

# You've had a stroke— Now what?



a guide for stroke survivors and their families

## We have created this booklet to help you recover and stay healthy

You've had a stroke. One of the most important things you can do now is help keep another stroke from happening. This booklet will help you do just that. It will also help you and your caregivers learn more about stroke, the signs of a stroke, how to care for yourself, and what to expect as you recover.



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# SPOT A STROKE

LEARN THE WARNING SIGNS AND ACT FAST

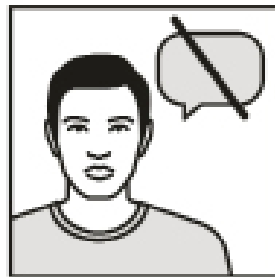
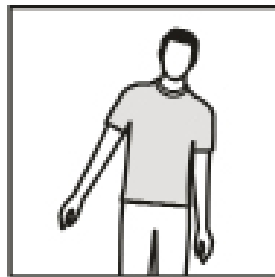
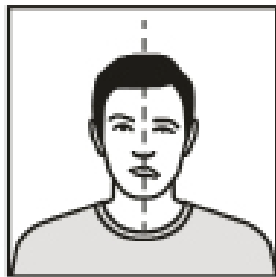


**F**

**A**

**S**

**T**



## FACE

ONE SIDE OF THE  
FACE IS DROOPING

## ARMS

ARM OR LEG  
WEAKNESS

## SPEECH

SPEECH DIFFICULTY

## TIME

TIME TO CALL  
FOR AMBULANCE  
IMMEDIATELY



**CALL 911 IMMEDIATELY**

# About strokes

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## What is a stroke?

A stroke is when blood flow to part of your brain is cut off. When this happens, the brain cells don't get the oxygen and glucose they need to survive. This causes the cells to die. If a stroke isn't caught early, lifetime brain damage or even death can happen.

### *Warning strokes or mini-strokes*

The medical term for a warning stroke is "transient ischemic attack" or TIA. It's also called a mini-stroke.

- "Transient" means it comes then goes.
- "Ischemic" means no oxygen.

If you have a TIA, you may have signs of a stroke, but go back to normal within minutes to hours. A TIA may be a sign that a larger and more dangerous stroke will happen. If you have signs of a TIA, think of it as a warning. Get help immediately!

## What are signs of a stroke?

- Sudden weakness or numbness in your face, an arm, or a leg (normally just on one side)
- Trouble speaking or understanding when people speak to you
- Trouble seeing with one or both eyes
- Sudden dizziness or trouble walking
- Sudden and severe headache
- You've had a recent stroke and your symptoms have suddenly gotten worse.

### *Think F.A.S.T. to spot a stroke!*

#### **Face drooping.**

One side of the face is drooping or numb. When the person smiles, the smile is not the same on both sides.

#### **Arm weakness**

One arm is weak or numb. When you lift both arms at the same time one arm may drift down.

#### **Speech problems**

You may have slurred speech or a problem speaking. You can't repeat a simple sentence correctly when asked.

#### **Time to call 911!**

If you have any of these signs, call 911 now! Any time you have signs of a stroke, it's an emergency. Get help even if the signs go away. Write down the time the problems first started.

# Staying healthy after your stroke

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## Am I at risk of having another stroke?

Having a stroke means you have a higher risk of another one. It's important that you do everything you can to lower the chances of another stroke.

It's important to know your risk factors for stroke. Some risk factors you can change. Some you can't. Even though you can't change some of your risk factors, don't feel helpless. There are many things you can do to lower your risk of having another stroke.

### *These are risk factors you CAN'T change:*

- Your age
- Your gender
- Your race
- Your family medical history
- You've already had a stroke
- Some types of heart problems, such as a atrial fibrillation and patent foramen ovale

### *These are risk factors that you CAN change:*

- High blood pressure
- Too much body weight
- Heart health problems, including atrial fibrillation and high cholesterol
- Diabetes
- Tobacco use
- Drinking too much alcohol
- Using illegal drugs

## How do I help prevent another stroke?

### *Keep a healthy blood pressure*

- Remember that you may have high blood pressure and not have any signs of it.
- Have your blood pressure checked regularly.
- Take any medicine your provider says you need. Take it exactly like you are told.
- Stay active, and eat a healthy diet. Your provider will talk with you about the best diet and activity routine for you.

### *Keep a healthy weight*

It is important to keep your weight at a healthy level. Your provider can help you come up with a plan to keep a healthy weight.

### *Keep healthy cholesterol*

Cholesterol is a kind of fat made by the liver. It moves through the body in the blood. There are two types of cholesterol, LDL (bad) and HDL (good). Both kinds play a role in the development of heart disease.

- LDL causes problems when it builds up inside the blood vessels.
- HDL helps remove bad cholesterol from your blood vessels.
- Blood fats (triglycerides) also play a role in heart disease.
- Make sure you know your cholesterol and triglyceride levels. If you don't know, ask your doctor.

To keep healthy cholesterol, you should:

- eat a heart-healthy diet
- stay active
- keep a healthy weight
- take your medicines exactly the way your doctor has said
- quit smoking, if you smoke.

### ***Keep healthy blood sugar***

- A healthy diet will help you keep your blood sugars under control.
- If you take insulin or medicine for diabetes, take it exactly like your provider tells you.



### ***If you smoke, quit!***

Smoking can raise blood pressure and make your blood thicker. This raises your risk of stroke. Smoking also lowers the oxygen you get when you breathe. Less oxygen means your body has to work harder to move the oxygen to the places that need it. Talk with your provider about getting the support you need to quit smoking.

### ***Control your alcohol intake***

Too much alcohol can raise blood pressure and lead to strokes. Have no more than 1 alcoholic drink each day. One drink is 1.5 ounces of hard liquor, 4 ounces of wine, or 12 ounces of beer.

### ***Take all your medicines exactly like you are told***

Take all the medicines that your doctor has prescribed for you. Take it exactly like your doctor has said.

### ***Take care of your heart***

If you have heart issues, do exactly what your doctor says to care for your heart. This means you should take any heart medicines you get. You should also live a heart healthy lifestyle, which includes a low-fat diet and no smoking.

Two heart conditions that raise your chances of stroke are atrial fibrillation and patent foramen ovale. Even though these are risk factors that you cannot change, do what your doctor says to prevent a stroke caused by these problems.

- Atrial fibrillation (Afib) is a heart problem that allows blood to pool in the heart. This can cause clots to form over time. If one of these clots travels to your brain, it could cause a stroke. If you have Afib, your doctor will give you medicine to help treat it.
- Patent foramen ovale is when you have a hole in the muscle between the left and right sides of the heart. This hole can cause blood clots can develop and lead to strokes. If you have this problem, your doctor can give you blood thinners to keep clots from forming. Some people also have surgery to close the opening.

# Your recovery and rehab

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## What can I expect as I recover from stroke?

### *Emotional changes*

After a stroke you may feel sad or depressed, because you can't do all the things you used to do. You'll also be faced with the changes you need to make to help keep another stroke from happening.

The best way to deal with these feelings is to be patient with yourself and make the most of the therapies and resources around you. If you begin feeling irritated, have changes in sleep or appetite, or the sad feelings just don't go away, tell your doctor. These could be signs of depression that could be treated by talking to a therapist or even getting medicine.



### *Watch for signs of depression:*

- Feeling sad, anxious, or “empty”
- Loss of interest in things you used to enjoy
- Changes in how much you eat or how much you weigh
- Changes in sleep pattern
- Loss of energy and feeling tired all the time
- Feeling worthless, guilty, or hopeless
- Feeling irritable or restless
- Having thoughts of death or suicide
- Physical problems that don't go away with treatment
- Problems with focus, memory, or making decisions

### *Changes in your sex life*

If you have a partner, you may find that your sex life changes after a stroke. Be open with your partner about what you are feeling. Whatever is comfortable and acceptable between you is normal sexual activity. If you do have concerns or problems, it may help for you to talk with your doctor or a therapist, even as a couple.



## What will my rehab treatment be like?

You will have rehab in the hospital. You will also have rehab after you leave the hospital. The goal of rehab is to help you get back your strength and the use of any part of your body that was affected by your stroke. Rehab will start as soon as possible. We will work with you and your family to create a plan that is best for you.

Once you have been given all the care we can give you in the hospital, you will be moved to the next phase of rehab. Where you go after the hospital will depend on how much care you need and the part of your brain that was hurt by your stroke.

After the hospital, we may send you:

- to a nursing home (skilled nursing facility)
- to a rehab facility
- or home.

## What can I expect in the hospital?

### *You might have inpatient hospital rehab*

You'll have inpatient rehab at the hospital if you need 2 or more types of therapy. To do this type of therapy, you must be able to learn and do at least 3 hours of therapy each day.

### *Or you might go to a subacute unit in the hospital for rehab*

You'll have this kind of rehab if our goal is for you to go home after you leave the hospital. Your stay in the unit will be short. To do this type of therapy, you must need 1 or more types of therapy. You must show progress with your therapy in order to stay.

## What can I expect after I leave the hospital?

### *You might go to a skilled nursing facility*

Here, therapy will be less intense than it was in the hospital. You must meet the requirements set up by the facility. And you must show progress to stay.

### *You might have outpatient rehab at a facility*

Here, the goal will be to restore you to your former ability to function.

- In outpatient rehab, you can only have 1 type of therapy.
- You must have someone to drive you to and from therapy.
- You must have a doctor's prescription for this therapy.

### *You might have your rehab at home*

This type of therapy is available for you if you aren't able to leave your home. You must require nursing care or therapy for functioning.

- You'll have more time to show progress in your therapy.
- Your family will be able to help with your care.
- You must have a doctor's prescription for this therapy.

# Your healthcare team

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You will work with many different people as you recover from your stroke. You will work with members of your care team from the time you come to the hospital and after. The team will help you get your strength back. They will also help you relearn any skills you need to relearn.

## Stroke specialist

This is a brain doctor (neurologist) who specializes in strokes. This doctor will examine you, make a plan of care, and order different tests to find out why and if you had a stroke. The doctor will decide how best to treat you. This doctor will also work with your primary care doctor to make the best plan to keep you from having another stroke.

## Nurses

The nurses on your team will give you medicine, alert the doctor and other team members about your healthcare needs, and manage your care while you're in the hospital.

## Case manager

This person will help plan where you'll go after the hospital. They will help find a rehab or nursing facility for you or help you set up home healthcare. They can also help you find out if insurance will pay for the tests and medicines you'll need after the hospital.

## Social worker

This person will help make sure you have the support you'll need after you leave the hospital. They will help you get the resources you need to have the best recovery you can.

## Physical therapist

This person will help you get your physical strength back. They will help you walk, get out of the bed, and sit up in a chair. They will show you how to stay safe as you move around.

## Occupational therapist

This person will help you relearn how to do your care tasks, such as eating, dressing, and bathing. The therapist will also find different tools for you to use to make it easier to do these tasks. Sometimes, the therapist will go to your home to make sure it's safe for you to return to. They will also show you ways to make your house safe.

## Speech-language pathologists

Sometimes a stroke can affect your ability to speak and swallow. This person will help you make the muscles in your face strong again. This will improve your speech and swallowing.

# Find the support you need

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You might find it helpful to find other stroke survivors. You can try the following listings below. You can also check your phone book and the internet for other resources. Talk with your social worker if you need help finding resources.

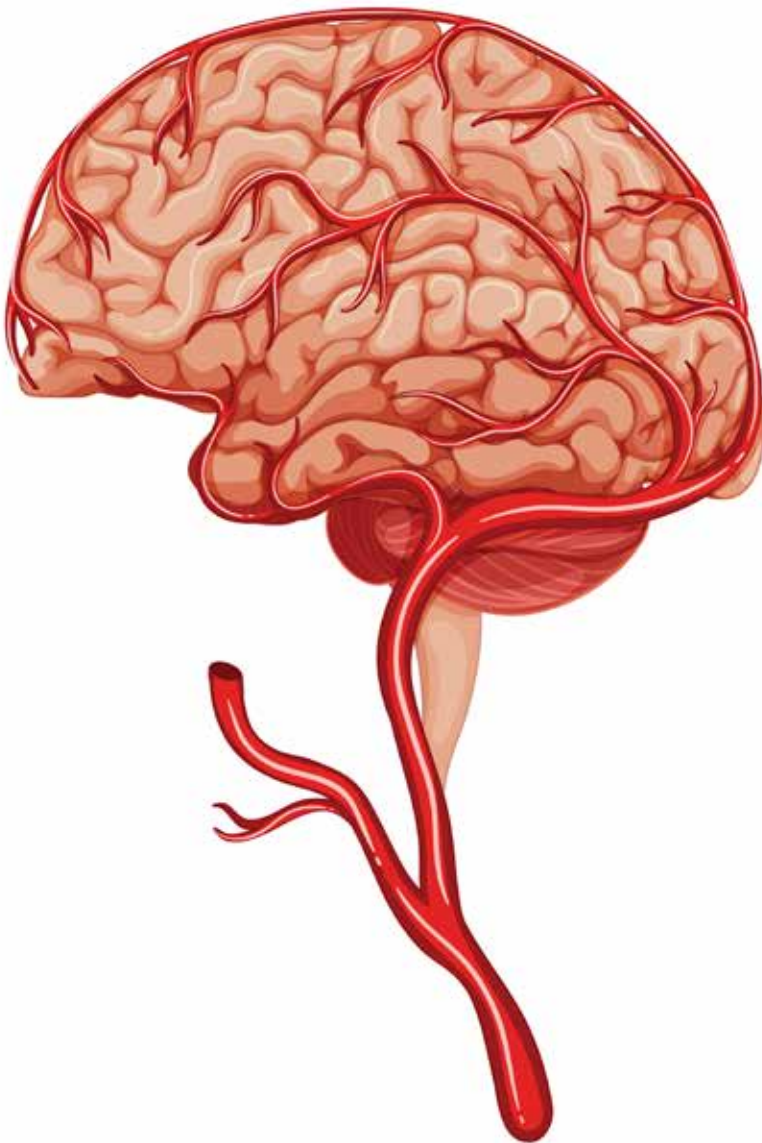
Remember: you don't have to go through this alone.

Some places you can go for support:

- Churches and synagogues
- Recreation centers
- Adult day care
- Social services
- Support groups
- Online stroke support communities
- National Stroke Association  
(800) 787-6537
- American Stroke Association  
(800) 553-6321
- Family Caregiver Alliance  
(800) 445-8106



# Types of human brain stroke



Ischemic stroke



Hemorrhagic stroke

# Learn more

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## Are all strokes the same?

No. There are different kinds of strokes. Even though all strokes mean that blood has stopped getting to some part of your brain, there are different kinds of strokes.

The 2 main types of strokes are:

- ischemic (without oxygen) strokes
- hemorrhagic (bleeding) strokes.

## *There are 2 kinds of ischemic strokes*

An ischemic stroke is simply any stroke caused by a blood clot. Ischemic means “without oxygen.” The 2 types of ischemic strokes are:

- embolic
- thrombotic.

## *There are 4 kinds or causes of hemorrhagic strokes*

These strokes happen when a blood vessel breaks or bursts. They are also called bleeding strokes.

The 4 types or causes of bleeding strokes are:

- intracerebral
- subarachnoid
- vasospasm
- subdural hematoma.

## Ischemic strokes and their causes

Ischemic strokes are strokes caused by a blood clot. There are 2 different ways these blood clots can happen.

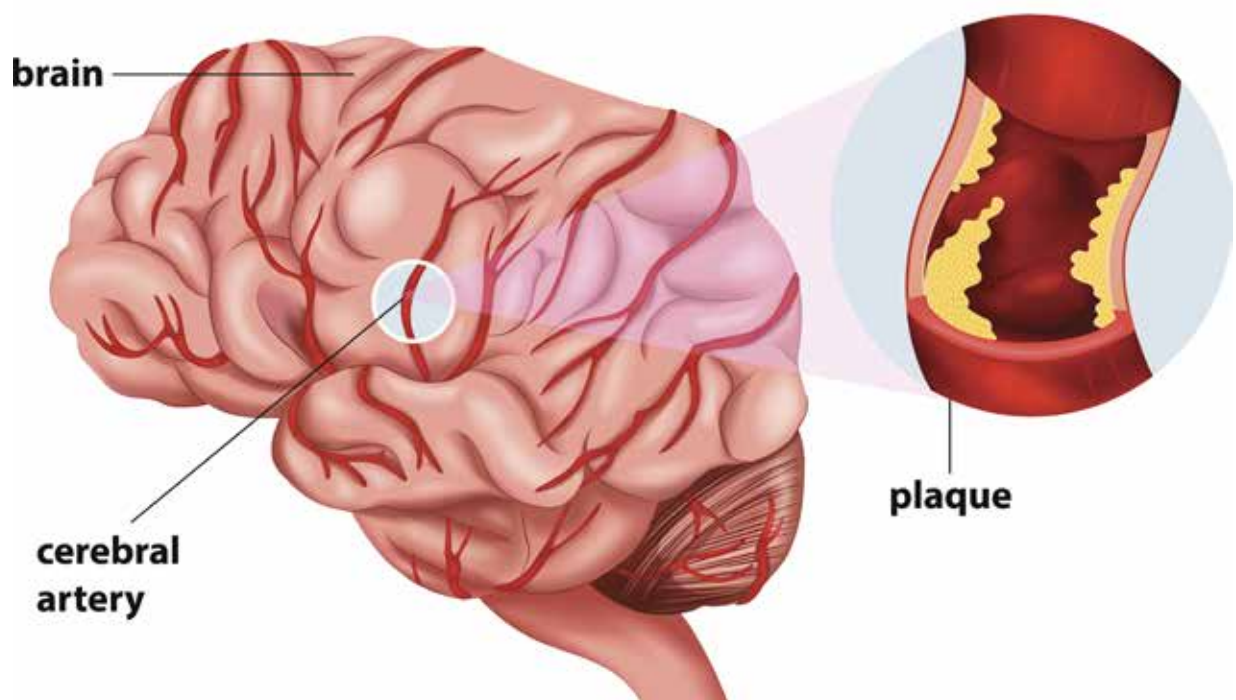
### Embolic strokes

This kind of ischemic stroke happens when a blood clot forms in 1 part of the body and travels to a different part of the body and blocks blood flow.

### Thrombotic strokes

This type of ischemic stroke happens when fat and cholesterol build up in the blood vessels and keep blood from passing through. Providers call this “atherosclerosis.”

When you have a clogged blood vessel, it is like a water pipe that clogs over time. The walls of your blood vessels can also become thick when the blood pressure remains high for a long period of time. When the walls are thick, blood will clot on the walls and lead to a stroke.

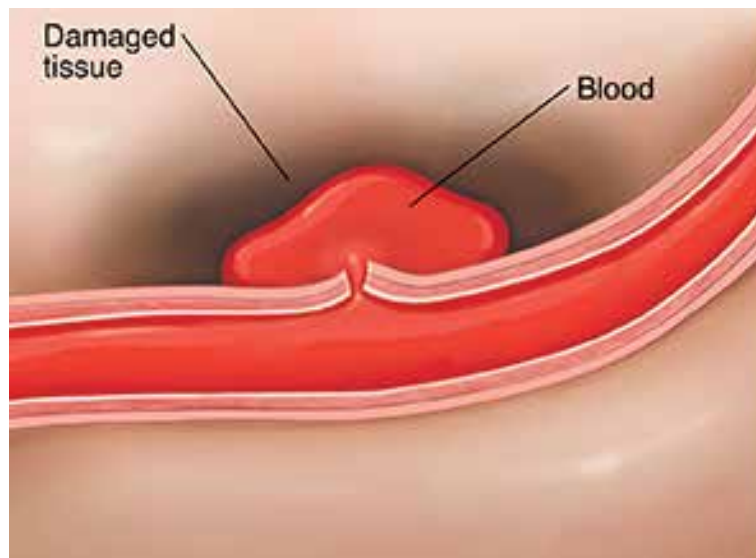


An ischemic stroke is when something stops the flow of blood in the brain is stopped. This can happen when a blood clot that travels from a different part of the body or when blood vessels are clogged by fat and cholesterol.

## Hemorrhagic (bleeding) strokes and their causes

Bleeding strokes can be caused by many different things:

- high blood pressure that is not treated
- aneurysm (a weakening in a vessel wall that can balloon out and burst.)
- having a group of large blood vessels that are weakened (arteriovenous malformation )
- taking blood thinning medications that are not watched closely by a doctor
- abusing alcohol or drugs
- falling and hitting your head or hurting your head.



A hemorrhagic stroke is when a blood vessel in the brain breaks or bursts. This can happen in different parts of the brain. And they have different causes.

## Intracerebral bleeding strokes

Intracerebral means “inside the brain.”

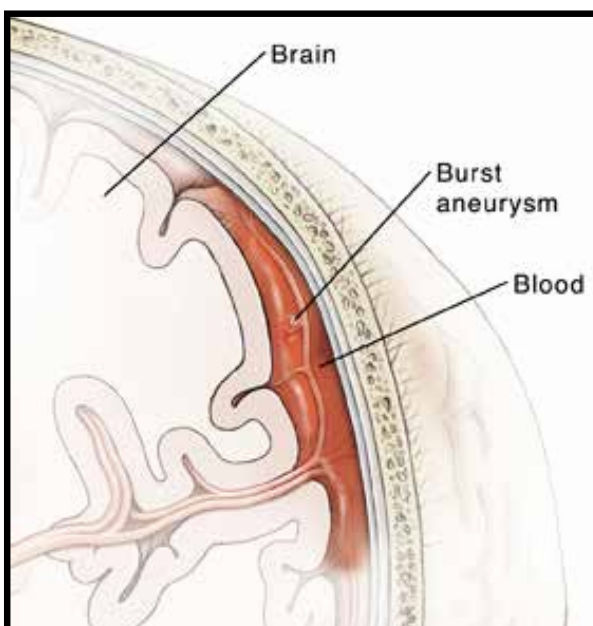
This type of stroke is simply when bleeding happens inside the brain.

Most of these types of strokes are caused by high blood pressure.

## Subarachnoid bleeding strokes

This is when a blood vessel on the outside of your brain bursts. This is often caused by an aneurysm. An aneurysm is when the wall of a blood vessel is weak. This weakness can puff out like a balloon and sometimes burst. Aneurysms are found with X-rays (arteriograms) that let your doctor see the way blood is flowing to your brain. An aneurysm is fixed by either clipping or coiling the blood vessel that goes to it. This stops blood from flowing to it.

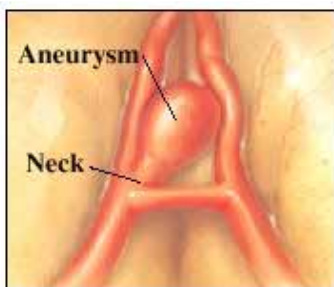
- When clipping the aneurysm, the surgeon will open the skull, find the aneurysm, and place a clip near the aneurysm to block the blood flow.
- When coiling the aneurysm, the surgeon will insert a plastic tube through a large blood vessel in the groin and thread the tube through the blood vessel until the aneurysm is reached. A coil (think of this as a very small mattress spring) is placed in the aneurysm to prevent blood from entering it.



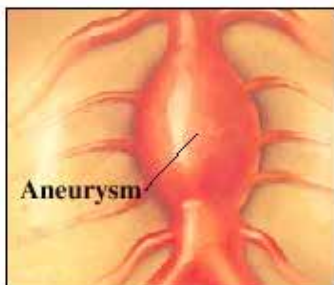
A subarachnoid stroke is when you have bleeding on the outside of the brain between the brain and the skull.



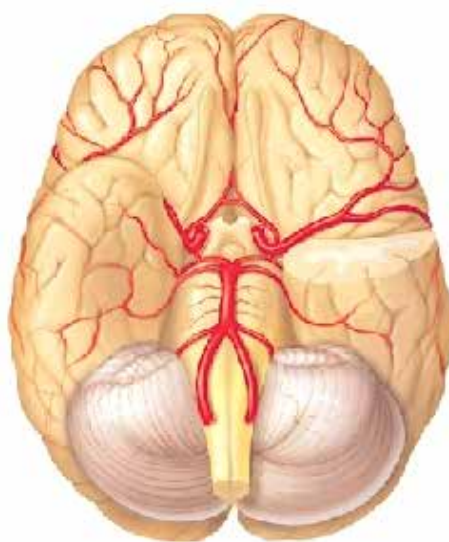
Subarachnoid strokes often happen when you have an aneurysm. The pictures below show you what different types of aneurysms look like.



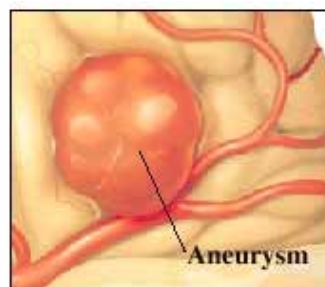
**A saccular (berry) aneurysm** bulges from one side of an artery. A neck leads to it.



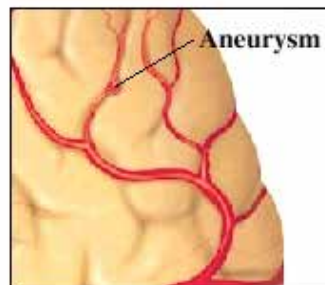
**A fusiform aneurysm** bulges from all sides of an artery. It rarely has a neck.



Using this picture, the surgeon may mark the site of the aneurysm.



**A giant aneurysm** can involve more than one artery. It is over 2.5 centimeters (cm) wide.

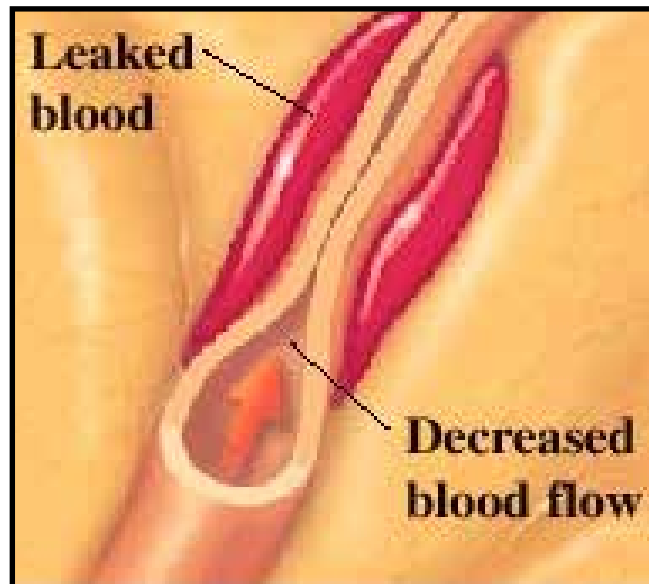


**A mycotic aneurysm** is caused by an infected artery wall. This type of aneurysm is fairly rare.

## Bleeding strokes caused by vasospasm

Strokes caused by vasospasm happen when a blood vessel swells and the amount of blood flowing through the vessel is lowered. This is an emergency. Blood flow needs to be brought back as soon as possible. The faster you are treated, the less damage you will have. Medicines and tests are used to treat vasospasms and prevent strokes caused by them. The test used is called a Doppler. This test uses sound waves to allow doctors to see where a vasospasm may be in your body.

A vasospasm is when a blood vessel in the brain swells and causes less blood to flow in the brain.



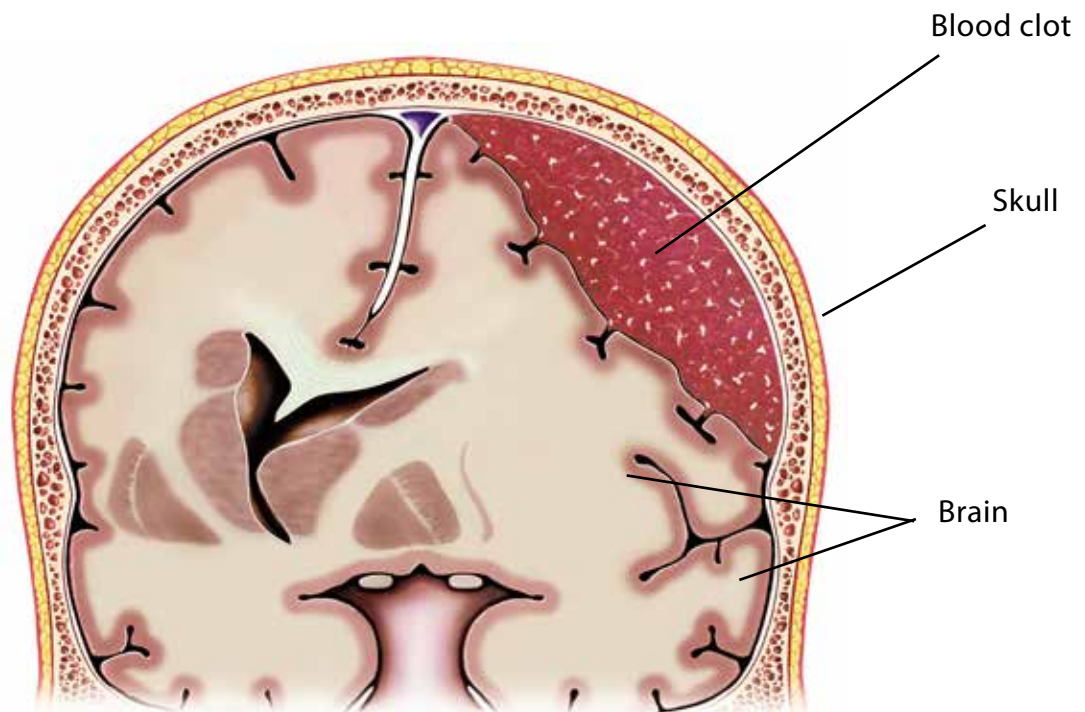
## Bleeding strokes caused by a subdural hematoma

A hematoma is when you get a blood clot on the surface of your brain. This can be caused by head injury or by blood thinners. How soon you have symptoms will depend on how fast or slow the bleeding is. A faster bleed will cause problems much faster. Treatments include medicines and surgery. If the bleeding is bad enough to stop blood flow within the brain, you can die.

*If you have hit your head and have any of the problems below, call 911!*

- loss of consciousness (blacking out)
- headache
- weakness
- numbness
- can't speak, slurred speech
- nausea/vomiting
- drowsy, hard to stay awake
- seizures.

A subdural hematoma is like a "brain bruise." You get a blood clot on the surface of your brain. It is caused by an injury or the use of blood thinners.



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