Stroke Prevention

Drug Use: The use of illicit drugs, including cocaine and crack cocaine, can cause stroke. Cocaine may act on other risk factors, such as hypertension, heart disease and vascular disease, to trigger a stroke. It decreases relative blood flow by up to 30 percent, causes vascular constriction, and inhibits vascular relaxation, leading to narrowing of the arteries. Cocaine also affects the heart, causing irregular and rapid heart rates that can lead to the formation of blood clots.

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For more information about stroke,
call University Hospital's Heart Line at
706/828-2828 or toll free at 866/601-2828.

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Stroke Symptoms

If you think you or someone you know is experiencing any of the symptoms of a stroke, do not wait. Call 911 emergency immediately. There are now effective therapies for stroke that must be administered at a hospital, but they lose their effectiveness if not given within the first three hours after stroke symptoms appear. Every minute counts!

Symptoms of stroke appear suddenly. Watch for these symptoms and be prepared to act quickly for yourself or on behalf of someone you are with:

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

What Is a Stroke?

A stroke occurs when the blood supply to part of the brain is suddenly interrupted or when a blood vessel in the brain bursts, spilling blood into the spaces surrounding brain cells. In the same way that a person suffering a loss of blood flow to the heart is said to be having a heart attack, a person with a loss of blood flow to the brain or sudden bleeding in the brain can be said to be having a "brain attack."

Brain cells die when they no longer receive oxygen and nutrients from the blood or when they are damaged by sudden bleeding into or around the brain. Ischemia is the term used to describe the loss of oxygen and nutrients for brain cells when there is inadequate blood flow. Ischemia ultimately leads to infarction, the death of brain cells which are eventually replaced by a fluid-filled cavity (or infarct) in the injured brain.

When blood flow to the brain is interrupted, some brain cells die immediately, while others remain at risk for death. These damaged cells can linger in a compromised state for several hours, but with timely treatment they can be saved.

Even though a stroke occurs in the unseen reaches of the brain, the symptoms of a stroke are easy to spot. They include sudden numbness or weakness, especially on one side of the body; sudden confusion or trouble speaking or understanding speech; sudden trouble seeing in one or both eyes; sudden trouble walking, dizziness, or loss of balance or coordination; or sudden severe headache with no known cause. All of the symptoms of stroke appear suddenly, and often there is more than one symptom at the same time. Therefore stroke can usually be distinguished from other causes of dizziness or headache. These symptoms may indicate that a stroke has occurred and that medical attention is needed immediately.

University Hospital's Stroke Team, led by neurologist Harold McGrade, M.D., works with the patient and their family to answer all questions involving stroke recovery and rehabilitation. To learn more about stroke, call University's Heart Line at 706/828-2828 or toll free at 866/601-2828.

Types of Stroke

ISCHEMIC STROKE

An ischemic stroke occurs when an artery supplying the brain with blood becomes blocked, suddenly decreasing or stopping blood flow and ultimately causing a stroke. This type of stroke accounts for approximately 80 percent of all strokes. Blood clots are the most common cause of artery blockage and brain infarction. Clotting problems become more frequent as people age.

HEMORRHAGIC STROKE

When an artery in the brain bursts, blood spews out into the surrounding tissue and upsets not only the blood supply, but also the delicate chemical balance neurons require to function. This is called a hemorrhagic stroke. Such strokes account for approximately 20 percent of all strokes. Hemorrhage can occur in several ways. One common cause is a bleeding aneurysm, a weak or thin spot on an artery wall. Over time, these weak spots stretch or balloon out under high arterial pressure. The thin walls of these ballooning aneurysms can rupture and spill blood into the space surrounding brain cells.

Hemorrhage also occurs when arterial walls break open. Plaque-encrusted artery walls eventually lose their elasticity and become brittle and thin, prone to cracking. Hypertension, or high blood pressure, increases the risk that a brittle artery wall will give way and release blood into the surrounding brain tissue.

TRANSIENT ISCHEMIC ATTACKS

A transient ischemic attack (TIA), sometimes called a mini-stroke, starts just like a stroke but then resolves leaving no noticeable symptoms or deficits. The occurrence of a TIA is a warning that the person is at risk for a more serious and debilitating stroke. Of the approximately 50,000 Americans who have a TIA each year, about one-third will have an acute stroke sometime in the future. A person should assume that all stroke symptoms signal an emergency and should not wait to see if they go away.

RECURRENT STROKE

Recurrent stroke is frequent; about 25 percent of people who recover from their first stroke will have another stroke within five years. Recurrent stroke is a major contributor to stroke disability and death, with the risk of severe disability or death from stroke increasing with each stroke recurrence. The risk of a recurrent stroke is greatest right after a stroke, with the risk decreasing with time. About 3 percent of stroke patients will have another stroke within 30 days of their first stroke and one-third of recurrent strokes take place within two years of the first stroke.

Who Is at Risk for a Stroke?

Some people are at a higher risk for stroke than others. Unmodifiable risk factors include age, gender, race/ethnicity and a family history of stroke. In contrast, other risk factors for stroke, like high blood pressure or cigarette smoking, can be changed or controlled by the person at risk.

UNMODIFIABLE RISK FACTORS

Age: Stroke can strike at any age, but older people have a higher risk for stroke than the general population, and the risk for stroke increases with age. For every decade after the age of 55, the risk of stroke doubles, and two-thirds of all strokes occur in people older than 65 years old. People older than 65 also have a seven-fold greater risk of dying from stroke than the general population.

Gender: Men have a higher risk for stroke, but more women die from stroke. The stroke risk for men is 1.25 times that for women. But men do not live as long as women, so men are usually younger when they have their strokes and therefore have a higher rate of survival than women.

Family History: Members of a family might have a genetic tendency for stroke risk factors, such as an inherited predisposition for hypertension or diabetes. The influence of a common lifestyle among family members could also contribute to familial stroke.

Ethnicity: Stroke incidence among African-Americans is almost double that of Caucasians, and twice as many African-Americans who have a stroke die from the event compared to Caucasians.

OTHER RISK FACTORS

The most important risk factors for stroke are hypertension, heart disease, diabetes and cigarette smoking. Others include heavy alcohol consumption, high blood cholesterol levels and illicit drug use.

Hypertension: Of all the risk factors that contribute to stroke, the most powerful is hypertension, or high blood pressure. People with hypertension have a risk for stroke that is four to six times higher than the risk for those without hypertension. One-third of the adult U.S. population, about 50 million people (including 40-70 percent of those over age 65) have high blood pressure. Forty to 90 percent of stroke patients have high blood pressure before their stroke event.

Heart Disease: Heart disease is a major risk factor for stroke, especially a condition known as atrial fibrillation. Atrial fibrillation is irregular beating of the left atrium, or left upper chamber, of the heart. This leads to an irregular flow of blood and the occasional formation of blood clots that can leave the heart and travel to the brain, causing a stroke.

High Cholesterol: A person may lower his risk for atherosclerosis (hardening of the arteries) and stroke by improving his cholesterol levels. A healthy diet and regular exercise are the best ways to lower total cholesterol levels.

Diabetes: People with diabetes have three times the risk of stroke compared to people without diabetes. Like hypertension, the relative risk of stroke from diabetes is highest for men at an earlier age and highest for women at an older age.

MODIFIABLE LIFESTYLE RISK FACTORS

Cigarette Smoking: Smoking almost doubles a person's risk for ischemic stroke, independent of other risk factors, and it increases a person's risk for hemorrhage by up to 3.5 percent. Smoking is directly responsible for a greater percentage of the total number of strokes in young adults than in older adults. Risk factors other than smoking - like hypertension, heart disease, and diabetes - account for more of the total number of strokes in older adults.

Alcohol Consumption: Generally, an increase in alcohol consumption leads to an increase in blood pressure. Heavy alcohol consumption may seriously deplete platelet numbers and compromise blood clotting and blood viscosity (thickness), leading to a hemorrhage. In addition, heavy drinking or binge drinking can lead to a rebound effect after the alcohol is purged from the body. The consequences of this rebound effect are that blood viscosity and platelet levels skyrocket after heavy drinking, increasing the risk for ischemic stroke.