Patient information from BMJ

Last published: Jul 24, 2020

Stroke caused by a blood clot: preventing another stroke

If you've had a stroke that was caused by a blood clot you might be worried about having another. But there are treatments that can reduce the chance of this happening.

You can use our information to talk to your doctor and decide which treatments are right for you.

What is a stroke?

A stroke happens when the blood supply to part of the brain is cut off. It's extremely dangerous. If brain cells go too long without a supply of blood they will die.

There are two main causes of a stroke.

- Hemorrhagic strokes are caused by a broken blood vessel in the brain.
- Ischemic strokes happen when a blood clot gets stuck in a blood vessel in the brain and blocks the flow of blood. The information in this leaflet is about ischemic strokes.

It's also possible to have what's called a mini-stroke. A mini-stroke happens when the blood supply to the brain is cut off for just a few minutes. Doctors call it a transient ischemic attack, or TIA.

If you've had a stroke or mini-stroke before it increases your chances of having another one. You might be at greater risk if:

- you're over 75
- you have heart failure, diabetes, or high blood pressure
- you have a type of irregular heartbeat called atrial fibrillation.

What treatments help to prevent a stroke?

Your doctor will suggest that you take medications to reduce your chance of having another stroke. Some people might also benefit from surgery.

Your doctor will also suggest some changes to your lifestyle to help you stay healthy.

Medications

Your doctor will probably recommend that you take a type of medication called an **antiplatelet**.

Platelets are tiny discs in the blood that join together to form scabs over wounds when you have an injury. Antiplatelet drugs help reduce your chance of having another stroke by stopping these platelets clumping together to form clots in your blood vessels.

There are several drugs your doctor might prescribe, partly depending on whether you have any other heart or circulation problems. But they all work in a similar way. Two that you may have heard of are aspirin and clopidogrel.

One side effect of these drugs is that they can make you bleed more easily. There's a small chance that this could cause dangerous bleeding inside your body (internal bleeding). But if you've had a stroke it's highly likely that the benefits of these drugs outweigh the risks.

Taking a drug called a **statin** can also lower your chance of having another stroke. Statins work by lowering cholesterol levels

Cholesterol is a fatty substance that's found in the blood. Some cholesterol is needed for good health. But if you have too much of one specific type of cholesterol it can lead to blocked blood vessels.

Statins can cause side effects in some people, including liver or muscle problems. Tell your doctor if you notice any muscle pain or weakness or any new symptoms.

What if I have an irregular heartbeat?

Some people who have had a stroke have a type of irregular heartbeat called atrial fibrillation. If you have atrial fibrillation the treatment you need to prevent another stroke will be slightly different.

An irregular heartbeat can mean that blood pools in your heart and forms clots. If a clot travels to your brain it can cause a stroke. So your doctor will probably suggest that you take an **anticoagulant** to help prevent blood clots forming in this way.

One anticoagulant you might have heard of is warfarin. But there are several newer drugs that do the same job. The treatment your doctor suggests will depend on which one he or she thinks will best suit you and your lifestyle.

One side effect of anticoagulants is that they can make you bleed more easily. This could lead to dangerous internal bleeding.

If you're taking warfarin you'll have regular blood tests to make sure you're taking the right dose. You might need to have your dose adjusted depending on the test results. This reduces your chance of side effects and makes sure you're getting the most effective treatment. The newer anticoagulants don't require as much testing.

Surgery

Your doctor might recommend surgery if you have a certain level of blockage in the carotid artery in your neck. An operation called **carotid endarterectomy** can remove this fatty build-up from the arteries in your neck (these are the arteries that carry blood to your brain).

If you have this operation you'll have a general anesthetic to make you sleep. A surgeon then makes small cuts in the major blood vessels in your neck and removes any blockages.

It's a serious operation and, like all surgeries, it has risks. It's also not suitable for everyone. For example, for some people, it could actually increase their chance of a stroke. Talk to your doctor about whether surgery could be right for you.

Another operation called **carotid artery stenting** is sometimes used to help prevent another stroke. This uses a tube with a tiny balloon on the end. The tube is passed through your blood vessels, and the balloon is blown up to widen any blockages.

This operation is fairly new, so we don't know as much about how well it works as we do about endarterectomy.

What can I do to help myself?

Making changes to your lifestyle can help lower your cholesterol level and help you be healthier overall.

Your doctor will probably advise you to do several things. But you'll still need to take the medications that your doctor has prescribed.

Everyone who has had a stroke will be strongly advised to **exercise** several times a week in order to reduce the chance of another stroke.

If you have been partly disabled by a stroke, or if you have lost some mobility, your doctor should refer you to a physical therapist or other specialist to help you recover as much movement as you can.

If you're overweight it's a good idea to try to get to a healthier weight. Doing some physical activity can help. Doing at least 30 minutes of exercise on most days is a good target.

Try to choose an activity that makes you warm and slightly out of breath. Many people find that walking briskly is the most convenient thing to do. But the type of exercise you can do will depend on how your stroke has affected you, especially at first.

You might want to talk to your doctor about what types of exercise are safest and best for you.

If you smoke your doctor will strongly advise you to quit or at least to try to smoke less. Smoking damages your blood vessels and makes a stroke more likely. Your doctor or pharmacist can give you help with quitting smoking.

(For more information on help to quit smoking, see our leaflet on *Quitting smoking*.)

It's also important to eat a **healthy diet** that includes a lot of fresh fruit and vegetables. Try to keep sugar, processed foods, and junk food to a minimum.

If you have another medical condition, such as high blood pressure or a heart problem, try to make sure it's kept under control. Not taking your treatments for other conditions could increase your chance of having another stroke.

Where can I get more help?

Many people who have a stroke have rehabilitation in a specialized stroke facility. This can help you recover if you have lost some mobility or have trouble communicating.

Some people become depressed after having a stroke. If you begin to feel depressed, don't keep it to yourself. Depression can slow down your recovery. Tell your doctor and anyone who is caring for you. There are treatments that can help.

Having a stroke can mean making some big changes to your life. You may find it helps to talk to people who've been in a similar situation. Or, if you're caring for a relative who's had a stroke, you may feel you need more advice and support. Your doctor can give you advice and put you in touch with organizations that can help.

What did you think about this patient information guide?

Complete the online survey or scan the QR code to help us to ensure our content is of the highest quality and relevant for patients. The survey is anonymous and will take around 5 minutes to complete.

BMJ Group