

Patient information from BMJ

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Stroke: treatment

What is a stroke?

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

There are two main causes of a stroke. The most common is a blood clot. This is called an **ischaemic stroke**. If a blood clot gets stuck in a blood vessel in the brain it can block the flow of blood. This can damage the part of the brain that's no longer getting a supply of blood.

A stroke can also be caused by bleeding in the brain. This is called a **haemorrhagic stroke**. If a blood vessel bursts in or near your brain the bleeding can cause damage and lead to a stroke.

What are the symptoms?

Strokes usually happen quickly and without any warning. But the symptoms someone has in the first few days after a stroke may not last forever.

Symptoms of a stroke include:

- feeling weak or numb on one side of the body and possibly being unable to move that side of the body at all
- dizziness
- difficulty walking
- drooping of one side of the face
- difficulty speaking. This can be caused by problems with the muscles in the face, or by difficulty finding words and using language (called dysphasia), or both
- problems understanding what people are saying
- trouble seeing out of one or both eyes
- passing out
- severe headache

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- difficulty swallowing.

Someone who is having a stroke might have several or most of these symptoms.

A stroke is an emergency. It's very important to get medical attention straight away.

However, the ambulance or paramedics may not take you to the nearest hospital. That's because people do better at hospitals with specialist stroke units. It might be better to go farther away to a hospital that can provide specialist care.

What treatments work?

If you've had a stroke you'll need emergency treatment in hospital. The main aims of treatment are to:

- restore blood flow to the affected area
- prevent complications caused by strokes.

At hospital you might be given fluid through a tube. Some people need a tube that's put into their mouth to help them breathe.

Someone who's had a stroke will need several scans and tests. These tests can tell doctors what type of stroke someone has had. The treatments for a stroke depend on whether it was caused by a blood clot or by bleeding.

Treatments for a stroke caused by a blood clot (ischaemic stroke)

Most strokes are caused by a blood clot that blocks a blood vessel. So you'll probably be given drugs that break down the clot. This type of treatment is called **thrombolysis**.

You might be given a drug called **alteplase**. This helps break down blood clots. But it's only useful if it's given within the first few hours after the stroke.

People treated with alteplase have a better chance of complete recovery, even taking into account the chance of serious side effects. In particular, alteplase can cause bleeding in the brain (brain haemorrhage) in some people.

Aspirin is well-known as a painkiller. But it is also given to most people who have just had a stroke. It is used to stop blood from clotting in the usual way. Being given aspirin within 48 hours of having a stroke reduces your chance of dying or of being severely disabled.

Like alteplase, aspirin can cause unwanted bleeding, including a brain haemorrhage. But if you've had a stroke the benefits of aspirin outweigh the risk of side effects.

Some people need treatments that target their blood clot more directly. This could mean having thrombolysis drugs injected into the blood vessel very near to the clot. This is called intra-arterial thrombolysis.

People who have a blockage of a large blood vessel in the brain can sometimes have the blood clot physically removed. To do this, a surgeon uses an instrument called a stent remover.

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Treatment for a stroke caused by bleeding (haemorrhagic stroke)

Strokes caused by bleeding into the brain, rather than by blood clots, often need surgery. This is to repair the broken blood vessel and remove the extra blood that's pooled in the brain.

Not everyone who has this type of stroke needs surgery. Whether you need surgery depends partly on how much bleeding there has been. The more bleeding there is in the brain, the more likely you are to need an operation.

What will happen?

It's hard to say what will happen after a stroke. More than half of people go on to make a good recovery and are able to take care of themselves.

But recovery can take time. About two thirds of people who have a stroke will have some kind of disability when they leave hospital. Some of these disabilities will be long lasting.

About 15 in 100 people who have a stroke will die within 30 days of it. These first 30 days are the most dangerous time for people who have a stroke. After that the outlook is much better. But about 25 in 100 people will have a second stroke within 5 years.

The outlook is better for younger people, men, and people who don't have other health problems.

It's hard to say how someone's symptoms will change in the weeks and months after a stroke. But there's a lot to be hopeful about. Research shows that being treated by specialists in a stroke team, such as a physiotherapist or a speech therapist, can help reduce disability after a stroke.

Doctors often recommend treatment to reduce the chance of a second stroke. To find out more, see our information on *Preventing another stroke*.

Caring for someone who's had a stroke

Caring for someone who has had a stroke can be physically and emotionally demanding. Carers might have to help with dressing, feeding, and washing. They might have to change their own lifestyle to be able to do all these things.

Carers often say that they sometimes feel isolated and often don't get enough rest or sleep. To avoid becoming ill themselves it's important for carers to realise that they might not be able to do everything themselves.

They might need extra help at home. Or they might need to arrange for someone else to take over the care for a time so that they can have a break.

Support groups can help carers feel less isolated. Your doctor can give you advice and put you in touch with organisations that provide help and support.

For example, in the UK the Stroke Association is a charity that offers information and support to people who've had a stroke and their families. You can find out more at their website (stroke.org.uk).

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