

Understanding Strokes

Your guide to prevention and care

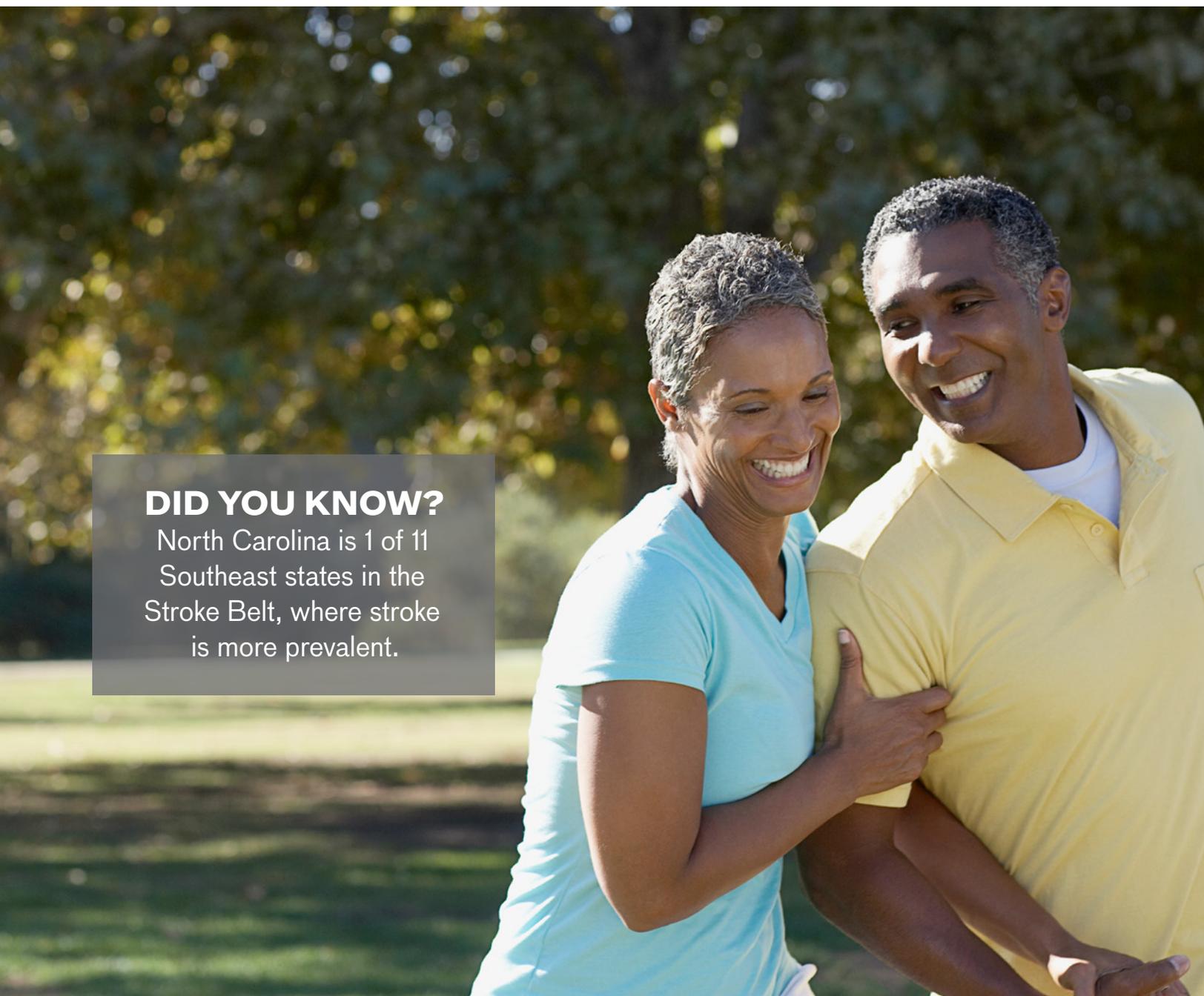


 **Atrium Health**
Wake Forest Baptist

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Am I at risk for a stroke?

Stroke is the fourth-leading cause of death in the U.S. and the leading cause of serious, long-term disability. A stroke can happen to anyone. If you are over age 55, have high blood pressure, high cholesterol, diabetes, heart disease, smoke or are African American, you are at an increased risk for a stroke.

A photograph of an older African American couple smiling and embracing each other outdoors. The woman is wearing a light blue shirt and the man is wearing a yellow polo shirt. They are standing in front of a blurred background of green trees and grass.

DID YOU KNOW?

North Carolina is 1 of 11 Southeast states in the Stroke Belt, where stroke is more prevalent.

What is a stroke?

Simply put, a stroke is an interruption of the flow of blood to any part of the brain.

What are the signs of a stroke? What should I do?

Recognizing the signs and calling 911 quickly gives the best chance of avoiding brain damage and its long-term effects. "BEFAST" is an easy way to remember and identify the most common symptoms of a stroke (see graphic below).

Treatment for a stroke must begin within 3 to 4.5 hours from the time the first symptoms appear. The faster the treatment, the better chance of a good outcome.

How can I manage my stroke risk factors?

According to the American Heart Association, there are some risks you cannot control. The good news is that there are many you can.

Risk factors you can control:

- » Blood pressure
- » Cholesterol
- » Tobacco use
- » Regular physical activity
- » Weight
- » Diabetes

Risk factors you cannot control:

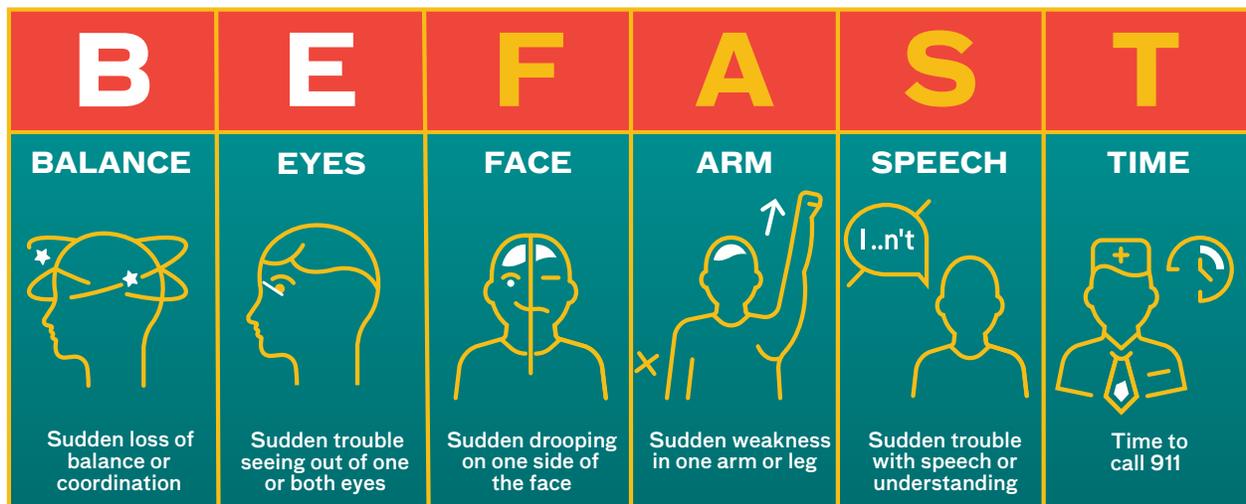
- » Age
- » Gender
- » Family history
- » Race
- » Previous stroke

Why do my heart-healthy numbers matter?

Knowing your heart-healthy numbers will help you spot early warning signs of stroke. Your doctor can help you manage these important numbers.

Know your numbers

- » Blood pressure: Below 120/80 mmHg
- » Cholesterol
 - LDL: Lower than 130; 70 to 100 (for high-risk individuals)
 - HDL: 40 or higher
 - Triglycerides: Under 150
- » Blood sugar: 100 mg/dL (fasting)
- » Body mass index (BMI): Lower than 30 (over 30 is obese)
- » Waist size in men: smaller than 40 inches
- » Waist size in women: smaller than 35 inches



Also look for a sudden, severe headache with no known cause.



80% of strokes are preventable: Manage your risk

Eat right

» Focus on fruits, vegetables, whole grains and meals you make yourself. Avoid foods with trans fat, high sugar and high sodium content.

Move it

- » Aim for 30 minutes of activity every day. Take it slowly at first. Talk to your doctor before starting any new exercise program.
- » Fitness trackers, mobile fitness apps and other wearable devices can help keep you motivated and up to date with your fitness and weight-loss goals.

Kick the habit

It's never too late to quit smoking! One year after you quit smoking, your risk of heart attack is cut in half. Five years after you quit, your risk is nearly the same as someone who has never smoked. Call 1-800-Quit-Now for free 24/7 phone support by trained specialists (sponsored by QuitlineNC).

“With stroke, time is brain. Every minute you delay seeking medical help, your brain can lose up to 2 million neurons. Act fast, because the longer you wait, the less likely it is that treatments will be effective and your chances of recovery will be reduced.”

— AMY GUZIK, MD
ATRIUM HEALTH WAKE FOREST
BAPTIST NEUROLOGIST

Not all strokes are the same

There are 2 primary types of strokes:

Ischemic stroke

This type of stroke occurs when a blood clot, or obstruction, in an artery prevents blood from flowing to the brain. This is the more common form of stroke; nearly 87% of all strokes are ischemic strokes.

The underlying condition for this type of obstruction is atherosclerosis, the development of fatty deposits lining the vessel walls.

Transient ischemic attack

A transient ischemic attack (TIA), or mini-stroke, occurs when blood flow to the brain suddenly stops for a short time, causing stroke-like symptoms. These symptoms can last anywhere from a few minutes up to 2 hours. Like any other stroke, a TIA requires immediate emergency care. Having a TIA puts you at greater risk of experiencing a full-blown stroke.

Hemorrhagic stroke

This type of stroke occurs when a blood vessel inside the brain bursts or leaks. The blood can put pressure on the brain, which can damage brain cells. Hemorrhagic stroke accounts for about 13% of stroke cases, but tends to have a higher mortality rate than ischemic stroke.

There are 2 types of hemorrhagic strokes: subarachnoid hemorrhage and intracerebral hemorrhage. Subarachnoid hemorrhage (bleeding around the outside of the brain) is typically caused by weakened blood vessels such as aneurysms and arteriovenous malformations, while high blood pressure or unknown causes may lead to intracerebral hemorrhages (bleeding inside the brain tissue).



DID YOU KNOW?

Diabetes is a major risk factor for stroke. Controlling your blood glucose levels, working with your health care team and developing healthy lifestyle changes can reduce your risk.

Specialized care from the start

In 2015, Atrium Health Wake Forest Baptist received the highest possible designation, an Advanced Comprehensive Stroke Center by The Joint Commission, a nationally recognized review organization. This designation is a symbol of quality that demonstrates our commitment to the highest standards of stroke care, our experienced staff and our ability to treat the most complex stroke cases. This means you can feel confident you're receiving the best care, from the moment you're admitted until the day you go home.



Team of stroke specialists

Our fellowship-trained, board-certified specialists are leaders in the field of stroke care. Our multidisciplinary team includes specialists in:

- » Neurology
- » Neurosurgery
- » Emergency medicine
- » Interventional neuroradiology
- » Stroke rehab

The team works together to evaluate your case and develop a treatment plan. Your neurologist works directly with you and will visit you every day throughout your treatment and recovery process. This helps you build a relationship with your doctor. You and your family will always know who to count on for guidance and support.



Drs. John Wilson, Stacey Wolfe (left), Kyle Fargen and Patrick Brown comprise the nationally recognized team that provides patients with state-of-the-art surgical and interventional stroke care.



Stroke treatment tailored to your needs

- » We offer comprehensive care beginning the moment you arrive and continuing through your stroke treatment, recovery and beyond.
- » We quickly diagnose the source of your stroke and develop a treatment plan using our wide-ranging expertise and the most advanced technology.
- » We are involved in research on new stroke treatments and devices, giving you access to the latest innovations.
- » We guide you through recovery with our world-class post-stroke rehabilitation program at the J. Paul Sticht Center for Rehabilitation.
- » We offer individualized coaching and care plans to smooth your transition from hospital to home.
- » We maintain contact with you after you go home to screen for risks that could lead to complications or re-hospitalization.

Ischemic stroke treatment

Ischemic strokes and TIAs occur when a blood clot forms in an artery that supplies blood to the brain. To treat, the clot needs to be removed or dissolved and new ones need to be prevented from developing.

We do this with special medications, including blood thinners and anti-coagulants, as well as with surgical procedures.

Medications

Tissue plasminogen activator (tPA) is a medication injected into the bloodstream that dissolves blood clots in the arteries that supply blood to the brain. It's a lot like a liquid clog remover that unclogs stopped-

up drain pipes. Only instead of plumbing pipes, it works on arteries.

tPA is effective for ischemic stroke patients who receive it within a few hours of their ischemic stroke and who do not have any additional bleeding.

Surgical procedures

tPA may not work for all patients, especially those who arrive too late for treatment with medication. At Atrium Health Wake Forest Baptist, our specialists are trained in using highly advanced surgical methods to remove blood clots. Using a combination of imaging technology and devices, our ischemic stroke team can surgically take out or break up blood clots in the arteries using:

- » Thrombectomy. Our hospital was the first in North Carolina to use the device.
- » Carotid stenting
- » Intracranial angioplasty and stenting
- » Extracranial-intracranial (EC-IC) bypass. We're the only ones in the area offering this advanced procedure.

Hemorrhagic stroke treatment

A hemorrhagic stroke occurs when a blood vessel inside the brain bursts or leaks. The first step in treating a hemorrhagic stroke is determining the source of the leak. Common sources of a hemorrhagic stroke include aneurysm and arteriovenous malformations (AVM). Once the source has been identified, our stroke experts will determine the appropriate treatment method.

Our comprehensive stroke center

Awards and recognition

Atrium Health Wake Forest Baptist Medical Center was one of the first hospitals in the country to receive a special designation as a Stroke Research Center from the National Institute of Neurological Disorders and Stroke, part of the National Institutes of Health.

The American Heart Association (AHA) has recognized Atrium Health Wake Forest Baptist Medical Center on its Target Honor Roll for our excellent door-to-needle times for administering tPA, the emergency clot-busting medicine.

Our current Get With The Guidelines® – Stroke performance achievement metrics for Atrium Health Wake Forest Baptist Medical Center (updated as of June 2022):

- » Compliance with AHA's Get With The Guidelines – Stroke measures is 90% to 100%
- » Serious complication rates for carotid endarterectomy are better than the national benchmark
- » Rates of serious complications for diagnostic angiogram are better than the national benchmark

Our comprehensive stroke center received the Get With The Guidelines — Stroke GOLD PLUS Achievement Award and Target Stroke Honor Roll Elite Plus

Wake Forest Baptist Medical Center



Atrium Health Wake Forest Baptist has been recognized as the top 10% in the country for Neurology & Neurosurgery and Stroke care by U.S. News & World Report.

Telestroke network

The Atrium Health Wake Forest Baptist Telestroke Network was not only the first network in North Carolina, but is now the state's largest. We have assessed over 15,000 patients and treated over 2,400 with tPA.

As part of our comprehensive stroke center, the network partners with community hospitals in nearly 20 counties in Western North Carolina to ensure 24-hour access to our acute stroke experts. Two-way live video and audio consultation and image-sharing technology allow physicians at community hospitals to have immediate access to the latest advancements in stroke care.

All of our stroke specialists have completed fellowship training in the care of stroke patients or are board certified in vascular neurology, and they make up the largest stroke team in the region.

Stroke research

Our faculty members have been awarded a 5-year grant from the Patient-Centered Outcomes Research Institute, a nonprofit, nongovernmental organization created through the Affordable Care Act and authorized by Congress.

We also launched COMPASS (COMprehensive Post Acute Stroke Services), the first statewide study to determine if a longer-term, post-stroke care model improves patients' daily function after leaving the hospital. Results showed that implementing this model was challenging, but hospitals that embraced it saw improved patient recovery and home blood pressure monitoring.

To make an appointment with one of our stroke specialists, call or visit:
336-716-WAKE (9253)
WakeHealth.edu/Stroke



Now part of  **ADVOCATEHEALTH**