

African Americans are at higher risk of strokes than whites, but the reasons are still unclear.

BY ANDREA KING COLLIER

n 2005, former CBS newsman Mark McEwen had it all—a new job as an anchor for an Orlando television station, a happy marriage, and young twin sons. Little did he know that a plane ride to Baltimore to visit family and friends would change his life.

"I started to feel ill," McEwen says, "dizzy and sweaty, just out of sorts." He felt so bad when the plane landed that he asked for help and was taken by ambulance to a Baltimore hospital. "The doctor misdiagnosed me with the flu and released me," McEwen says. On the return to Orlando, his symptoms worsened. "I could hardly speak," he recalls. After getting off the plane he had to ask an airport attendant to call his wife, Denise. McEwen was rushed to an Orlando hospital and diagnosed as having had not one but two strokes while he was in Baltimore. They were "ischemic" strokes, which are caused by blood clots in the brain. "It was like being underwater," he says. "It took me six months to realize that I had been in a coma for four days while I was in the hospital."

Nearly 795,000 people in the U.S. have a stroke each year, making it the third leading cause of death in this country, right behind heart attacks and cancer. And statistics show that African Americans are at greater risk than other groups.

According to the National Institute of Neurological Disorders and Stroke (NINDS), African Americans are two to three times more likely than their white counterparts to have a stroke. African Americans are more likely to suffer a stroke at a younger

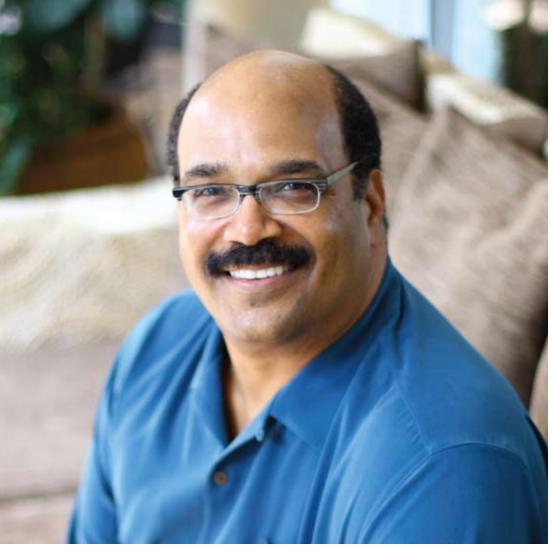
age, have a higher mortality rate from stroke, and often take longer to recover than whites. African American women have the highest stroke rates of all, surpassing that of African American men as well as white men and women.

While overall deaths due to stroke have dropped by nearly 30 percent over the past several years, the numbers have not been as significant for people of color. African Americans saw a 20 percent drop in the death rate from stroke versus 25 percent for whites, which represents hundreds of thousands of African Americans who are still at risk for dying of a stroke. According to the Centers for Disease Control and Prevention (CDC), the overall drops in death rates are associated with lifestyle changes such as healthier diets and more exercise, as well as better medical management of cholesterol and high blood-pressure. So the question is: Are African Americans getting the message?

KNOWING THE RISKS

McEwen says he never thought about the risks that predisposed him to having a stroke or the lifestyle changes he might need to make to manage those risks. He was overweight for years before his stroke and says, "I never saw a pizza I didn't like." He also had unmanaged high blood pressure.

According to Lewis Morgenstern, M.D., director of the stroke program at University of Michigan, some risks for stroke are uncontrollable; others are not. Uncontrollable risks include age (being over 65 significantly increases the risk for a stroke), race, gender,



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 newsman and stroke survivor Mark McEwen

family history, past personal history of a stroke, and sickle cell anemia (an inherited blood disorder). But people can prevent strokes by managing risk factors such as high cholesterol, tobacco use, alcohol use, diabetes, obesity, high blood pressure, and a condition called atrial fibrillation that causes abnormal heart rhythms.

Keith Black, M.D., chairman of the department of neurosurgery and director of the Maxine Dunitz Neurosurgical Institute at Cedars-Sinai Medical and author of *Brain Surgeon: A Doctor's Inspiring Encounters with Mortality and Miracles* (Hachette Wellness Central, 2009), says, "African Americans need to be aware of their risks for stroke and make changes." Dr. Black emphasizes that a significant number of strokes can be prevented through simple lifestyle changes, weight management, and managing blood pressure.

Researchers are also focusing on the association between mental health and stroke risk. Emotional stressors such as unemployment and perceived discrimination—as well as depression—seem to play a role in the increased risk of stroke for both whites and African Americans. Statistics from the CDC show that African Americans who suffer from depression saw a 160 percent increase in stroke risk versus 68 percent increase for white males and a 52 percent increased risk for white females.

According to the American Stroke Association, high blood pressure is the major risk factor for stroke. One in three African Americans has high blood pressure. Several studies are un(continues on p.23)

Signs of Stroke

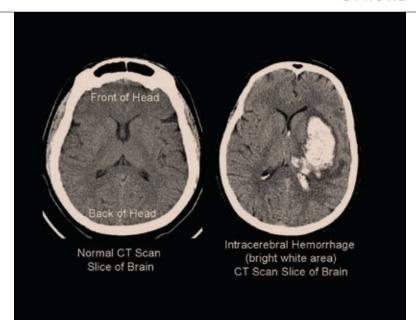
The first step in preventing the debilitating effects of a stroke is to be able to recognize the symptoms as quickly as possible, and call 911. It is important to get to the emergency room for medical attention. Don't ignore the warning signs of a stroke, and remember not all symptoms occur in every stroke. When you arrive at the hospital, make sure you tell them that you think you are having a stroke. And pay attention to the time that the symptoms started, because the medical team will ask you this. Some of those symptoms to look for are:

- ► Sudden numbness or weakness of the face, arm, or leg, especially on one side of the body
- Sudden confusion or trouble speaking or understanding
- 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

If you're with someone who is having stroke, call 911 even if they tell you that they are fine. In the case of a stroke, time is of the essence.

PHOTOGRAPH BY CY CYR NEUROLOGY NOW • MAY/JUNE 2009 19

A computed tomography (CT) is the best test to look for bleeding in or around your brain.



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derway to understand why high blood pressure seems to put African Americans at a higher risk for mortality than whites. However, these differences don't appear to be due to a lack of education or medication, according to George Howard, Ph.D., University of Alabama in Birmingham Chair of Biostatistics and a researcher studying the epidemiology of strokes.

"Data show African Americans on hypertensive medications are 40 percent less likely than whites to have their blood pressure controlled," Dr. Howard says. The larger medical community assumes that African Americans are less likely to be aware of high blood pressure and less likely to comply with treatment. But Dr. Howard's research, published in the journal *Stroke* in 2006, shows that African Americans are more aware than whites and more likely to be

taking medicines to treat their high blood pressure.

The key, says Dr. Howard, may be finding the right medications. "We are trying to explore if hypertensive medications are equally effective in both races," he notes, "and looking at the possibility that certain medications don't work as well in African Americans." The team is also studying how high blood pressure is treated, prescribing practices, frequency of office visits, and affordability of medications compared to whites. African Americans with hypertension should have their blood pressure checked regularly and ask their doctor to treat them with different medications if the ones they are on are not working.

A condition called "cerebral microbleeds," which appears to be more common in African Americans than whites, may be another cause of stroke disparities. These tiny lesions (from an eighth to a quarter of an inch in diameter) can only be seen by using sensitive magnetic resonance imaging (MRI) scans of the brain. Often, cerebral microbleeds happen without causing immediate symptoms (that is, the microbleeds are "asymptomatic"). But after one of them has occurred and the blood is reabsorbed, a blood pigment is left behind which can be picked up by MRI. Cerebral microbleeds are found in 50 to 80 percent of people who have larger, symptom-causing (or "symptomatic") intracerebral hemorrhages, which comprise 10 to 15 percent of all strokes.

Based on studies of racial differences in stroke being conducted in Washington, D.C., some researchers think that a higher prevalence for these brain lesions in African Americans is an important factor. "Knowing if a person has a higher likelihood of having these brain lesions or bleeding in the brain is

important for doctors and patients when caring for medically underserved groups of people and optimally treating their stroke risk factors," says Chelsea Kidwell, M.D., of Georgetown University Medical Center in Washington, D.C., and author of a study published in the journal *Neurology* in October 2008. "This information may lead to new methods for testing and treating people to prevent stroke," Dr. Kidwell says.

African
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women have
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RECOGNIZING A STROKE

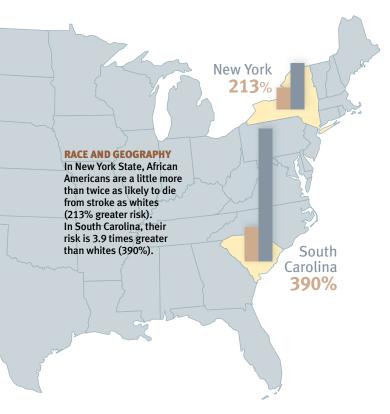
Lack of understanding the warning signs and getting medical attention promptly may play a role in poor stroke outcomes and recovery for African Americans, researchers say. Organizations such as the National Stroke Association and the African American Nurses Association are partnering with African American faith-based and community based organizations, as well as beauty and barber shops, to get the word out on reducing risks and educating people of color on the warning signs of stroke. Several offer health screenings to make

people in the African American community aware of their personal risks. "The key," says Catherine Alicia Georges, Ed.N, R.N., and a member of the African American Nurses Association who is doing community outreach in Brooklyn, NY, "is to also help people find a primary doctor who can coordinate their care after they are screened."

EQUITY IN TREATMENT

Researchers say that access to life-saving treatment in the crucial hours and days after a stroke can impact survival rates. McEwen was fortunate to be able to get immediate attention and surgery at a facility that specializes in stroke treatment. But his story is not the norm for African Americans.

According to researchers at University of California in San Francisco, one of the reasons that African Americans have poorer outcomes after stroke is that they are less likely to receive clot-dissolving drugs—tissue plasminogen activator (tPA)—within three to 4.5 hours of the brain attack; when given within



that recommended time frame, tPA can help dissolve the clots 80 percent of the time. It is the only drug approved by the U.S. Food and Drug Administration for the most common type of stroke: ischemic stroke.

Among reasons why African American stroke victims don't get tPA in the three hours: they don't realize they are having a stroke and don't have access to the money or transportation to get to a hospital. Another factor can be the patient's age. Because African Americans often have a stroke at a younger age, "the emergency room staff may not be thinking stroke when the patient is under 45 years old," says Seemant Chaturvedi, M.D., of Wayne State University in Detroit, MI. "Patients arriving with seemingly trivial symptoms like vertigo and nausea should be assessed meticulously. Physicians must realize that a stroke is the sudden onset of these symptoms."

RACE AND GEOGRAPHY—THE ONE-TWO PUNCH

Where a person lives also seems to have a major impact on health outcomes, according to Dr. Howard. Findings from the REGARDS (Reasons for Geographic and Racial Differences in Stroke) study he leads show that people aged 65 years and older and living in the South are 150 percent more likely to die from stroke, compared with their Northern counterparts of the same age.

"The disparity is alarming," says Dr. Howard. The researchers analyzed stroke death data reported from 1997 to 2001 and calculated mortality rates by race and age. They looked at rates in both Southern and non-Southern states that had large populations of African Americans.

"Stroke death rates vary considerably from state to state," Dr. Howard notes. In New York, the risk of death from stroke among whites aged 55 to 64 years was 0.32 per 1000, versus

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0.68 per 1000 among African Americans in the same age group. In South Carolina, the stroke death rate for whites aged 55 to 64 years was 0.5 per 1000, versus 1.95 per 1000 for same-aged African Americans. "African Americans in New York are twice as likely to die from stroke than whites—but in South Carolina, their risk is 3.9 times greater," Dr. Howard observes.

Researchers thought that the larger disparities in the Southern area called the Stroke Belt (Alabama, Arkansas, Georgia, South Carolina, Mississippi, and Tennessee) were in part due to lack of awareness and education about hypertension. "Some thought that the reason was that Southern clinicians were less likely to prescribe hypertension medications," Dr. Howard says. "In fact, the REGARDS study has shown Southern physicians are equal or better at prescribing medications for hypertension, and African Americans in the South are largely aware of the importance of being tested for the disease." So what is causing the wider gaps in the South?

The truth is, we don't know yet. "It could be that whatever African Americans living in the South are doing puts them at higher stroke risk," Dr. Howard says—for example, consuming high-calorie, high-fat foods. And they may be doing more of whatever is putting them at risk than African Americans who live in other parts of the country, he adds.

THE ROAD TO RECOVERY

"This is such a huge problem that we really need to focus our energies on trying to reduce the disparity, using all the tools that we have," Dr. Howard says. "Right now that includes working better on blood pressure control, on diabetes, and on smoking cessation."

Mark McEwen has fought hard to recover from his stroke. "I had to learn how to walk and talk all over again," he says. While he still works to regain his pre-stroke, on-the-air speech, he has remained vigilant about his health to prevent a recurrence. McEwen says he works out and has changed his diet, losing over 50 pounds and reducing many of his risks for stroke such as obesity, hypertension, and a risk for diabetes. Dr. Morgenstern says that these steps are important because a person who has had a first stroke is at greater risk for strokes in the future. McEwen is determined that he will beat the odds, and spends much of his time educating people on the risks and showing them that he has not only survived but thrived since his stroke by taking control of his health.

Andrea King Collier is a journalist and the lead author of The Black Woman's Guide to Black Men's Health. She is also a W.K. Kellogg Food and Society Policy Fellow.

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