your atrial fibrillation happens only when you drink alcohol or caffeine, you may simply be advised to avoid these triggers.

Emergency treatment

If your atrial fibrillation comes on quickly or gets worse suddenly, you may need emergency treatment.

If you become seriously ill (for example, if you have low blood pressure or a very fast heartbeat) you'll need **emergency electric shock treatment**.

If you've had atrial fibrillation for a long time and it gets worse quickly because of a fast heartbeat, you'll be given drugs to slow down your heart. These will usually be beta-blockers or calcium channel blockers. If you need treatment urgently, the drugs will be given as a drip (also called an **intravenous infusion** or an IV).

If you have not had atrial fibrillation before and your atrial fibrillation started within the last 48 hours, you may have either electrical or drug treatment to restore your heart rhythm to normal. You will also have drug treatment to slow your heart beat. If your atrial fibrillation started more than 48 hours ago, you may just have treatment to slow your heart beat.

You may also need drugs to prevent your blood from clotting. If you are not already taking this type of medicine and you have not had atrial fibrillation before, you might have treatment with a drug called heparin.

Treatments to prevent blood clots

Atrial fibrillation can increase your risk of getting **blood clots**. That's because it can stop blood flowing smoothly through your heart. If you get a blood clot, there's a chance it could cause a **stroke**.

Doctors use a scoring system to work out your chance of having a stroke. The score is based on your age, sex, whether you have heart failure or high blood pressure, whether

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you've had a stroke before, and whether you have diabetes. The score will tell the doctor whether you need treatment.

People with atrial fibrillation who are aged under 65 without any other risks for a stroke have a very low risk. Doctors are told not to offer treatment to prevent blood clots to these people.

People at higher risk may be offered one of the following drugs: apixaban, dabigatran, rivaroxaban, or warfarin. Each of the drugs has benefits and risks. Your doctor will discuss them with you. Some may be better or worse for you, depending on your risk of stroke, your risk of bleeding from the medicines, and your personal preferences.

What treatments work for atrial fibrillation?

The treatment you need will depend on lots of things, including your age, how long you've had an irregular heartbeat, and how healthy your heart is. There are three main approaches to treating atrial fibrillation.

- [Getting your heart rhythm back to normal](#) : Medicines or electric shock treatment can get rid of your irregular heartbeat and make your heart beat normally again. [More...](#)
- [Slowing down your heartbeat](#) : Doctors may prescribe drugs to slow down your heartbeat. This approach tends to be used for people who've had atrial fibrillation for some time. [More...](#)
- [Preventing blood clots](#) : An irregular heartbeat can cause blood to pool inside your body. This could cause blood clots, which can be dangerous. So your doctor might recommend treatment to stop clots forming. [More...](#)

To find out more about which treatment approach might be best for you, see [How atrial fibrillation is treated](#) .

Treatment Group 1

Treatments to get your heart rhythm back to normal

For some people who get atrial fibrillation, their heartbeat will go back to normal on its own. However, many people need treatment to get their heart beating normally again. You may need urgent treatment if you become seriously ill because of an irregular heartbeat.

Key points about getting your heart rhythm back to normal

- Taking flecainide, propafenone, or amiodarone can help your heart beat normally again. You can take these medicines as tablets or injections.

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- Flecainide and propafenone can both make an irregular heartbeat worse for some people. There's a bigger risk for people who have heart disease. So your doctor will probably avoid these drugs if you have other heart problems.
- Electric shock treatment can also be used to get your heart beating normally again. You'll be given a general anaesthetic so you don't feel the shock. But there's not much research on how well this treatment works.
- If you become seriously ill with atrial fibrillation (for example, you have low blood pressure or a very fast heartbeat), you may need emergency electric shock treatment.
- You might be treated with an anticoagulant drug at the same time as treatment to correct your heartbeat.^[10] This will reduce the risk of blood clots forming while your heart is beating irregularly. To read more, see [Treatments to stop you getting blood clots](#) .

To read more about how doctors decide on treatment for atrial fibrillation, see [How atrial fibrillation is treated](#) .

Which treatments work best? We've looked at the best research and given a rating for each treatment according to how well it works.

Treatments to get your heart rhythm back to normal

Treatments that work, but whose harms may outweigh benefits

- [Amiodarone](#)
- [Flecainide](#)
- [Propafenone](#)

Treatments that need further study

- [Electric shock treatment \(cardioversion\)](#)
- [Sotalol](#)
- [Verapamil](#)

Treatments that are unlikely to work

- [Digoxin](#)

Treatment Group 2

Treatments to slow down your heart

If you have atrial fibrillation, your doctor might recommend medicines to slow down your heartbeat. This approach tends to be used for atrial fibrillation that lasts a long time.

Key points about treatments to slow down your heart

- There are several medicines that can slow down your heartbeat. Your doctor may recommend amiodarone, digoxin, a beta-blocker, or a calcium channel blocker.
- There's not much research about which of these drugs works best. One study found that an amiodarone drip worked better than digoxin injections.

To read more about how doctors decide on treatment for atrial fibrillation, see [How atrial fibrillation is treated](#) .

Which treatments work best? We've looked at the best research and given a rating for each treatment according to how well it works.

Treatments to slow down your heart

Treatments that are likely to work

- [Amiodarone](#)
- [Beta-blockers](#)
- [Calcium channel blockers](#)
- [Digoxin](#)

Other treatments

- [Dronedarone](#)

Treatment Group 3

Treatments to stop you getting blood clots

Atrial fibrillation can put you at risk of blood clots. Because blood doesn't always flow smoothly through your heart, it's easier for clots to form in slow-moving pools of blood.

Blood clots can be serious. For example, if a blood clot forms and travels to your brain, it can cause a stroke. If you have atrial fibrillation, your doctor is likely to prescribe medicines to prevent clots and cut your risk of a stroke.

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Key points about preventing blood clots

- If you have atrial fibrillation that lasts for more than a few days, your doctor may recommend long-term treatment to prevent blood clots.
- Dabigatran, rivaroxaban, apixaban, and warfarin are drugs that are often used to prevent clots. Research shows they can stop you having a stroke.
- Aspirin is sometimes used instead of dabigatran, rivaroxaban, apixaban, or warfarin. But it might not be as good at preventing strokes.
- If you're going to have treatment to get your heartbeat back to normal, you may be given drugs to prevent blood clots for a few weeks before and after.
- If you need emergency treatment to get your heartbeat back to normal, you may be given the drug heparin at the same time. The idea is to prevent blood clots, but there's not much research on whether this works.

To read more about how doctors decide on treatment for atrial fibrillation, see [How atrial fibrillation is treated](#) .

Which treatments work best? We've looked at the best research and given a rating for each treatment according to how well it works.

Treatments to stop you getting blood clots

Treatments that work

- [Dabigatran](#)
- [Warfarin](#)
- [Rivaroxaban](#)
- [Apixaban](#)

Treatments that need further study

- [Aspirin](#)
- [Anticoagulants for people having treatment to get their heart beating normally again](#)

What will happen to me?

Your atrial fibrillation may get better without any treatment. But if it doesn't, then treatment can help get your heartbeat back to normal.

Atrial fibrillation

More than half the people who have short-term atrial fibrillation get their normal heart rhythm back within 24 to 48 hours without any treatment. ^[1]

For other people, atrial fibrillation doesn't go away on its own. If this happens, treatment can help your heartbeat get back to normal.

It's possible to get atrial fibrillation again from time to time. In some people, it can become permanent. If you get permanent atrial fibrillation, you may need to take tablets regularly to control your heartbeat.

Blood clots

Some people who have atrial fibrillation get complications. **Blood clots** may form in the heart because blood isn't flowing normally through it. These clots can get into the bloodstream, where they can block important blood vessels. When this happens it is called **thromboembolism**.

If one of these blood clots blocks an artery to the brain it can cause a **stroke**, but drug treatment can be given to prevent these clots.

Your risk of a stroke is affected by lots of things. Things that increase your risk include being older, having high blood pressure, or having a long-term medical condition, such as diabetes. ^[7] Your doctor will help you decide which treatment is right for you based on your overall risk of a stroke. To read more, see [How atrial fibrillation is treated](#) .

Treatments:

Amiodarone

In this section

Having tablets or injections of amiodarone may help some people with atrial fibrillation to get their normal rhythm back, but we can't be sure because the evidence is mixed. Two studies found that this treatment didn't help any more than a placebo drug, but four later studies found that it did help more people get back to normal heart rhythm. ^[11] ^[12] ^[13] ^[14] ^[15] ^[16]

Amiodarone (Cordarone) can be given as a drip into a vein (an **intravenous infusion** , or IV), or tablets.

Several studies have compared amiodarone with other drugs that are used to improve heart rhythm. ^[16] ^[17] ^[18] But none of the treatments was clearly better than another.

Amiodarone can cause side effects. Your blood pressure may drop too low (hypotension) or your heart may beat too slowly (bradycardia).

Flecainide

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In this section

Five good studies (randomised controlled trials) found that most people who had either injections or tablets of flecainide (Tambocor) got a normal heart rhythm back within one to 24 hours. ^{[19] [20] [21] [22] [23]} But it may not last.

Flecainide can make the blood pressure drop too low in some people, causing dizziness. It can also make the heart rhythm worse, especially if you have heart disease. ^{[19] [22] [24]} For this reason, doctors are told not to use flecainide in people who have heart disease. ^[9]

Two studies found that flecainide tablets helped more people get a normal heart rhythm than injections of the drug [amiodarone](#) . ^{[19] [20]} But it's not clear whether flecainide is better than other treatments for getting a normal heartbeat back.

Propafenone

In this section

Most people with atrial fibrillation get a regular heartbeat back after having propafenone treatment, and it's likely to happen more quickly than if they take a dummy (placebo) drug. ^{[19] [23] [25] [26] [27] [28] [29] [30] [31]} Many studies have looked at the effects of propafenone. They found that between 7 in 10 and 8 in 10 people with atrial fibrillation who take this treatment get a regular heartbeat back. But although people are likely to get a regular heartbeat back more quickly with propafenone, some studies showed that after 24 hours almost as many people who had a placebo drug had also got a regular heartbeat.

Propafenone (Arythmol SR) comes as tablets and injections.

Propafenone can make the heart rhythm worse in some people, especially if they have heart disease. ^{[19] [31] [24]} So doctors are told not to use propafenone in people who have heart disease. ^[9]

It isn't clear whether propafenone is better than other treatments to get a normal heartbeat back.

Electric shock treatment (cardioversion)

In this section

Giving your heart an electric shock can mean it gets its normal rhythm back. There's not been a lot of research on this treatment, but it has been used since the 1960s, so doctors think that it works. You'll need a [general anaesthetic](#) so you don't feel the shock, and the treatment sometimes leads to other, more serious, abnormal heart rhythms.

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Doctors recommend electric shock treatment to correct atrial fibrillation that started longer than 48 hours ago.^[9] If your irregular heartbeat started in the last 48 hours, your doctor may suggest either drugs or electric shock treatment.

An electric shock is sometimes used as emergency treatment if you suddenly become very ill with atrial fibrillation.^[9]

Sotalol

In this section

This is a type of drug called a beta-blocker. It may be used to make your heart beat normally. But there's no good research to show whether or not it works.

Sotalol (Beta-Cardone, Sotacor) can be given as injections or tablets.

In the UK, sotalol tablets are sometimes used for people who have permanent atrial fibrillation.^[32] But this treatment isn't usually recommended to get your heartbeat back to normal if you've got atrial fibrillation that has started recently.

Verapamil

In this section

Verapamil is a type of drug called a calcium channel blocker. There's not much research on whether it can get your heart rhythm back to normal if you have atrial fibrillation.

One small study showed that no people who took verapamil got their normal heartbeat back, compared with 3 in 4 people who took another treatment called [amiodarone](#).^[33]

Verapamil (brand names Cordilox and Univer) can be given as tablets or injections.

Digoxin

In this section

Taking digoxin will probably not get your normal heart rhythm back if you have atrial fibrillation. Four good-quality studies ([randomised controlled trials](#)) found that digoxin wasn't any better than having a dummy treatment (a [placebo](#)).^{[34] [35] [36] [37]}

Digoxin (brand name Lanoxin) can be given as injections or tablets. Sometimes it may cause different abnormal rhythms.

Apixaban

In this section

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Apixaban is a drug that helps prevent blood clots (an anticoagulant). It comes as tablets. The brand name is Eliquis.

Until recently, most people who needed medicine to help prevent blood clots were offered [warfarin](#) . But studies have shown that apixaban works at least as well as warfarin to prevent a stroke. ^[38]

Apixaban has the advantage of not requiring to have regular blood tests in order to make dose adjustments, which makes it more convenient than warfarin. But different drugs suit different people. You should discuss with your doctor which drug is the best and safest for you.

Like all drugs that prevent blood clots, apixaban can cause heavy bleeding (haemorrhage). For this reason, doctors are advised not to prescribe apixaban to people with a high risk of bleeding. This could be because of conditions such as a stomach ulcer, a cancer at high risk of bleeding, a recent brain or spinal injury, or a recent bleed in the brain. ^[39]

Amiodarone

In this section

Sometimes, amiodarone is used to slow down the heart in people with atrial fibrillation when other treatments haven't worked. ^[40] Doctors think it can help, but there's not much evidence from studies that it works.

One study found that, in the short term, amiodarone might work better than [digoxin](#) .

Amiodarone (Cordarone) can be given as a drip into a vein (an [intravenous infusion](#) , or IV), or tablets.

Amiodarone can cause several side effects, including skin rashes and light sensitivity, and lung, liver, and thyroid problems, especially when it is used in high doses for a long time. ^[40]

Beta-blockers

In this section

Taking a drug called a beta-blocker can help to slow down your heartbeat. ^[41] A big review of good-quality studies ([randomised clinical trials](#)) of people with short-term and long-term atrial fibrillation found that beta-blockers helped slow down the hearts of 6 in 10 people, even when they were exercising. ^[41]

Beta-blockers include drugs such as atenolol (Atenix, Tenormin), metoprolol (Lopressor), propranolol (Angilol, Bedranol, Beta Prograne, Inderal, Lopranol, Syprol), sotalol (Beta-Cardone, Sotacor), and timolol (Betim). You can have injections in hospital to treat

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a short-term attack, or you can take tablets at home if your atrial fibrillation lasts a long time. ^[10]

Beta-blockers can make you feel light-headed, dizzy, or tired.

If you have asthma, you shouldn't take a beta-blocker, because it can make your breathing worse. If you have diabetes, beta-blockers may prevent your body from recognising that your blood sugar is too low.

Calcium channel blockers

In this section

Injections of verapamil or diltiazem can help to slow down a heart that is beating very quickly. ^[42] ^[43] ^[44] You may need one or more injections. The drugs work quickly, usually within five to 15 minutes. In one study, diltiazem slowed down the hearts of more than 7 in 10 people, from 120 beats a minute to less than 100 beats a minute, within 15 minutes. ^[42] One small study showed that verapamil and diltiazem worked as well as each other. ^[45]

You may be given injections of one of these drugs if you need treatment in the accident and emergency department. Your doctor may also give you tablets to take at home to stop your heart beating rapidly again.

Verapamil and diltiazem belong to a group of drugs called calcium channel blockers. Brand names for verapamil include Cordilox and Univer. Brand names for diltiazem include Adrizem, Angitil, and Calcicard.

One small study showed that verapamil was more likely than diltiazem to make your blood pressure go too low, and this can make you feel light-headed or dizzy. ^[45] Another study showed that diltiazem may be better than a drug called [digoxin](#) at making the heart beat more slowly. ^[46]

Digoxin

In this section

Taking digoxin (brand name Lanoxin) can help to slow down your heart. Two good-quality studies ([randomised controlled trials](#)) found that injections of digoxin slowed the heart to less than 100 beats a minute within about 30 minutes to two hours. ^[34] ^[37] But it may slow down the heart too much in some people.

You may be given injections of digoxin if you need treatment in the accident and emergency department. Your doctor may also give you tablets to take at home to prevent your heart from beating rapidly again.

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One good-quality study found that digoxin didn't work as well as the [calcium channel blocker](#) drug called diltiazem. ^[46]

Some studies have also found that digoxin didn't work very well for people who need treatment to slow their heart when they exercise. ^[47] ^[48] They seem to need other treatments as well as digoxin, such as a [beta-blocker](#) or calcium channel blocker.

Dronedarone

In this section

Dronedarone (brand name Multaq) is a treatment for atrial fibrillation that works to slow the heartbeat and make it beat normally. It comes as a tablet.

We haven't looked at the research for this treatment in as much detail as for other treatments we cover. It may cut your chances of having to go to hospital for heart problems.

It can cause these side effects: [diarrhoea](#), nausea, stomach pain, vomiting, [heartburn](#), weakness, rash, itching, or redness. ^[49] You should avoid taking grapefruit juice with this drug.

There's also a small chance that the drug could harm your liver. Although this is rare, your doctor should check your liver before and during treatment. ^[50] You should also contact your doctor straight away if you have any symptoms of liver injury, such as pain in your abdomen, nausea, yellow eyes or skin (jaundice), or brown urine. A review of the safety of the drug found it may also cause serious heart problems, and damage to the lungs. ^[51]

Because of these safety concerns, doctors have been advised only to use dronedarone if other drugs have been tried, but haven't worked. It should only be used to help maintain a normal heart rhythm, not to change a heartbeat from atrial fibrillation to a normal heartbeat.

Warfarin

In this section

There's a lot of evidence that taking the anticoagulant drug warfarin (Coumadin) can reduce your risk of having a stroke. ^[52] ^[53] Several good-quality studies ([randomised controlled trials](#)) have shown that if you have atrial fibrillation, taking warfarin reduces the risk of a stroke by about two-thirds. ^[52] ^[53]

However, a recent large study with more than 18,000 people found that warfarin might not work as well as a newer drug called [dabigatran \(Pradaxa\)](#). ^[54] ^[55]

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You can take **anticoagulants** as injections or as tablets. We've only looked at tablets, because that's what your doctor might prescribe to help protect you from a stroke. Doctors inject anticoagulants when they treat strokes in an emergency.

Anticoagulants change the way that blood cells stick together to form clots. They can't remove clots that have already formed. But they can stop clots getting bigger, and they can stop new clots forming. If a clot forms in a blood vessel in your brain or in a blood vessel leading to your brain, you might have a stroke.

You will need to have regular blood tests to check you're taking the right amount of warfarin. If the dose of warfarin is too high, there is an increased risk of internal bleeding. Recent studies found there was less risk of internal bleeding with dabigatran.^[55] ^[56] Your doctor should discuss with you which is the best and safest drug for you.

Dabigatran

In this section

Dabigatran is a drug that helps prevent blood clots (an anticoagulant). It comes as capsules. The brand name is Pradaxa.

Until recently, most people who needed medicine to help prevent blood clots were offered [warfarin](#). But good-quality studies have shown that dabigatran worked at least as well as warfarin to prevent a stroke.^[54] ^[55] Dabigatran has the advantage that you don't need to have regular blood tests in order to make dose adjustments, which makes it more convenient than warfarin.

Like all drugs that prevent blood clots, dabigatran can cause heavy bleeding (haemorrhage). For this reason, doctors are advised not to prescribe dabigatran to people with a high risk of bleeding. This could be because of conditions such as a stomach ulcer, a cancer at high risk of bleeding, a recent brain or spinal injury, or a recent bleed in the brain.^[39]

Rivaroxaban

In this section

Rivaroxaban is a drug that helps prevent blood clots (an anticoagulant). It comes as tablets. The brand name is Xarelto.

Until recently, most people who needed medicine to help prevent blood clots were offered [warfarin](#). But a good-quality study has shown that rivaroxaban worked at least as well as warfarin to prevent a stroke.^[57] ^[58]

Like all drugs that prevent blood clots, rivaroxaban can cause heavy bleeding (haemorrhage). For this reason, doctors are advised not to prescribe rivaroxaban to people with a high risk of bleeding. This could be because of conditions such as a stomach

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ulcer, a cancer at high risk of bleeding, a recent brain or spinal injury, or a recent bleed in the brain. ^[39]

Rivaroxaban has the advantage that you don't need regular blood tests in order to make dose adjustments, which makes it more convenient than warfarin. ^[58]

Aspirin

In this section

Aspirin helps to prevent blood clots. Cells in your blood called **platelets** help your blood to clot by sticking together. Aspirin makes these cells less sticky and helps to prevent blood clots. ^[59]

We're not certain how good aspirin is at preventing strokes for people with atrial fibrillation. For people at a high risk of a stroke, aspirin doesn't seem to be as good as the drugs [dabigatran](#) or [warfarin](#) . ^{[52] [60] [61] [54]}

Anticoagulants for people having treatment to get their heart beating normally again

In this section

If you're having treatment to correct your heart's abnormal rhythm, you might also be given a drug to prevent blood clots (an **anticoagulant**). One drug that's sometimes used is called heparin. There's not much research on how well heparin works when it's used like this. Another option is the drug warfarin.

If you're not being treated as an emergency, your doctor may recommend having three or four weeks of treatment with an anticoagulant drug, both before and after you have treatment to get your heart beating normally again. ^[10]

To read more about treatments to restore a normal heartbeat, see [Treatments to get your heart rhythm back to normal](#) .

Further informations:

Glossary:

ultrasound

Ultrasound is a tool doctors use to create images of the inside of your body. An ultrasound machine sends out high-frequency sound waves, which are directed at an area of your body. The waves reflect off parts of your body to create a picture. Ultrasound is often used to see a developing baby inside a woman's womb.

intravenous infusion

When a medicine or a fluid, such as blood, is fed directly into a vein, it's called an intravenous infusion (or IV). To give you an intravenous infusion, a nurse, technician or a doctor places a narrow plastic tube into a vein (usually in your arm) using a needle. The needle is then removed and the fluid is infused (or dripped) through the tube into the vein.

blood clot

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A blood clot forms when the cells in blood clump together. Sometimes this happens to stop you from bleeding if you've had an injury. But it can also happen on the inside of your blood vessels, even when you haven't had an injury. A blood clot inside a blood vessel is called a thrombus.

stroke

You have a stroke when the blood supply to a part of your brain is cut off. This damages your brain and can cause symptoms like weakness or numbness on one side of your body. You may also find it hard to speak if you've had a stroke.

randomised controlled trials

Randomised controlled trials are medical studies designed to test whether a treatment works. Patients are split into groups. One group is given the treatment being tested (for example, an antidepressant drug) while another group (called the comparison or control group) is given an alternative treatment. This could be a different type of drug or a dummy treatment (a placebo). Researchers then compare the effects of the different treatments.

placebo

A placebo is a 'pretend' or dummy treatment that contains no active substances. A placebo is often given to half the people taking part in medical research trials, for comparison with the 'real' treatment. It is made to look and taste identical to the drug treatment being tested, so that people in the studies do not know if they are getting the placebo or the 'real' treatment. Researchers often talk about the 'placebo effect'. This is where patients feel better after having a placebo treatment because they expect to feel better. Tests may indicate that they actually are better. In the same way, people can also get side effects after having a placebo treatment. Drug treatments can also have a 'placebo effect'. This is why, to get a true picture of how well a drug works, it is important to compare it against a placebo treatment.

general anaesthetic

You may have a type of medicine called a general anaesthetic when you have surgery. It is given to make you unconscious so you don't feel pain when you have surgery.

diarrhoea

Diarrhoea is when you have loose, watery stools and you need to go to the toilet far more often than usual. Doctors say you have diarrhoea if you need to go to the toilet more than three times a day.

heartburn

Heartburn is a painful, burning sensation in the chest. It happens, often after meals, when the contents of the stomach pass back up into the oesophagus. The oesophagus is the tube that runs from the mouth to the stomach.

anticoagulants

Anticoagulants are medicines that prevent your blood from clotting. In certain cases, they are given to people to prevent them from having a stroke. Anticoagulants are also called blood-thinners.

platelets

Platelets are small disc-shaped particles found in your blood (along with red blood cells and white blood cells). Platelets form the clots that stop the bleeding when you've been cut. People who don't have enough platelets have problems with bleeding too much.

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