let's talk about

Stroke, TIA and Warning Signs

Stroke occurs when a blood vessel bringing blood and oxygen to the brain gets blocked or ruptures. When this happens, brain cells don’t get the blood that they need. Deprived of oxygen, nerve cells stop working and die within minutes. Then, the part of the body they control can’t function either. The effects of stroke may be permanent depending on how many cells are lost, where they are in the brain, and other factors.

Stroke is the No. 4 cause of death and a leading cause of serious, long-term disability in America.

What is a TIA?

TIA, or transient ischemic attack, is a “minor stroke” that occurs when a blood clot blocks an artery for a short time. The symptoms of a TIA are the same as those of a stroke, but they usually last only a few minutes. About 15 percent of major strokes are preceded by TIAs, so don’t ignore a TIA. Call 9-1-1 or seek emergency medical attention immediately!

Isn’t stroke hopeless?

No. Stroke is largely preventable. You can reduce your stroke risk by living a healthy lifestyle — controlling high blood pressure; not smoking; eating a low-fat, low-cholesterol diet; being physically active; maintaining a healthy body weight; managing diabetes; drinking moderately or not at all.

Also, much is being done to fight the effects of stroke. For example, the FDA approved use of the clot-dissolving drug tissue plasminogen activator (tPA) to treat stroke. This is an advance because tPA can stop a stroke in progress and reduce disability. But to be eligible for tPA, you must seek emergency treatment right away, because it must be given within 4.5 hours after symptoms start, and have a clot-caused stroke.

What are warning signs of stroke?

You and your family should recognize the warning signs of stroke. You may have some or all of these signs. Note the time when symptoms start and call 9-1-1 or the emergency medical number in your area. Stroke is a medical emergency!

Don’t ignore these warning signs, even if they go away. Timing is important. There are treatments that can be considered within 4 1/2 hours of the onset of symptoms.

Stroke Warning Signs:

• Sudden numbness or weakness of the face, arm or leg,
especially on one side of the body
• Sudden confusion, trouble speaking or understanding
• Sudden trouble seeing in one or both eyes
• Sudden trouble walking, dizziness, loss of balance or coordination
• Sudden severe headache with no known cause

Before you need to take emergency action, find out where the emergency entrance is to your nearest hospital. Also, keep a list of emergency phone numbers next to your phone and with you at all times, just in case. Take these steps NOW!

If you think you may be having a stroke, don’t hesitate... immediately call 9-1-1 or your emergency response number.

**Stroke, TIA and Warning Signs**

**How can I learn more?**

1. **Talk to your doctor, nurse or other healthcare professionals.** Ask about other stroke topics.
2. **Call 1-888-4-STROKE (1-888-478-7653) or visit us at StrokeAssociation.org to learn more about stroke.**
3. **Call the American Stroke Association’s “Warmline” at 1-888-4-STROKE (1-888-478-7653), and:**
   - Sign up for Stroke Connection, a free magazine for stroke survivors and caregivers.
   - Talk to other stroke survivors and caregivers and find local support groups.

**Do you have questions for the doctor or nurse?**

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

- **Which facility close to me is best equipped to treat me if I am having stroke symptoms?**
- **How can I reduce my risk for stroke?**

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit strokeassociation.org/letstalkaboutstroke to learn more.

**Knowledge is power, so Learn and Live!**
let’s talk about

Hemorrhagic Stroke

About 13 percent of strokes happen when a blood vessel ruptures in or near the brain. This is called a hemorrhagic stroke as shown at right.

When a hemorrhagic stroke happens, blood collects in the brain tissue. This is toxic for the brain tissue causing the cells in that area to weaken and die.

Are all hemorrhagic strokes the same?

There are two kinds of hemorrhagic stroke. In both, a blood vessel ruptures, disrupting blood flow to part of the brain.

**Intracerebral hemorrhages** (most common type of hemorrhagic stroke):

- Occur when a blood vessel bleeds or ruptures into the tissue deep within the brain.
- Are most often caused by chronically high blood pressure or aging blood vessels.
- Are sometimes caused by an arteriovenous malformation (AVM). An AVM is a cluster of abnormally formed blood vessels. Any one of these vessels can rupture, also causing bleeding into the brain.

**Subarachnoid hemorrhages:**

- Occur when an aneurysm (a blood-filled pouch that balloons out from an artery) on or near the surface of the brain ruptures and bleeds into the space between the brain and the skull.
- Are often caused by high blood pressure.

In addition to high blood pressure, factors that increase the risk of hemorrhagic strokes include:

- cigarette smoking
- use of oral contraceptives (particularly those with high estrogen content)
- excessive alcohol intake
- use of illegal drugs

(continued)
Prevention

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How are hemorrhagic strokes diagnosed?

When someone has shown symptoms of a stroke or a TIA (transient ischemic attack), a doctor will gather information and make a diagnosis. He or she will review the events that have occurred and will:

• get a medical history
• do a physical and neurological examination
• have certain laboratory (blood) tests done
• get a CT or MRI scan
• study the results of other diagnostic tests that might be needed

Diagnostic tests examine how the brain looks, works and gets its blood supply. They can outline the injured brain area. Diagnostic tests fall into three categories.

• Imaging tests give a picture of the brain similar to X-rays.
• Electrical tests record the electrical impulses of the brain.
• Blood flow tests show any problem that may cause changes in blood flow to the brain.

How are hemorrhagic strokes treated?

Because hemorrhages may be life-threatening, hospital care is required. Medication is used to control high blood pressure. Other medicine may be given to reduce the brain swelling that follows a stroke.

Surgery may be needed depending on the cause of the hemorrhage. Surgery is often recommended to either place a metal clip at the base of an aneurysm or to remove the abnormal vessels that make up an AVM.

Some procedures are less invasive and use of a catheter that goes in through a major artery in the leg or arm. The catheter is guided to the aneurysm or AVM where it places a device, such as a coil, to prevent rupture.

HOW CAN I LEARN MORE?

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3 Call the American Stroke Association’s “Warmline” at 1-888-4-STROKE (1-888-478-7653), and:
   • Sign up for Stroke Connection, a free magazine for stroke survivors and caregivers.
   • Talk to other stroke survivors and caregivers and find local support groups.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What can I do to help prevent another stroke?

How can I control high blood pressure?
let's talk about

Risk Factors for Stroke

Knowing your risk factors is the first step in preventing stroke. You can change or treat some risk factors, but others you can’t. By having regular medical checkups and knowing your risk, you can focus on what you can change and lower your risk of stroke.

What risk factors can I change or treat?

- **High blood pressure.** This is the single most important risk factor for stroke because it’s the No. 1 cause of stroke. Know your blood pressure and have it checked at least once every two years. If it’s consistently 140/90 or above, it’s high. Talk to your doctor about how to manage it.

- **Tobacco use.** Tobacco use damages blood vessels. Don’t smoke and avoid second-hand smoke.

- **Diabetes mellitus.** Having diabetes increases your risk of stroke because it can cause disease of blood vessels in the brain. Work with your doctor to manage diabetes.

- **High blood cholesterol.** High blood cholesterol increases the risk of blocked arteries. If an artery leading to the brain becomes blocked, a stroke can result.

- **Physical inactivity and obesity.** Being inactive, obese, or both, can increase your risk of cardiovascular disease.

- **Carotid or other artery disease.** The carotid arteries in your neck supply most of the blood to your brain. A carotid artery damaged by a fatty buildup of plaque inside the artery wall may become blocked by a blood clot, causing a stroke.

- **Transient ischemic attacks (TIAs).** Recognizing and treating TIAs can reduce the risk of a major stroke. TIAs produce stroke-like symptoms but have no lasting effects. Know the warning signs of a TIA and seek emergency medical treatment immediately.

- **Atrial fibrillation or other heart disease.** In atrial fibrillation the heart’s upper chambers quiver rather than beating effectively. This causes the blood to pool and clot, increasing the risk of stroke. People with other types of heart disease have a higher risk of stroke, too.

- **Certain blood disorders.** A high red blood cell count makes clots more likely, raising the risk of stroke. Sickle cell anemia increases stroke risk because the “sickled” cells stick to blood vessel walls and may block arteries.

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Risk Factors for Stroke

**Prevention**

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit strokeassociation.org/letstalkaboutstroke to learn more.

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### Risk Factors for Stroke

- **Excessive alcohol intake.** Drinking an average of more than one drink per day for women or more than two drinks a day for men raises blood pressure. Binge drinking can lead to stroke.
- **Illegal drug use.** Intravenous drug use carries a high stroke risk. Cocaine use also has been linked to stroke. Illegal drugs commonly cause hemorrhagic strokes.

**What are the risk factors I can't control?**

- **Increasing age.** Stroke affects people of all ages. But the older you are, the greater your stroke risk.
- **Gender.** In most age groups, more men than women have stroke, but more women die from stroke.
- **Heredity and race.** People whose close blood relations have had a stroke have a higher risk of stroke. African Americans have a higher risk of death and disability from stroke than whites, because they have high blood pressure more often. Hispanic Americans are also at higher risk of stroke.
- **Prior stroke.** Someone who has had a stroke is at higher risk of having another one.

### HOW CAN I LEARN MORE?

1. **Talk to your doctor, nurse or other healthcare professionals.** Ask about other stroke topics.
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   - Sign up for Stroke Connection, a free magazine for stroke survivors and caregivers.
   - Talk to other stroke survivors and caregivers and find local support groups.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

- **What are my risk factors for stroke?**
- **What are the warning signs of TIA and stroke?**

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit strokeassociation.org/letstalkaboutstroke to learn more.
Lifestyle Changes To Prevent Stroke

You can do plenty to make your heart and blood vessels healthy, even if you’ve had a stroke. A healthy lifestyle plays a big part in decreasing your risk for disability and death from stroke and heart attack.

How can I make my lifestyle healthier?
Here are steps to take to be healthier and reduce your risk of stroke:

- Don’t smoke and avoid second-hand smoke.
- Improve your eating habits. Eat foods low in saturated fat, trans fat, cholesterol, sodium and added sugars.
- Be physically active.
- Take your medicine as directed.
- Get your blood pressure checked regularly and work with your healthcare provider to manage it if it’s high.
- Reach and maintain a healthy weight.
- Decrease your stress level.
- Seek emotional support when it’s needed.
- Have regular medical checkups.

How do I change my eating habits?

- Ask your doctor, nurse or a licensed nutritionist or registered dietician for help.
- Be aware of your special needs, especially if you have high blood pressure, high cholesterol or diabetes.
- Avoid foods like egg yolks, fatty meats, butter and cream, which are high in fat and cholesterol.
- Eat moderate amounts of food and cut down on saturated fat, trans fat, sugar and salt.
- Bake, broil, roast and boil foods instead of frying.
- Read nutrition labels on packaged meals. Many are very high in sodium.

How do I stop smoking?

- Make a decision to quit — and commit to stick to it.
- Ask your healthcare provider for information, programs and medications that may help.
- Fight the urge to smoke by going to smoke-free facilities. Avoid staying around people who smoke.
- Keep busy doing things that make it hard to smoke, like working in the yard.
- Remind yourself that smoking causes many diseases, can harm others and is deadly.
- Ask your family and friends to support you.

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• Limit alcohol to one drink a day for women; two drinks per day for men.
• Eat more fruit, vegetables, whole-grains, dried peas and beans, pasta, fish, poultry and lean meats.

**What about physical activity?**
• If you have a medical condition, check with your doctor before you start.
• Start slowly and build up to at least 2 ½ hours of moderate physical activity (such as brisk walking) a week.
• Look for even small chances to be more active. Take the stairs instead of an elevator and park farther from your destination.

**HOW CAN I LEARN MORE?**

1. **Talk to your doctor, nurse or other healthcare professionals.** Ask about other stroke topics.
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   • Sign up for Stroke Connection, a free magazine for stroke survivors and caregivers.
   • Talk to other stroke survivors and caregivers and find local support groups.

**Do you have questions for the doctor or nurse?**
Take a few minutes to write your questions for the next time you see your healthcare provider.
For example:

- **What is the most important change I can make?**
- **What kind of physical activity can I do safely?**

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