

Take charge of your health today. Be informed. Be involved.

This month, the "Take Charge of Your Health Today" page focuses on stroke research. Bee Schindler, community engagement coordinator with the University of Pittsburgh's Clinical and Translational Science Institute, and Esther L. Bush, president and CEO of the Urban League of Greater Pittsburgh, spoke about this topic.

BS: Good morning, Ms. Bush. I thank you for the chance to talk with you today about strokes, particularly as the Centers for Disease Control and Prevention state that strokes kill about 140,000 individuals each year—which shakes out to 1 out of every 20 deaths. Someone in the United States has a stroke every 40 seconds, while every four minutes someone dies of stroke.

EB: Yes, Bee. As you pointed out, this is a far-reaching topic that most people can re-

Stroke Research

late to. The risk for individuals in the Black community having a first stroke is nearly twice as high as the risk for White individuals. I hope we can learn more about how to best prevent strokes to change that statistic!

BS: Absolutely. This is a critical point, especially because African Americans are also more likely to die of stroke-related causes. Researchers at the University of Pittsburgh found that maintaining blood sugar levels at 180 or below aids in stroke prevention. The researchers suggest not smoking, engaging in routine exercise and eating healthy as ways to combat higher blood sugar levels.

EB: That's important to mention because



ESTHER BUSH

African Americans are often forced to advocate for their health needs. Taking charge of one's health also means monitoring our own blood sugar levels to be on top of changes.

The Urban League of Greater Pittsburgh's Health Education Office offers services around blood pressure, diabetes, nutrition and more that directly relate to taking the next steps to staying healthy.

BS: That's so great. In addition to seeking ways to measure and educate, I also encourage our readers to check out some of the research opportunities listed on this page for stroke victims. Engaging in studies is a powerful way to lend feedback on how future research could greatly influence our lives and the lives of our loved ones.

EB: Thank you so much for having this conversation with me, Bee. We've provided some great information and ways that readers can take charge of their health today. I look forward to next month as we discuss the Pittsburgh Study.

Learn your numbers

by Roger Caldwell

(NNPA)—I am a stroke survivor. As a stroke survivor, I consider myself to be a miracle. One of my goals in life is to educate Americans (particularly Black men), that 80% of strokes can be prevented with knowledge and education. Strokes have the potential to be a silent killer, and nearly 85% of all strokes that occur show no



ROGER CALDWELL

warning signs. Although there are no major warning signs, there are risk factors, diseases, and health issues, which make an individual more susceptible to having a stroke. High blood pressure (hypertension) is the number one

cause in the country for a stroke and it can be regulated with medicine, a proper diet, monitoring your blood pressure and a healthy lifestyle.

"Healthcare in one of the wealthiest countries on the face of this earth is not a primary focus or concern. In this society, many people are not interested in improving their health. They prefer to take a chance and hope that health issues will resolve themselves. I was not taking care of myself and not taking the necessary steps to correct my health problems. This is a major crisis confronting this country today," written about in my book, "The Inspiring Journey of a Stroke Survivor."

It is obvious with the recent news of the passing of actor Luke Perry (52), and director John Singleton (51), who both died suddenly of massive strokes, that something is wrong. Both of these men were very successful, and if 80% of strokes are preventable, I would have expected these two men to have received the best medical care, but they are gone.

When I had my stroke, I was well aware that I had hypertension, but I was still not taking my prescribed medication. I was walking around with a time bomb. At any time, I knew the bomb could explode but I took a chance. Eventually, it exploded but I lived, and now part of my responsibility is to educate Americans about strokes with a primary focus on African Americans.

After having my stroke, I was completely paralyzed on the entire right side. I spent the next seven weeks in rehabilitation re-learning basic tasks: How to dress myself, how to talk, how to write with my left hand, and how to graduate from a wheelchair to a cane. My efforts paid off, but I did not recover 100%. All Americans must know more about stroke prevention and awareness, and they should know their personal numbers as well as their family members' numbers.

As a culture and community, Black Americans have the highest incidence of high blood pressure, with 1 out of 2 adults having some form of hypertension. It is essential to understand the mechanics of blood pressure and what the numbers represent.

The higher number is the systolic number, and it represents the active portion of blood pressure, when the heart is pumping. This number should be around 120 or lower. The lower number represents the diastolic number, or the passive or resting portion of blood pressure. This number should be around 80 or lower.

Know your numbers, take your medication, educate your children, and adult family members, and talk about your health. Visit a physician on a regular basis. Take control of your health, your life depends on it. Remember at any age a person can have a stroke, but as you get older you are more susceptible to having a stroke.

FAST is an acronym that everyone should know when they suspect that someone is having a stroke. The "F" stands for face, and one side of the face droops. The "A" stands for arm and the arm drop's down. The "S" stands for speech and check for slurred or strange speech. The "T" stands for time, and time is of the essence and call 911.

To learn more about strokes, contact the American Stroke Association; and go to my YouTube channel and view my documentary: "High Blood Pressure: A State of Emergency in the African American Community" (<https://youtu.be/tiiNtiXBLXw>).



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Treating strokes quickly can mean difference between life and death or life unchanged and permanent impairment

Ischemic (in the brain) strokes happen when a blood clot or fatty deposits (called plaque) block a blood vessel carrying oxygen-rich blood to the brain, which means the brain cannot get the oxygen it needs. Within minutes of being starved of oxygen, tissue in affected areas of the brain starts dying. Therefore, strokes can lead to brain damage, disability or even death.

Treating strokes quickly can mean the difference between life and death or life unchanged and permanent impairment. Researchers continue to work on ways to quickly treat people who have had strokes to minimize brain damage. One particular area of research done recently at the University of Pittsburgh and other sites examined the common connection between high glucose (blood sugar) levels and worse outcomes for people who have had strokes. The Stroke Hyperglycemia Insulin Network Effort (SHINE) study, funded by the National Institute of Neurological Disorders and Stroke, looked at how closely doctors control blood sugar levels in people who have had strokes. The standard treatment in monitoring blood glucose levels after stroke is to check blood sugars every four to six hours to make sure the level is not above 180. If it is above 180, then patients are given insulin to lower to the number. Knowing that people with lower blood sugars fare better after strokes, researchers designed the SHINE study to use a more intensive treatment after strokes: Patients' blood sugar levels were inserted into a computer that would then calculate the amount of insulin needed to maintain a blood sugar level between 80-130. The Pitt portion of



LORI SHUTTER, MD

the study was managed by Lori Shutter, MD, professor and vice chair of education, Department of Critical Care Medicine, and professor of neurology and of neurosurgery, Pitt School of Medicine. "The idea was to tightly control the patients' glucose levels for 72 hours after a stroke event with the hope that patients would have better outcomes," says Dr. Shutter. "When it finished, the SHINE study results showed that keeping tight control of patients' blood sugar levels did not improve their 90-day outcome and slightly increased their risk for low blood sugar. We found that keeping the glucose below 180, checking it four to six times a day and injecting insulin as needed is the preferred treatment, which is what we've been doing for years. The old-fashioned way works! We also know that that keeping blood sugar below 180 is the right number."

Now that researchers have answered the question of how aggressively to control blood sugar levels in people after ischemic strokes, Dr. Shutter emphasizes the importance of always keeping blood sugar levels below 180 to prevent strokes, especially in people with diabetes.

"High blood sugar can affect healthy blood vessels, which are very important to overall health, including healthy heart, brain, eye and kidney function," says Dr. Shutter. "It's like tree limbs—the arteries are like the big trunk, then the arterials and then to the tiny twigs on the tree, the capillaries. These are tiny little vessels delivering blood. If you have diabetes, the twigs become brittle and get narrower. Just as in a big storm, the little twigs can fall off or get too narrow to carry blood through; you won't get blood to your kidneys, brain, heart, eyes, etc. You'll start having kidney and heart problems, small strokes and eyesight changes."

The Centers for Disease Control and Prevention (CDC) report that strokes are the fifth leading cause of death in the United States but that the risk of having a stroke varies greatly between races and ethnicities. The risk of having a stroke is almost twice as high for African Americans as it is for whites. African Americans have the highest rate of death due to strokes. In the past few years, Latinx populations are experiencing higher rates of death from strokes. According to the CDC, one in three people in the United States has at least one stroke risk factor—being male, having high blood pressure, high cholesterol, diabetes, smoking and being obese.

Dr. Shutter says, "The overall message is that there's a lot people can do to change many of their risk factors for having a stroke—stop smoking, exercise regularly, make healthy eating choices as much as possible and be aware of their blood sugar levels."

The Western Pennsylvania Patient Registry at the University of Pittsburgh

by Julie Fiez, PhD

The Western Pennsylvania Patient Registry (WPPR) is a confidential listing of stroke survivors who are interested in participating in research.

Brain researchers in Pittsburgh use WPPR to identify individuals appropriate for a wide range of studies. For example, one research group studies the brain regions that support reading and language. They are recruiting individuals with damage to the cerebellum, which is a part of the brain associated with motor control and coordination.

New research suggests that the cerebellum may also contribute to the learning of cognitive skills like reading. To evaluate this idea, the reading abilities of individuals with cerebellum damage are being compared with individuals without such damage. If differences are found,



JULIE FIEZ, PHD

help individuals recover from aphasia, a language disorder, following a stroke. This project requires multiple sessions involving language practice and the collection of brain imaging data to better understand the mechanisms of recovery.

A third research group is studying visual

object recognition. The group is testing the idea that individuals with damage to the brain's parietal lobe may understand what an object is used for but have difficulties understanding how to reach for and grasp the object properly. The opposite pattern is expected for individuals with damage to the temporal lobe. The results from this study will help scientists understand the organization of the brain's visual system.

None of this research could happen without the generous involvement of stroke survivors. WPPR is continuously enrolling registry participants.

For more information, visit the WPPR website (<http://www.lrdc.pitt.edu/wppr/>) or contact the WPPR coordinator, **Denise Balason, at 412-624-0178.**

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