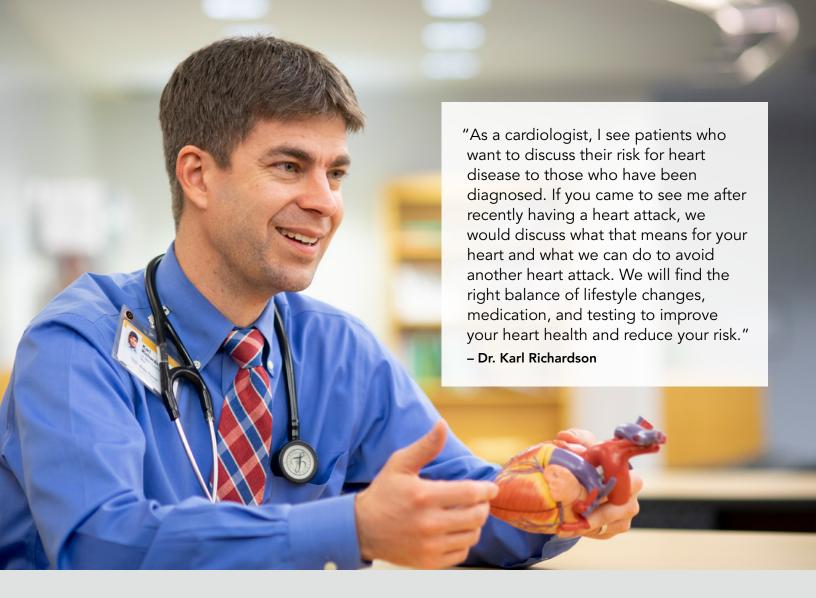


Heart Disease and Stroke





Why should I be worried about getting heart disease or having a stroke?

According to the American Heart Association, heart disease is the No. 1 cause of death in the United States. That is why it is important to make healthy lifestyle choices, focus on prevention and get the care that your heart needs.

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. However, 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.

With your heart, every second can be critical. If you need care, please don't wait. Our medical professionals are thoroughly trained to keep you and everyone COVID-19-protected while caring for you.

What are signs of a heart attack? What should I do?



Uncomfortable pressure, fullness, squeezing, or pain in the center of chest



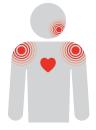
Chest discomfort with difficulty breathing



Chest discomfort with light-headedness, fainting or sweating

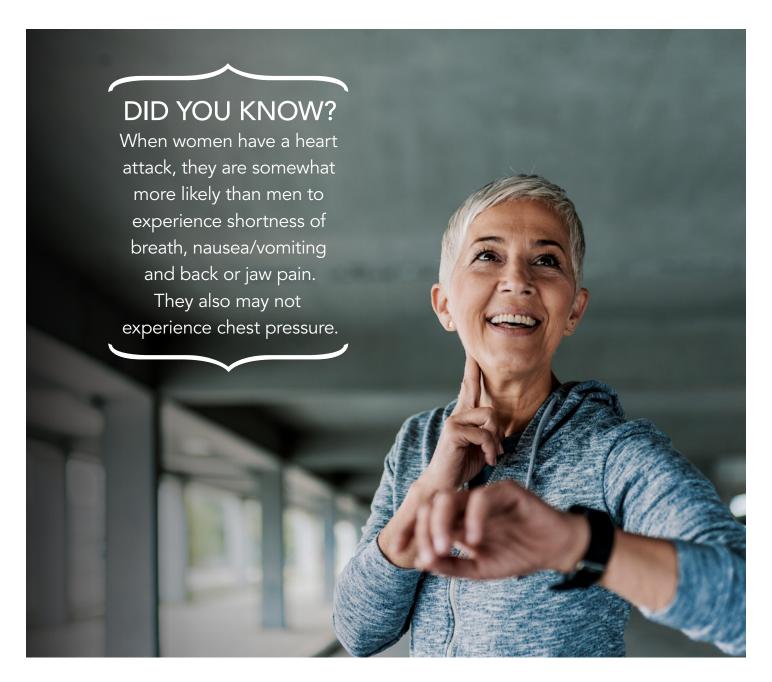


Chest discomfort with nausea



Unusual symptoms: jaw pain, pain across the shoulders, fatigue

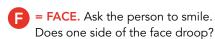
If you think you are having a heart attack, **call 911** immediately and go to the nearest emergency department.



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. "FAST" is an easy way to remember and identify the most common symptoms of a stroke.







A = ARM. Ask the person to raise both arms.

Does one arm drift downward?



S = SPEECH. Ask the person to speak a simple sentence. Does the speech sound slurred or strange?



= TIME to call 911. If you observe any of these signs, call 911 or go to the nearest emergency department immediately.

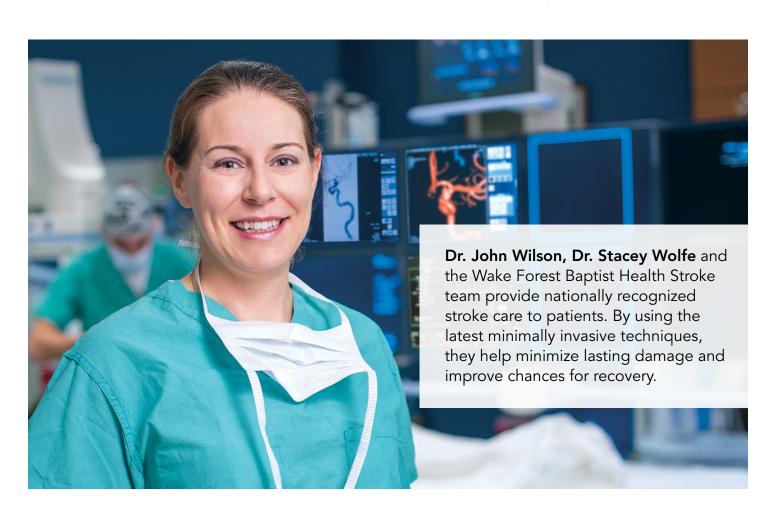
Also look for:

- 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.

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.

DID YOU KNOW?

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



What is my risk for developing heart disease?

Take our online Heart Health Profiler to estimate your risk of developing cardiovascular disease. Then, talk to your doctor about your results. Visit **WakeHealth.edu/Heart**.

What is my risk for having a stroke?

Take our online Stroke Risk Profiler to estimate your risk for having a stroke. Then, talk to your doctor about your results. Visit **WakeHealth.edu/Stroke**.

How can I manage my heart disease and 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 cannot control:

- Age
- Gender
- Family history
- Race
- Previous stroke or heart attack

Risk factors you can control:

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

DID YOU KNOW?

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

What are my heart-healthy numbers?

Knowing your heart-healthy numbers will help you spot early warning signs of heart disease and stroke. Your primary care doctor or cardiologist can help you manage these important numbers.

Know your numbers

- ♥ Blood pressure: Below 140/90 mm HG
- Cholesterol
 - LDL: Lower than 130/70–100 (for high risk individuals)
 - HDL: 40 or higher
 - Triglycerides: Under 150
- Blood sugar: 100 mg/dL (fasting)
- Body mass index (BMI): Lower than 30 (obese)
- Waist size
 - Men: Smaller than 40 inches
 - Women: Smaller than 35 inches

Weight can affect your heart disease and stroke risks. Your doctor and the Wake Forest Baptist Health Weight Management Center team can help create a program centered around your lifestyle and weight loss goals. Call 336-716-WAKE to make an appointment. To learn more, visit WakeHealth.edu/Weight-Management-Center.



Preventive Cardiology: An Emerging Subspecialty

Signs of cardiovascular disease—the world's leading cause of death—often go undetected until it is too late. A center at Wake Forest Baptist Health, dedicated to the emerging subspecialty of preventive cardiology, aims to make a difference.

"Only half of people are fortunate enough to have signs and symptoms that suggest that they may have underlying cardiovascular disease before they have a catastrophic event," says Michael D. Shapiro, DO, MCR, a board-certified cardiologist directing Wake Forest Baptist Health's Center for the Prevention of Cardiovascular Disease.

"The other half actually have a major event, such as heart attack or sudden cardiac death, as their first sign or symptom."

Preventive cardiologists can evaluate apparently healthy individuals for their risk of heart disease and identify some of the earliest signs and/or risk for cardiovascular disease.

"We actually have good tools to do that now," Shapiro says. Those tools include a range of new technology and diagnostic methods, such as advanced cardiac imaging, cutting-edge laboratory testing and genetics.

He says many deaths attributable to cardiovascular disease are easily preventable.

"If you can find who is at risk and you can offer them good options, both in terms of lifestyle changes and medical treatment," Shapiro says, "it can go a long way toward preventing a lot of misery down the road."

To make an appointment, call 336-716-WAKE.

DID YOU KNOW?

Even just regular moderate exercise, such as walking briskly for two hours each week can reduce your risk of cardiovascular disease by more than 40 percent and reduce your risk for heart attack and diabetes.



Michael Shapiro DO, MCR Director, Preventive Cardiologist



Yashashwi Pokharel, MD Preventive Cardiologist



Dani Raymer, PharmD Clinical Pharmacist



Meredith Clarke, RD Registered Dietitian



The Wake Forest Baptist Health Difference

Because we are part of an academic medical center, you will receive the depth of care that few hospitals can provide. From preventing heart disease and strokes to emergency care and managing ongoing conditions, our experts can help you, whether your condition is simple or complex.

Your team of heart and stroke care experts includes:

- Cardiologists and cardiovascular surgeons
- Neurologists and neurosurgeons
- Nurses
- Pharmacists
- Dietitians
- Cardiac rehabilitation specialists
- Emergency medical responders

Diagnosis and Unique Treatment Options

Our cardiovascular and stroke teams offer personalized treatment plans and state-of-the-art tests to help accurately diagnose your condition. These specialists also offer unique treatment options—such as minimally invasive procedures and advanced technology—not found at other hospitals.

Safety awards-Wake Forest Baptist:

▼ The Wake Forest Baptist Heart and Vascular Center is a national leader in heart and vascular care, surgery and research. We house western North Carolina's only advanced cardiac care and transplant program. We were the first Chest Pain Center in the region to be accredited by The Joint Commission, and we have disease-specific certification by The Joint Commission in acute myocardial infarction (heart attack) and congestive heart failure. We have received the highest possible recognition for quality cardiac surgery from the Society of Thoracic Surgeons.

Clinical Trials

Our doctors, along with researchers and public health scientists, participate in national clinical trials studying the effects of heart disease and stroke. We use these findings to help provide comprehensive screening services and treatment. If you want to learn more about our clinical trials or join one, visit **WakeHealth.edu/Belnvolved**.

Women's Heart Health

Women face the same risk for heart disease as men do.

The effects of pregnancy, menopause and certain heart conditions can lead to serious problems that require specialized care. For example, our heart specialists work with our Obstetrics and Gynecology team for pregnancy-related conditions, and help make sure that treatments for menopause do not harm a woman's heart.



"You can take comfort knowing that we offer the latest advanced technology options, including minimally invasive procedures, and have an entire team dedicated to getting you back to a healthy life."

Dr. David Zhao,
 Director, Heart and Vascular Center

Cardio-Oncology Care

If your cancer treatments may have contributed to your heart condition, we will work with cardio-oncology experts to provide you with specialized screenings.

Pediatric Care

The Pediatric and Congenital Heart Program of Brenner Children's Hospital specializes in heart care for infants and children. We treat kids born with congenital heart defects, helping them prevent and manage complications through adulthood. Brenner Children's also has a dedicated pediatric electrophysiologist who examines children with heart rhythm problems.

Adult Congenital Heart Program

Congenital Heart Defects (CHD) are a problem with the heart's structure that is present at birth. CHD is the most common birth defect with approximately 1 in 100 babies being born with a CHD and about two million adults living with CHD in the US.

Because adults with complex CHD face a higher risk of death, all adults born with CHD should be seen regularly by an adult congenital heart disease specialist, yet fewer than 10% receive this recommended care.

Wake Forest Baptist Health is now a regional center for CHD. Board-certified CHD physicians Dr. Derek A. Williams and Dr. Bharathi Upadhya lead the team, working with physician Dr. David Zhao, congenital heart surgeon Dr. Yoshio Otaki, and head of adult heart surgery, Dr. Ted Kincaid. Together, we offer the full spectrum of diagnostic and procedural treatments for these diverse and complex patients.

What are some of the most common heart conditions? How are they treated?

Wake Forest Baptist Health offers comprehensive diagnosis and treatment for the full range of heart and vascular conditions, from simple to complex. For some patients, medical management and lifestyle changes may be an effective alternative to surgery. In other cases, more invasive treatment may be needed.

Common conditions we treat include:

Aneurysms occur when an artery's wall weakens and a bulge in the artery appears. If this bulge ruptures, it will cause internal bleeding. Aneurysms can develop slowly over several years, but they can also be sudden and a serious health risk.

Our experts in open and noninvasive aneurysm repair can help. A new technology, **fenestrated endograft**, allows us to noninvasively repair an aneurysm while maintaining the integrity and function of your arteries. Noninvasive procedures reduce pain and recovery time.

Angina is chest pain or discomfort that occurs when your heart is not getting enough oxygen-rich blood. This is often a sign of some other underlying cardiovascular disease, such as coronary artery disease, that can lead to a heart attack. Angina can be either stable or unstable (most concerning).

Arrhythmia is an abnormal heart rhythm. This includes any rhythm of the heart that deviates from normal, such as:

- Atrial fibrillation
- Tachycardia (fast heart rate)
- Bradycardia (slow heart rate)
- Ventricular tachycardia (VTach/VT)
- Ventricular fibrillation (VFib/VF)
- Atrial flutter

Stents are small, mesh-like metal tubes that are placed into a narrowed coronary artery. The percutaneous coronary intervention (PCI) procedure uses a stent to open the narrowed vessel and keep it open.

Atrial fibrillation (AF or AFib), the leading cause of stroke, is an abnormal, rapid, irregular beating of the atria (top chambers of your heart). Wake Forest Baptist Health is the only medical center in the region that has the ability to treat all levels of AFIB.

Congenital heart disease is the most common birth defect in the United States. Adults living with congenital heart disease need regular follow-up care throughout life to prevent or manage possible complications. Wake Forest Baptist Health has both pediatric and adult congenital specialists that can find and treat these defects.

Cardiomyopathy is a condition in which the heart muscle is abnormal and has difficulty pumping. Risk factors may include a previous heart attack, high blood pressure, viral infections, obesity, diabetes, heavy alcohol or drug use, or family history. Sometimes even pregnant women can get cardiomyopathy. This condition can lead to heart failure and serious complications.

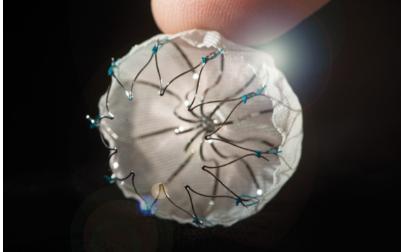
Ventricular Assist Device (VAD) is an implantable mechanical pump that helps the heart pump blood from the lower portion of your heart to the rest of your body. VADs are used for people who have weakened hearts or heart failure and are surgically implanted.

Carotid artery disease is a narrowing of the vessel which is usually caused by plaques or other buildup in the carotid artery. This is a form of cardiovascular disease and is a risk factor for stroke.

Coronary artery disease (CAD) is very common and is the leading cause of death in the U.S. for both men and women. CAD is often the underlying cause of a heart attack, heart failure and angina.

Heart failure occurs when the heart is not able to adequately pump enough to meet your body's demand. Symptoms include swelling in the legs and lower extremities, shortness of breath (especially with exercise or lying down), and extreme fatigue or tiredness. If you are diagnosed with heart failure, Wake Forest Baptist offers daily clinics so you can be quickly seen and helped. This will help improve your outcome and reduce your chances of readmission.





First in region to offer WATCHMAN.

The WATCHMAN[™] procedure is a minimally invasive treatment that places a "parachute" in the left atrial appendage to seal it off. This procedure helps reduce your risk of a stroke by as much as 77 percent. It also allows you to stop taking blood thinners within 45–60 days.

"We try medications first. However, if that fails, we may then use the WATCHMAN catheter-based technology to help you maintain normal heart rhythm. There's no absolute cure for AFIB, but there is better management, and we have the technology to do so." – **Dr. Elijah Beaty**

Heart transplant surgery replaces a diseased or damaged heart with a healthy heart from a human donor. At Wake Forest Baptist, our Advanced Cardiac Care and Transplant Program helps heart failure patients who have exhausted all other reasonable treatment options.

Heart valve disease is when any of the four valves in your heart (tricuspid, pulmonic, aortic, mitral) become hardened, leak, or regurgitate (blood flows backward into the heart chamber). Depending on your specific condition, treatments include minimally-invasive and open procedures.

High blood pressure occurs when your blood pressure levels rise above 139/89. High blood pressure can be managed and prevented by adopting a healthy lifestyle.

If you have a family history of blood pressure, are 20 pounds or more overweight, or have reached menopause, you may be at a higher risk for heart disease. If your blood pressure is normal (less than 120/80), continue to annually visit your primary care doctor or cardiologist. If you have high blood pressure (over 139/89), speak with your doctor because you need to be monitored more closely.

High cholesterol can be controlled by diet and medication. LDL is "bad" cholesterol which can raise your risk of cardiovascular disease and heart attack, while HDL is "good" cholesterol. There are generally no symptoms of high cholesterol, and it is monitored during routine medical visits.

Mitral regurgitation is caused by a leaky mitral valve. The Mitraclip® procedure is a less invasive technique that allows the mitral valve to be repaired without surgery. This clip is attached to the mitral valve through the skin, allowing the valve to more completely close and restore normal blood flow through the heart.

Patent foramen ovale (PFO) is a hole between the atria (the two upper heart chambers). Everyone is born with this opening, but generally it should close after birth. Approximately 25 percent of the population still has this opening when they are adults. There is a chance that PFO can cause a stroke, but most people never know they have it, and many times they don't need treatment.

Peripheral artery disease (PAD) is the narrowing of the peripheral arteries, generally in the legs and arms (sometimes in the stomach and head). Symptoms in legs include pain in the lower extremities that does not go away when resting, and swelling or cramping when walking or climbing stairs.

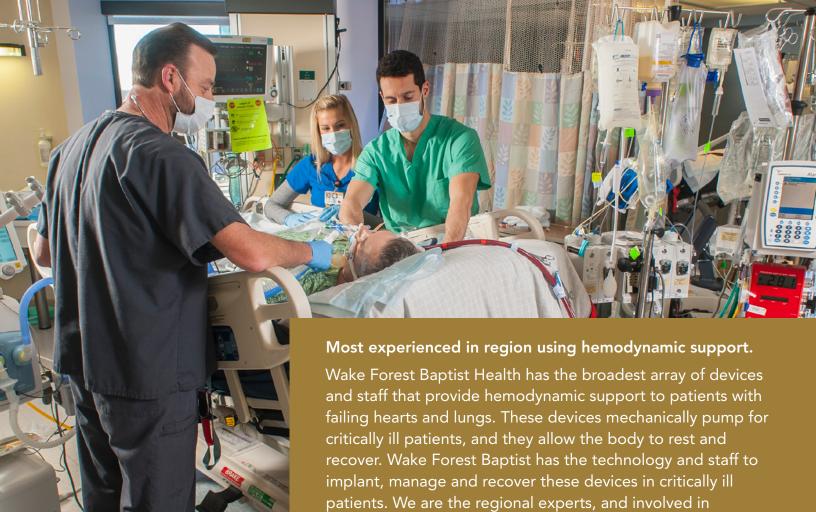
Pulmonary embolism (PE) is a blood clot in the lungs or pulmonary arteries. Symptoms include shortness of breath, difficulty breathing or coughing up blood. Women that take oral contraceptives are often at increased risk for PE.

Structural heart disease includes a wide range of problems such as birth defects and damage to valves and vessels caused by wear and tear. Depending upon your condition, treatments include aortic valve replacement, mitral valve replacement, aortic root repair and more. Wake Forest Baptist Health has the most comprehensive and experienced Structural Heart Program in the region. We do many of these procedures under conscious sedation—rather than anesthesia—so you can have quicker recovery and a shorter hospital stay.

DID YOU KNOW?

If you are overweight, losing just 10 pounds may lower your blood pressure and improve the effects of blood pressure medicine. It also may reduce other heart disease and stroke risk factors such as diabetes and high cholesterol.



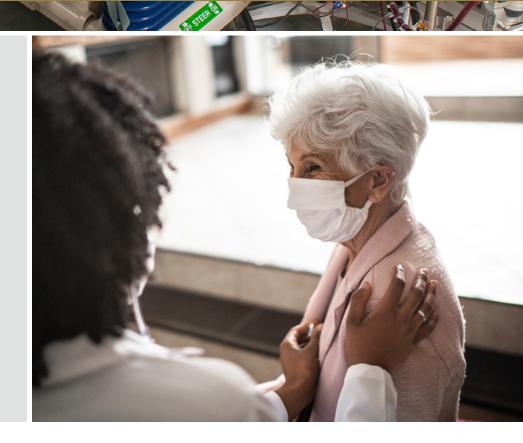


national efforts to improve patient care.

The difference between cardiac arrest and a heart attack.

Cardiac arrest is when the heart stops beating appropriately. You are not breathing normally or not breathing at all. A cardiac arrest patient needs immediate CPR (cardiopulmonary resuscitation) and defibrillation (electric shock to the heart to make the heart rhythm normal again).

A heart attack occurs when blood flow to the heart is blocked. It can either progress into or be the cause of cardiac arrest.



Tasty and Easy Heart-Healthy Recipes

Almond-Honey Granola

Number of Servings: About 24 cups

Ingredients:

- 3 cups old-fashioned oats, uncooked
- √ ½ cup honey
- ¼ cup vegetable oil
- ▼ 1½ teaspoons vanilla extract
- 1 cup whole natural almonds, coarsely chopped
- ♥ ½ cup toasted wheat germ
- ▼ ½ cup dried apricots, cut into thin strips
- 1 cup dried tart cherries
- ▼ ½ cup golden and/or dark raisins

Directions:

- 1. Preheat oven to 350 degrees. Place oats in two 15 $\frac{1}{2}$ x 10 $\frac{1}{2}$ -inch jelly-roll pans. Bake oats 15 minutes or until lightly toasted, stirring twice.
- 2. In large bowl, stir together honey, oil and vanilla. Add toasted oats, almonds and wheat germ. Stir to coat well.
- 3. Spread oat mixture evenly in same jelly-roll pans. Bake until dark golden brown, 15 to 20 minutes, stirring every 5 minutes. Cool in pans on wire racks. Transfer to large bowl and stir in dried fruit. Store at room temperature in tightly covered container up to 1 month.



Cucumber Salad

Number of Servings: About 4

Ingredients:

- 1 lb. seedless cucumbers, thinly sliced
- 1½ teaspoons sugar
- ▼ 1½ teaspoons kosher salt
- 2½ tablespoons red wine vinegar
- ½ small onion, thinly sliced

Directions:

- **1.** In a medium bowl, toss the cucumber slices with the sugar and salt and let stand for 5 minutes.
- 2. Stir in the vinegar and onion.
- 3. Refrigerate for 10 minutes, then serve.

Strawberry-Spinach Salad

Number of Servings: About 1

Ingredients:

- 4 oz. fresh spinach leaves
- 4 fresh strawberries, sliced
- 1 tablespoon reduced-fat blue cheese crumbles
- 1 tablespoon sliced almonds
- 2 tablespoons light poppy seed dressing (bottled)

Directions:

1. Assemble spinach on large plate. Top with the remaining ingredients.

DID YOU KNOW?

According to a JAMA: Internal Medicine study published in 2014, most U.S. adults consume about 22 teaspoons of added sugars a day. The American Heart Association recommends no more than 6 teaspoons (100 calories) a day for most women and no more than 9 teaspoons (150 calories) a day for most men.





Zucchini-Banana Muffins

Number of Servings: About 24 Ingredients:

- 2 cups flour
- 2½ teaspoons baking powder
- ♥ ½ teaspoon salt
- 1 teaspoon ground cinnamon (optional)
- 2 eggs
- √ ¹/₃ cup granulated sugar
- ¼ cup packed brown sugar
- √ ¼ cup canola oil
- √ ½ cup fat-free sour cream
- 1 teaspoon vanilla extract
- 1 cup mashed ripe banana (about 3 bananas)
- 1 cup grated zucchini, squeezed dry
- ½ cup chopped nuts (optional)

Directions:

- 1. Preheat oven to 325 degrees.
- 2. Combine dry ingredients and set aside.
- **3.** Whisk eggs, sugars, oil, sour cream and vanilla until well blended. Stir in banana, zucchini and nuts.
- 4. Stir in dry ingredients just until moistened.
- 5. Spoon into well-greased or paper-lined muffin tins.
- 6. Bake for about 25 minutes.

Chicken, Black Bean and Rice Salad

Number of Servings: About 6

Ingredients:

- 12 oz. skinless, boneless chicken breast
- 2 teaspoons olive oil
- ▼ ¼ cup lime juice
- ▼ ¼ cup cilantro, minced
- ¼ cup red wine vinegar
- 2 tablespoons cumin
- ▼ ½ teaspoon red pepper flakes
- ▼ 1 cup rice, cooked
- 1 (15 oz.) can black beans, rinsed and drained
- ▼ 1 bunch scallions, sliced
- 1 cup green or red bell pepper, diced

Directions:

- 1. Place chicken on a baking sheet or broiler pan and broil under high heat 5 to 6 minutes. Turn chicken over and broil for 5 to 6 minutes more, until thermometer registers 165 degrees. Let cool and slice chicken into strips.
- 2. In a large bowl, combine oil, lime juice, cilantro, vinegar, cumin, pepper flakes, rice, beans, scallions and pepper.

 Add chicken and stir to combine.

Note: Salad may be eaten immediately, but will taste better if it has time to marinate. You may let it marinate at room temperature for one hour or in the refrigerator for 2 or more hours. the whole amount directly in the pot with a hand blender (if pot is high enough). Check if you like the consistency of the soup.



From "Community Recipes: BestHealth Favorites, First Edition"



In partnership with $\# \text{MEDCOST}^\circ$

Convenient Locations Throughout the Area

Asheboro

1 Heart & Vascular – Asheboro 311 E. Presnell Street Asheboro, NC 27203

Bermuda Run

2 Davie Medical Center-Bermuda Run 329 NC Highway 801 North Bermuda Run, NC 27006

Clemmons

Medical Plaza – Clemmons 2311 Lewisville Clemmons Road Winston-Salem, NC 27012

Elkin

4 Heart & Vascular-Elkin
100 Johnson Ridge Medical Park
Elkin, NC 28621

Greensboro

5 Medical Plaza – North Elm 3903 N. Elm Street Greensboro, NC 27455

Hickory

6 Catawba Valley Medical Center 3251 Fairgrove Church Rd SE Hickory, NC 28602 828-326-2354

High Point

7 Congdon Heart and Vascular Center / High Point Medical Center 306 Westwood Avenue High Point, NC 27262

8 Heart and Vascular – Premier 4515 Premier Drive High Point, NC 27265

Kernersville

9 Kernersville VA Health Care Center 1695 Kernersville Medical Park Kernersville, NC 27284

Lexington

10 Lexington Medical Center 14 Medical Park Drive Lexington, NC 27292

Mount Airy

11 Northern Hospital of Surry County 705 Rockford Street Mount Airy, NC 27030

North Wilkesboro

12) Wilkes Medical Center 1370 West D Street North Wilkesboro, NC 28659

Salisbury

13 W. G. Hefner Veteran's Affairs 1601 Brenner Avenue Salisbury, NC 28144

Sparta

14 Alleghany Health 200 Doctors Drive Sparta, NC 28675

Statesville

(In partnership with Iredell Health System)
770 Hartness Road
Statesville, NC 28677

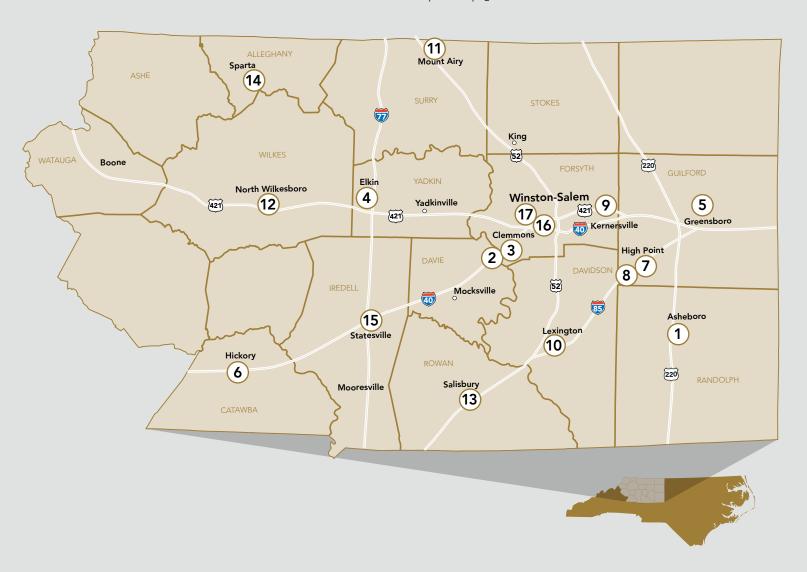
Winston-Salem

Make Forest Baptist Medical Center
Medical Center Boulevard
Winston-Salem, NC 27157

Medical Plaza – Country Club 4610 Country Club Road Winston-Salem, NC 27104

See map on next page.

See location details on previous page.



Healthy Friendship, Healthy Hearts

Lexington Men Turn to Heart and Vascular Care at Wake Forest Baptist Health



Friends and Lexington, N.C., natives David Welborn and Tim Koonts are prime examples of the power of proactive heart health.

For years, David would feel winded during strenuous exercise, such as hiking and skiing. When stress tests over the course of a couple of years failed to reveal any problems, David trusted what his body kept telling him. His cardiologist, Dr. Katie Twomley at Wake Forest Baptist Health Cardiology—Lexington, ordered a cardiac catheterization to learn more.

With Dr. Twomley's guidance, "I realized that, no matter what the stress tests showed, something wasn't right," David says.

The procedure revealed four blockages of 75% or more, all in major arteries. Days later, David had quadruple bypass surgery led by Dr. Ted Kincaid at Wake Forest Baptist Medical Center. After a four-day hospital stay in April and a walking regimen that included 12 weeks of

cardiopulmonary rehabilitation at Wake Forest Baptist Health Lexington Medical Center, David had no problem leading his Boy Scout troop on a 40-mile, five-day hike in the mountains.

He also had no problem sharing his story with friends like Tim, who for a couple of years had been experiencing similar symptoms of being winded after exerting himself. Tim heeded David's advice: "Know your history, know your body, and if something doesn't feel right, stand up and be heard."

After speaking with David about his experience, Tim went to see cardiologist Dr. Barrett Cheek at Wake Forest Baptist Health Cardiology—Lexington. Dr. Cheek scheduled a cardiac catheterization for Tim at Wake Forest Baptist Health High Point Medical Center. It revealed a 95% blockage that doctors addressed during the same visit by placing two stents.



Know your history, know your body, and if something doesn't feel right, stand up and be heard.

- David Welborn

"I came home at 4 o'clock that afternoon and felt like I had dodged a bullet," Koonts says.

Just like his friend David, Tim praises the cardio rehab team at Lexington Medical Center for helping him regain his strength following his procedure.

Now, these friends who owe their heart health to expert care at Wake Forest Baptist Health, are back living happier, healthier lives.

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

Photos were taken prior to the COVID-19 pandemic. Since that time, all patients, faculty and staff are required to wear masks at our facilities.