

The Warning Signs of a Stroke

By Lisa Catanese

Most people would call 911 immediately if they or a loved one experienced chest pain or another familiar symptom of a heart attack. But most Americans wait between six and twenty-four hours to seek medical attention for a "brain attack" — a stroke.

Stroke ranks as a leading killer in the United States and is the most common cause of adult disability. It can be devastating to victims and their families, robbing them of their independence. Stroke afflicts more than a half million Americans each year and causes 150,000 to die. Three million Americans are permanently disabled from paralysis, speech loss, memory loss or other impairments caused by stroke.

In the past, not much could be done for people suffering a stroke. But today, medication and surgical techniques are available to help avoid brain damage if a stroke does occur, and to prevent a person with early warning signs from having a major stroke. The key, however, is to seek medical attention immediately. The longer you wait, the lower the chances of successful treatment.

Neurologists Gary Belt, MD, Robert Berland, MD, and Michael Krinsky, MD, who treat many people who have had a stroke, say the vast majority of people who have a major stroke had some warning beforehand.

They encourage all people to be aware of the warning signs of a stroke, which are:

- Sudden weakness, numbness or paralysis of your face, arm or leg — especially if it is on only one side of your body.
- Sudden blurred or decreased vision in one or both eyes.
- Difficulty speaking or understanding speech.
- Loss of balance or coordination, or unexplained dizziness, especially when combined with another symptom.
- Sudden severe or unexplained headache, often described as "the worst headache of my life."

These symptoms are an indication that your brain is not receiving enough oxygen. Sometimes these warning signs may last only a few minutes and then disappear. These brief episodes are known as "mini-strokes" or TIAs (transient ischemic attacks). They can precede a major, life-threatening stroke by hours, days or even months.

Although brief, these warnings are signs of a serious condition that is not going away without medical help. Unfortunately, since they don't last very long, many people ignore them. But heeding them can save your life.

"The cost of stroke to a person's life and to society is staggering," Dr. Krinsky says. "People have to fight off the urge to downplay their symptoms. They have to view them as a red flag and get immediate medical attention."

There are two major types of stroke: hemorrhagic and ischemic. Hemorrhagic strokes occur when blood vessels burst, causing bleeding within or around the brain. Ischemic strokes are caused by blood clots,

which block the flow of blood to the brain. Ischemic strokes are far more common than hemorrhagic, accounting for about 80 percent of all strokes.

Ischemic strokes can be caused in three ways: by the formation of a clot within a blood vessel of the brain or neck (called thrombosis), by the movement of a clot from another part of the body such as the heart to the neck or brain (called embolism), or by a severe narrowing of an artery in or leading to the brain (called stenosis).

The FDA recently approved a clot-dissolving medication — the same "clot-busting" drug used to treat heart attacks — to treat ischemic strokes. This medication works by dissolving a blood clot in an artery in the brain and restoring the blood flow. However, it must be given within three hours after the onset of symptoms, and only after a person has had a brain scan to rule out a hemorrhagic, or bleeding, stroke.

"The window of opportunity to treat a stroke with this drug is three hours," Dr. Berland says. "In that time, a person has to get to the hospital, have a CT scan, and meet the criteria to receive these drugs. Unfortunately, many people don't even get to the hospital within three hours of having a TIA."

At the hospital, the cause of the "mini-stroke" can be diagnosed and steps may be taken to prevent another stroke from happening. These steps include a surgical technique called angioplasty to open up a narrow artery, similar to the type of surgery used to unblock arteries near the heart.

"Today, knowing that you're having a stroke is very important, because of the methods we have to treat it," Dr. Belt explains. "After a stroke, the tissue around the damaged area will swell and cause further damage. Medication can be used to counteract the swelling and restrict the amount of damage that occurs."

A stroke can happen to people in all age groups, of both sexes, and in all races in every country. It can even occur before birth, when the fetus is in the womb. In African Americans, the death rate from stroke is almost twice that of the white population.

Some of the most important treatable risk factors for stroke are:

- High blood pressure (also called hypertension). This is the greatest risk factor for stroke. Some ways to lower your blood pressure are to lose weight, avoid medication that can raise blood pressure, exercise, cut down on salt, and eat fruits and vegetables to increase the potassium in your diet. Your doctor also may prescribe medication to lower blood pressure.
- Cigarette smoking. Smoking has been linked to the buildup of fatty substances in the carotid artery, the main neck artery that supplies blood to the brain. Blockage of this artery is the leading cause of stroke in Americans. In addition, nicotine raises blood pressure, while carbon monoxide reduces the amount of oxygen your blood can carry to your brain. Cigarette smoke also makes your blood thicker and more likely to clot. If you are a woman who smokes and takes birth control pills, you are at very high risk for having a stroke.
- Heart disease. Heart disorders such as coronary artery disease, irregular heartbeat and valve defects can result in blood clots that may break loose and block vessels in or leading to the brain. The most common blood vessel disease, called atherosclerosis, is caused by the buildup of

fatty deposits in the arteries. If you have atherosclerosis, your physician may recommend that you take aspirin daily or another blood-thinning medication.

- Warning signs or a history of stroke. Health-care experts encourage you to call 911 if you experience the warning signs of a stroke, because there is no way of knowing how soon a major stroke will follow. If you have had a stroke in the past, you must lower your risk of a second stroke by reducing your risk factors.
- Diabetes. This disease causes destructive changes in the blood vessels throughout the body, including the brain.

"The same risk factors that we have for heart disease are also the risk factors for stroke," Dr. Belt says. "Stroke goes hand-in-hand with heart disease. It's a blockage of blood flow to the brain, in the same way that a heart attack is a blockage of blood flow to the heart. And the steps that you take to prevent a stroke are the same ones you would take to prevent heart disease, such as watching your blood pressure and cholesterol level, exercising regularly, not smoking."

The outlook for people who have had a stroke varies greatly, depending on which area of the brain was affected and the extent of the damage. "With small strokes, the outlook is good," Dr. Berland says. "Most people who have had a stroke do improve, except in cases of a very severe one. If the stroke affects a person's speech center, for example, it's a much more difficult disability to live with. Therapy can help people re-learn some abilities they may have lost."

There is no guarantee of a recovery, however, so being aware of the warning signs and acting on them is vitally important.

"Any abrupt change in strength, usually in the arm or leg, a change in speech, an alteration in vision, an inability to communicate or express oneself, has to be taken seriously," Dr. Krinsky says. "You must pay attention to that brief spell of vertigo, or of numbness or weakness. The point to make is that a brain attack is not any less important than a heart attack."