

Heart **to** Heart

WakeMed Heart & Vascular News
Winter 2023

All About
Heart Valves

Try Nordic Walking

A Steady Pace
Wins the Race:
A Pacemaker
Story



TAKE with...

ROBERT FERGUSON, DO



Robert Ferguson, DO, is a board-certified cardiovascular and thoracic surgeon who is highly-skilled in performing a wide range of cardiothoracic surgeries with a focus on minimally-invasive techniques. Let's get to know more about Dr. Ferguson, his unique skillset and what he loves most about winter.

Q: Tell us a little bit about yourself.

I'm originally from West Virginia, but have lived in North Carolina for five years now. My wife Chelsea works as a nurse anesthetist in the WakeMed operating room, and we have a beautiful 16-month-old daughter who keeps us busy. As a teen, I was heavily involved in sports (basketball, baseball and football) – which sparked my interest in preventive medicine, diet and exercise. As an undergraduate, I studied exercise physiology, but quickly learned I wanted to use my holistic philosophies for more than personal training – which led me to medical school.

Q: Talk about your background as an osteopathic physician and how that guides your patient care philosophy.

Osteopathic physicians have a firm belief in treating the entire patient, mind-body-spirit, with a heavy focus on preventive medicine. When these are considered holistically, the body has a remarkable ability to heal itself. With this in mind, I knew I wanted to pursue my medical degree from an osteopathic medical school – and today, I feel this approach allows me to best serve my patients before, during and after surgery.

Q: How did you choose to become a cardiothoracic surgeon?

As a child of a construction worker, I grew up building and using my hands. Throughout my medical school rotations, I found myself enjoying all surgical subspecialties. This ultimately led me to pursue general surgery. While learning general surgery, I found my interest in the heart and lungs tied very closely to the passion I developed for the cardiovascular system very early in life through sports. I fell in love with the anatomy and physiology of the heart and lungs, so I decided to pursue a career in cardiothoracic surgery.

Q: What is most rewarding about being a cardiothoracic surgeon?

The patients are, by far, the most rewarding part of my job. It takes great trust to allow someone to operate on your most vital organs – the heart and lungs. With this bond, I can do everything from removing cancers to restoring blood flow to the ailing heart. The patients' lives are forever changed. Nothing is better than seeing a patient come back to clinic after surgery and hearing how much better they feel or how they are so relieved to be cancer-free.

Q: What are some of your favorite winter activities?

I personally love winter. Being from West Virginia, we always had snow during this time of year. There is nothing better than sitting by a fireplace watching the snow fall. When I'm outside, you're likely to find me snowboarding or trout fishing. On the sports front, we love college sports and specifically our West Virginia Mountaineers – I hope to see them make a run in the NCAA tournament this year.



Mended Hearts

Join Mended Hearts

The Mended Hearts Chapter of the Triangle is here to serve and support WakeMed Heart & Vascular patients. Mended Hearts is a support group for heart patients and their families who have experienced the effects of heart disease – whether through a heart attack, heart surgery, or stent, defibrillator or pacemaker placement. Our team provides support in many ways – by offering a listening ear, through visits to hospitalized patients or by providing educational seminars for members. New members are welcome to join us. Learn more by contacting Hazel Covington at 919-350-6888 or at hcovington@wakemed.org.

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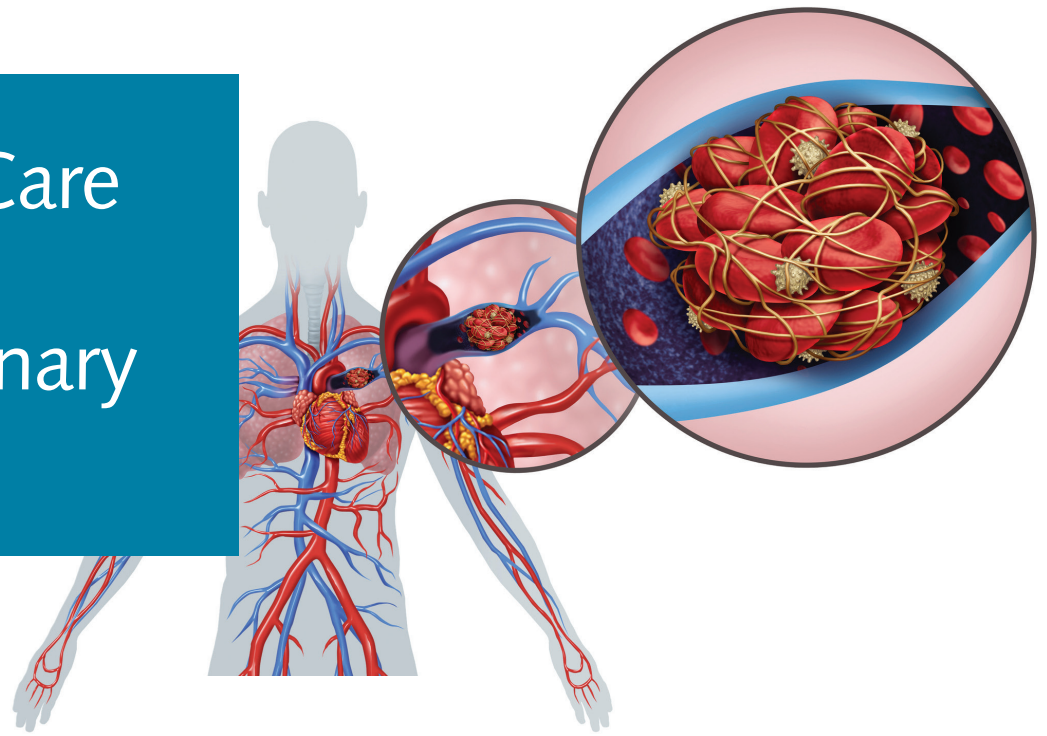


February is Heart Month!

Each year, we observe Heart Month to raise awareness about heart disease and its many risk factors. This month, we are reminded to practice self-care for a healthier heart. When we take care of #OurHearts, we set an example for those around us to do the same. To learn more about American Heart Month, visit nhlbi.nih.gov/education/american-heart-month or heart.org.

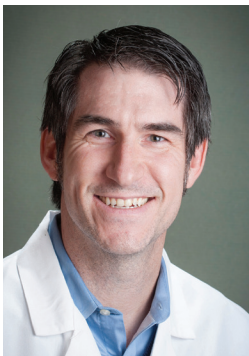


Advanced Care for Patients with Pulmonary Embolism



A pulmonary embolism (PE) is a vascular problem that occurs when a pulmonary artery in the lungs becomes blocked by a blood clot. And, while it's a common health condition, if not diagnosed quickly and treated properly, a PE can be life-threatening. While treatment varies based on a patient's symptoms, as well as the size and location of the clot – getting prompt and appropriate treatment saves lives. That's why WakeMed Heart & Vascular recently made several advances in the evaluation and treatment of PE.

“Establishing the PERT program here at WakeMed is significantly enhancing the care we can deliver to our patients with pulmonary embolism.”



DAVID KIRK, MD
WakeMed Pulmonary & Critical Care Medicine

Newly Formed Team Enhances PE Care: Introducing PERT

The newly formed Pulmonary Embolism Response Team (PERT) includes all the clinicians required to meet the needs of PE patients who are critically ill. Our team of interventional radiologists, cardiologists, vascular surgeons, intensivists, nurses, and pharmacists have collaborated to develop research-based guidelines that provide the best care possible for this condition. For patients with life-threatening PE, a PERT consult is now available 24/7, and there is always a physician available to perform advanced procedures day or night.

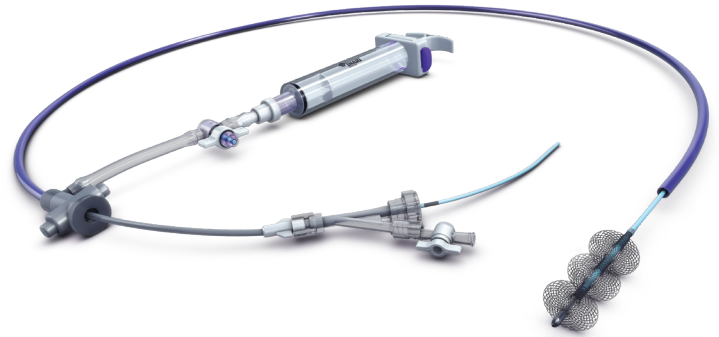
PERT: How It Works

When a PERT consult is ordered, our team of physicians and support staff gets together either by phone or at the bedside with the patient and family to discuss the best approach to treating their individual pulmonary embolism – based on the patient's unique circumstances as well as WakeMed's PE protocols, which are based on a thorough review of the latest evidence-based guidelines.

“Establishing the PERT program here at WakeMed is significantly enhancing the care we can deliver to our patients with pulmonary embolism,” explains David Kirk, MD, Associate Chief Medical Officer. “Because the medical literature around treating pulmonary embolism isn't always clear, patients now receive the benefit of true collaboration – which is like having three to four highly-trained physicians across multiple disciplines all evaluating a patient's best course of treatment. In the medical world, it doesn't get any better than that.”

New Device Allows for Minimally-Invasive Removal of Large PE Clots

WakeMed has recently invested in new tools and procedures to treat pulmonary embolism. The FlowTriever® is a mechanical device that allows a highly-trained proceduralist (either an interventional cardiologist, vascular surgeon or interventional radiologist) to remove large blood clots that previously were treated using either an open surgical procedure or with the use of very potent anti-thrombolytics (clot-busting drugs). This device opens up new treatment options for patients who aren't candidates for anti-thrombolytics or an open surgery.



▲ FlowTriever is the first device of its kind that can capture and remove large clots from big blood vessels.



“ This procedure is allowing us to treat more patients with PE, more safely... We're also eliminating the need for open surgery in many patients, which increases safety and allows patients to recover more quickly.”

SIVA KETHA, MD, FACC
WakeMed Heart & Vascular

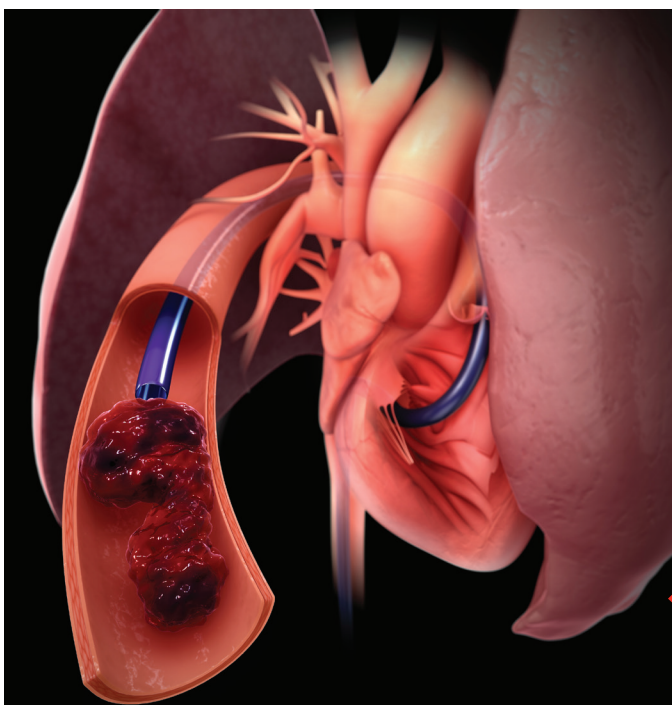
Interventional cardiologist Dr. Siva Ketha performed the first FlowTriever case at WakeMed Heart & Vascular last fall. “This procedure is allowing us to treat more patients with PE, more safely. By simply having this new device available, we're increasing the number of tools we have in our toolbox to treat PE – particularly for those with a higher risk for bleeding or other complications. We're also eliminating the need for open surgery in many patients, which increases safety and allows patients to recover more quickly.”

These advances in the treatment of pulmonary embolism complement WakeMed's growing Vascular Surgery program.

“By enhancing our pulmonary embolism program, we're reinforcing our commitment to bringing the very latest and most advanced treatment options to our patients, right here in Wake County,” explains Dr. Ellen Dillavou. “Over the past few years, our Vascular Surgery program has grown exponentially, and we will continue to add highly-trained experts, advanced tools and new procedures so we can offer the highest quality vascular surgery and care available anywhere in the region.”



ELLEN DILLAVOU,
MD, FACS, RPVI
WakeMed
Heart & Vascular



▲ Illustrated depiction of using the FlowTriever device to remove a pulmonary embolism.

Clinical Research Update

WakeMed Heart & Vascular physicians are involved in numerous clinical research studies led by our Clinical Research Institute. Participation in these studies allows WakeMed Heart & Vascular to remain on the forefront of the latest innovations in medical and procedural therapies across numerous cardiovascular specialty areas.



Taylor Guidi, Dr. Stuart Russell, Dr. George Hamrick and Rhonda Norton team up to work on the heart failure study evaluating diagnostic sensors in insertable cardiac monitor.

Heart Failure Study Evaluates Diagnostic Sensors in Insertable Cardiac Monitor

This investigational study, led by Dr. George Hamrick, evaluates the LUX-Dx insertable cardiac monitor (ICM) in patients with heart failure. ICMs are small devices implanted under the skin that are used to detect abnormal heart rhythms and provide long-term monitoring. ICMs have the capability of wirelessly transmitting data about a patient's heart rhythm to their doctor. In this study, we are looking at various sensors, which offer added heart failure diagnostic features to accompany those standard monitoring abilities of the LUX-Dx ICM. Patients will be followed for up to two years. WakeMed enrolled its first patient in this study in November 2022.

Study Aims to Prevent Lower Extremity Amputation Wound Complications

Led by Dr. Ellen Dillavou, the PREVENA-AMP study aims to reduce wound complications for patients undergoing lower extremity amputation by using a new dressing kit, called the PREVENA™ PEEL & PLACE™ Dressing, as compared to using the standard surgical dressing of sterile gauze and an elastic wrap. The dressing is placed over the surgical incision attached to a wound vac device that applies continuous negative pressure and suction to remove anything that comes out of the wound such as blood or lymph fluid. Patients will be assessed shortly after surgery and followed for 30 days after discharge.



Taylor Guidi, Dr. Ellen Dillavou and Rhonda Norton lead the PREVENA-AMP study.



The study team is led by Dr. Judson Williams (back, left) and includes Dennis Williams, CRNA; and Ron Fazio, PA; front row are Dr. Brendan Howes; Taylor Guidi and Rhonda Norton.

Research Evaluates Combination Therapy for Preventing Postoperative Atrial Fibrillation

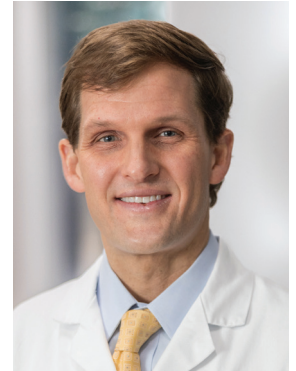
Conducted in partnership with Helios Cardio, this study is led by Dr. Judson Williams, and reviews the use of an antiarrhythmic medication (amiodarone) on the CardiaMend™ pericardial wrap in the prevention of postoperative atrial fibrillation for cardiothoracic surgery patients (specifically, those undergoing coronary artery bypass or isolated valve surgery procedures). The CardiaMend pericardial wrap is an FDA-cleared surgical patch, which provides soft tissue reinforcement, repair, and reconstruction of the pericardium (the sac which holds the heart). Atrial fibrillation (AF) is extremely common after open heart surgery, affecting 20-50% of patients. WakeMed is the only study site for this innovative research.

NEW + NOTEWORTHY

Two WakeMed Heart & Vascular Physicians Named to *Business NC's* List of Top Doctors



Congratulations to both Chelsea Ngongang, MD, FACC, and Judson Williams, MD, MHS, for earning Top Doctors recognition from *Business NC* magazine. The Top Doctors recognition is an award in which doctors across the state nominate and vote for their colleagues in various medical specialties who exemplify excellence in their service areas. Congratulations to these exceptional physicians for being recognized as leaders by their peers across the North Carolina medical community!



Welcome, Dr. Khan!



Dr. Faisal Khan is a multi-sub-specialty board-certified cardiologist with clinical interests in non-invasive cardiology, coronary artery diseases, congestive heart failure, cardiovascular

imaging, preventive cardiology, cardiac arrhythmias, and cardiac valve abnormalities. Dr. Khan received his medical degree from Aga Khan University in Karachi, Pakistan. He completed his internal medicine residency and cardiovascular disease fellowship at the University of Cincinnati Medical Center in Ohio where he was selected as Chief Fellow and worked as an assistant professor before joining Kettering Healthcare Network in the greater Cincinnati area. He was voted by his peers as a "Top Doctor" in *Cincinnati Magazine* for 11 consecutive years.

Dr. Khan embraces being involved in his patients' health care journey. Outside of work, he enjoys traveling, watching movies, reading and spending time with his wife and two daughters. He sees patients in the Heart Center, Six Forks and Garner Cardiology offices.



A Fond Farewell to Cardiac Rehab Program Director Beth Drossman

Best wishes to Beth Drossman following her retirement this past fall after nearly 20 years at WakeMed where she spent 15 years as the Cardiac Rehab Program Director at WakeMed Healthworks. Her professionalism and dedication to her patients and co-workers alike was unmatched. She served as a clinical resource not only to the cardiac rehab

teams at WakeMed, but to her colleagues throughout the organization and across the state. Beth has mentored dozens of students, ensuring each had a rich cardiac rehab experience. She continues to serve as a consultant to the program, but is now enjoying time with her grandchildren and playing lots of tennis!



Happy Retirement, Dr. Chaudhry!

Congratulations and farewell to current longest practicing cardiovascular surgeon in Wake County, Dr. Abdul Chaudhry. He joined the WakeMed Medical Staff in 1982 and is retiring this month. An expert in all facets of cardiac, thoracic and vascular surgery, Dr. Chaudhry frequently treated patients with coronary and valve disease, aneurysms and blocked arteries.

Dr. Chaudhry will be missed by both his peers and patients, who appreciate his keen ability to both listen and operate, as well as offer education and expertise to help guide informed treatment decisions. So many WakeMed patients and surgeons have benefitted from his selfless dedication to practice. Please join us in wishing Dr. Chaudhry well in his retirement!

All About Valves – Everything You Need to Know About Valve Disease

Today, approximately 2.5 percent of the population suffers from some type of valve disease – and it’s much more common among older adults. That’s because as we age, the heart valves can become lined with calcium deposits that make valves thicken and become stiffer – leading to malfunction. Because heart valve disease is far more common in the elderly, it frequently goes undetected as patients may mistake symptoms as normal signs of aging.

“While valve disease can cause a variety of symptoms, it often presents as decreased exertional capacity, or what patients report as just ‘slowing down or tiring out more quickly than they used to’ – which is also common with aging,” explains Dr. Bryon Boulton. “Unfortunately, too many patients dismiss these symptoms and just assume they’re tiring more easily because of their age – but it’s important to pay attention to changes in how you feel at every stage of life and to talk to your doctor about them.”



BRYON BOULTON, MD, FACS
WakeMed Heart & Vascular

“ While valve disease can cause a variety of symptoms, it often presents as decreased exertional capacity, or what patients report as just ‘slowing down or tiring out more quickly than they used to.’ “



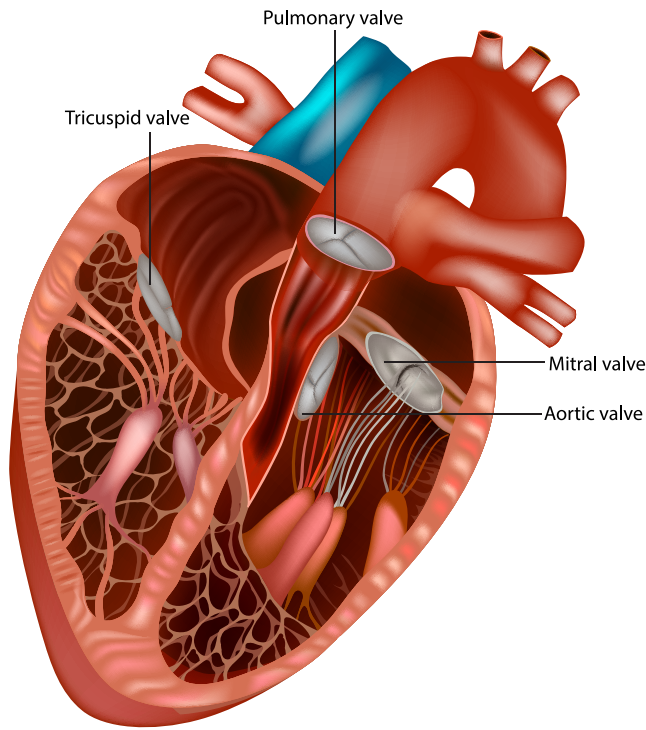
Valve disease can also occur due to congenital problems, or high blood pressure, heart attack, heart failure, rheumatic fever from untreated strep throat or infection. Other common symptoms include heart palpitations, dizziness, chest discomfort, rapid weight gain or swelling in the feet, ankles or abdomen.

Heart Valves – The Basics

Much like the plumbing in our homes, many of us don’t think about our heart valves until there is a problem. Yet, our heart valves play a critical role in the many functions of the circulatory system. They’re largely responsible for directing blood flow throughout the body to ensure our heart, lungs and cells get the blood they need to work properly.

Getting to know your heart valves begins with understanding how the heart and circulatory system function. First, when your heart pumps or beats, it pushes blood throughout the body in a consistent pattern – from the body, through the right side of the heart, over to the lungs to receive oxygen, back through the left side of the heart, and out to the rest of the body. This process is made possible by the heart’s four chambers and four valves.

In between each chamber (two atria and two ventricles), a valve is present to ensure blood empties from the previous chamber and flows forward in the correct direction. These valves are complex structures made up of small flaps of tissue called leaflets or cusps. The four valves include the aortic valve, the mitral valve, the pulmonary valve and the tricuspid valve.



Types of Valve Disease

While any of the four valves can experience problems, the mitral valve and the aortic valve are most typical to become diseased. Here are the most common types of heart valve disease.

Stenosis

This occurs when the valve's leaflet tissue becomes stiff and the opening is narrowed by calcification over time. When the opening becomes narrow, there's less blood flow – causing the heart to pump harder.

Regurgitation

Also known as incompetence, insufficiency or a 'leaky valve,' regurgitation occurs when the leaflets don't close properly. Blood leaks backward into the chamber from where it came. To counteract this backward flow, the heart has to work harder.

Atresia

This is a congenital problem where the leaflets are fused, which means the valve doesn't form properly and can't accommodate normal blood flow.

Mitral Valve Prolapse

This common problem occurs when the mitral valve flaps don't close smoothly or evenly, but instead bulge upward (prolapse) into the left atrium when the heart beats, creating a backward flow of blood.

What Occurs During a Heartbeat?

During the first half of each heartbeat, the valves open to allow blood to move forward through the heart. During the second half of the heartbeat, they close to prevent blood from flowing backward. If the valves have problems with opening or closing, or if there are congenital problems with the anatomy of the valve, that's when valve disease occurs.

The Importance of Early Detection

Early heart valve disease doesn't cause noticeable symptoms – which can make detection difficult. However, valve disease can be detected when a doctor listens to your heart using a stethoscope and hears a murmur. Dr. Boulton urges all of his patients to keep up with routine annual physical examinations – and to ask your doctor to listen to your heart regularly.

“In an age of virtual visits and digital health care, patients may not have a standard physical exam as often as they would have had ten years ago,” explains Dr. Boulton. “I encourage all patients to ask their doctors to listen to their heart using a stethoscope at least once a year. And, if you are told (or have been told at any age) that you have a potential heart murmur, it's important to ask for an echocardiogram – even if you don't have any symptoms.”

That's because treating heart valve problems early can prevent disease progression and reduce the risks of advanced valve disease.

Support for Patients with Valve Disease

WakeMed is pleased to partner with heartvalvesurgery.com to support patients with valve disease. This comprehensive online resource offers patients a highly-credible source of education and information about valve disease, treatment options and what to expect. Patients can read personal stories, find encouragement and make connections with others who have valve disease.



Did You Know?

WakeMed Heart & Vascular is one of the only programs in the Southeast to offer a minimally-invasive approach for open heart valve surgery – a unique procedure that requires just a 4 cm incision rather than a full sternotomy (which requires breaking the breastbone open). This approach can be used for operations performed on the aortic valve, mitral valve and tricuspid valve – and while the operation itself is the same, patients recover in half the time.

Early Treatment Is Best

Valve disease creates a situation where the heart can't pump efficiently – forcing the heart to work harder. This can lead to a variety of health problems and serious potential complications as the disease progresses, such as heart failure, stroke, cardiac arrhythmias, blood clots, and/or sudden death. Dr. Boulton encourages early surgical intervention to help patients not only preserve their long-term quality of life and increase life expectancy, but also to preserve ventricular function and structure. He cautions that once structural damage is done, it can't be reversed. Here are some of the common ways valve disease is treated at WakeMed Heart & Vascular.

Early Valve Disease – Your cardiologist may recommend a combination of medication and lifestyle changes, such as incorporating moderate exercise, limiting or eliminating alcohol and tobacco use, and eating a healthy diet that's high in fiber and low in sodium and saturated fat. Medication therapies could include ones to treat high blood pressure like diuretics and ace inhibitors, or even a beta blocker to reduce the heart rate.

“I tell patients their heart is a muscle just like the bicep, but with valve disease, you want to decrease the amount of work the heart has to do,” explains Dr. Boulton. “If you have high blood pressure, it's like adding more weight to the barbell – which is like putting extra pressure on the valve. Particularly if you have a leaky valve (mitral valve regurgitation), you want to reduce that pressure, which is why medication is a good start for early stages of disease.”

Advanced Valve Disease – For those patients who are experiencing intense physical symptoms, a number of surgical and non-surgical options are available, depending on the valve and underlying cause of the disease.

- > A **valve repair** procedure can be used to treat valve disease in most cases. A cardiothoracic surgeon can use open surgical or minimally-invasive techniques to fix problems with valve leaflets (valvuloplasty) or to tighten or strengthen the valve base (annuloplasty). Other common repair procedures include placing stents to allow blood flow or plug a leaking valve, or implanting a device (MitraClip™) to treat mitral valve regurgitation for patients who aren't candidates for surgery.
- > **Valve replacement** in general is only performed when a repair isn't a good option due to complications or other factors such as when the valve is too damaged or calcified to be fixed. Valve replacement can be performed with an open procedure or using a minimally-invasive technique known as TAVR (transcatheter aortic valve replacement).





A Steady Pace Wins the Race: Dina Cobb's Pacemaker Story

In June 2022 upon turning 59 years old, Dina Cobb was determined to lower her BMI and get in better physical shape before her 60th birthday. She began taking an FDA-approved prescription medication for weight loss. Three weeks in, Dina started experiencing episodes of lightheadedness that worsened as the days progressed. Thinking she was having side effects from the medication, she consulted with her primary care provider who ordered an electrocardiogram (EKG) and advised her to discontinue the weight loss medication while they investigated.

The results of the EKG were abnormal, so Dina was referred to a cardiologist. During her initial cardiology consult, she didn't experience any episodes, and all her vital signs were normal. Yet, by early the next morning, she felt lightheaded and ill all day.

"That night, my heart would not stop fluttering with palpitations," explains Dina. "I finally admitted to my family that I needed to go to the emergency room."

Upon arrival to the WakeMed Apex Healthplex Emergency Department, Dina was immediately evaluated. Her heart rate was fluctuating significantly. She was transferred by WakeMed's Mobile Critical Care team to WakeMed Cary Hospital.

Invasive cardiologist Dr. Hemant Solomon promptly met with Dina. She was experiencing sinus bradycardia (slow heartbeat) with atrioventricular block (partial or complete blockage to the electrical signal that controls heartbeats). Her care team explained she would need a pacemaker.

"I was shocked and emotional," shares Dina. "Dr. Solomon was very patient as he allowed me time to digest the information and then ask questions." Once the care team stabilized her blood pressure and heart rate, Dina was scheduled for dual chamber pacemaker implantation in the coming week.

However, the following morning, Dina experienced a few eventful symptoms that accelerated her pacemaker placement. While getting up for the bathroom, her heart rate suddenly dropped to 18 (normal is 60 to 100 beats per minute). WakeMed's Rapid Response Team immediately rushed to Dina to get her stabilized – and her pacemaker procedure was scheduled within the hour.

Dina explains, "Members of the Rapid Response Team were so compassionate, holding my hand and letting me know I was OK. What an incredible job they did, under pressure, all while making me feel at ease and even making me smile."

Soon after, Dina's pacemaker was implanted, allowing the device to send electrical signals to make adjustments when her heart beats too slowly.



Dina is forever grateful for her providers Hemant Solomon, MD, FACC, RPVI and Jay Harless, PA-C, and says the entire WakeMed Cary Hospital team treated her like family during her three-night stay.

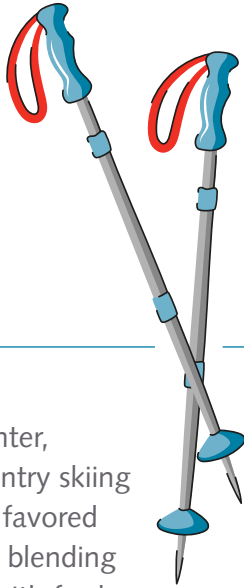
Once Dina's heart troubles were resolved, she got back on track with getting in shape and losing weight prior to her 60th birthday. This time, she is doing it the old-fashioned way with a healthy diet and exercise – and she's already lowered her BMI from 32 to less than 28.

"I am forever grateful to Dr. Solomon for saving my life along with all the excellent medical staff who treated me. 'thank you' doesn't seem like enough to express my appreciation for all involved."

DINA COBB

In reflecting on her entire stay at WakeMed Cary Hospital, Dina has a heart full of gratitude. She says, "I am forever grateful to Dr. Solomon for saving my life along with all the excellent medical staff who treated me. Saying 'thank you' doesn't seem like enough to express my appreciation for all involved."

Step It Up! Try Nordic Walking for Total-Body Health



In the winter, cross-country skiing is a sport favored by many, blending exercise with fresh, mountain air and scenic snowy terrain. However, given our local climate where snow and skiing are rare opportunities, we have Nordic walking to fill the gap. Nordic walking offers a higher intensity workout when brisk walking isn't quite enough. It is enjoyed by old and young alike as a fun, lower-impact exercise regimen with great health benefits. It can also be practiced by skiers who want to enhance their skills and build endurance.



Origins of Nordic Walking

Created in Finland, Nordic walking was first developed for cross-country skiers who needed an off-season training option. Its accessibility and health benefits soon caught on, and its popularity has consistently grown since the 1990s. In 2000, the International Nordic Walking Association was founded, and the association began offering educational programs and creating networks for instructors, both of which have helped Nordic walking gain international appeal.

Poles Make the Difference

Nordic walking is much like brisk walking for exercise; however, it adds the use of special walking poles that help propel you forward. A low-impact sport that engages the full body, Nordic walking incorporates both strength training and cardiovascular exercise. The walking poles are used like extensions of your own arms and set into motion your upper body during your walk. Nordic walking essentially mimics the motion of cross-country skiing, as the poles are meant to push you along and help you walk faster.

Nordic walking poles are lightweight and include grips with removable wrist straps. The poles are meant to be gripped lightly and are kept behind your body. The tips of the poles can be switched from steel to rubber, depending on your chosen walking terrain. No matter the surface – flat, hiking trails, uneven terrain, grassy fields, or concrete sidewalks – the poles can be utilized anywhere due to these interchangeable tips.

Higher Intensity, Lower Impact

Nordic walking offers a higher intensity cardiorespiratory workout as compared to regular walking, with low impact on your joints. The poles absorb some of the pressure so that your knees and ankles don't have to bear as much, and the upper body utilization leads to more blood pumping through your heart. While walking and using your arms to manage the poles, you engage 80 to 90 percent of your body's muscles, including the shoulders, arms, core and legs. Additionally, while you'll burn more

calories than you would with regular walking, Nordic walking appears to only slightly increase your rate of perceived exhaustion (RPE), meaning that even though your body is working harder, you won't notice the difference in intensity.

“Incorporating an aerobic activity such as Nordic walking into your routine is a great way to work more of the body for overall health and vitality,” explains WakeMed Heart & Vascular Cardiovascular and Thoracic Surgeon Robert Ferguson, DO. “Nordic walking is ideal because it involves both cardiovascular training and strength training, while being friendly on the joints. It's a great exercise choice for older adults.”

Before starting any new aerobic exercise, Dr. Ferguson recommends first talking with your physician to ensure you are fit to do so based on your personal health history, diagnoses and current symptoms.

Health Benefits of Nordic Walking

Studies show that Nordic walking offers a variety of health benefits for the entire body. Here are just a few:

- Enhanced strength for all major muscle groups (upper, lower and abdominal muscles)
- Enhanced cardiovascular health
- Increased endurance
- Increased flexibility
- Weight loss support/decreased fat mass
- Reduction in waist circumference
- Reduction in LDL “bad” cholesterol and triglycerides
- Improved HDL “good” cholesterol
- Reduction in chronic pain
- Increased quality of life

Medical Research Supports Nordic Walking

According to a study published in a 2015 issue of the *European Journal of Preventive Cardiology*, heart failure patients can enhance lung capacity (measured by VO_2 max) and exercise duration using a Nordic walking program.

Similarly, in a 2017 study published in the *European Journal of Preventive Cardiology*, researchers compared how heart disease patients responded to a Nordic walking program versus standard exercise in cardiac rehabilitation programs. They found the Nordic walkers improved more in the areas of exercise capacity, exercise duration, and oxygen uptake. The poles also allow walkers to find more stability with their movements, making it an exercise method that is recommended for people with balance issues.

How to Become a True Nordic Walker

Proper technique is essential to safe and beneficial Nordic walking. If you are new to the sport, learn from a certified expert. You can even train to become one yourself. The American Nordic Walking Association offers excellent resources for training as well as assistance in connecting with walking groups in your area.

Visit www.americannordicwalking.com for more information.

In conclusion, Nordic walking can be a fun, social activity, enjoyed with friends and neighbors, helping to ease feelings of loneliness and isolation, and even depression and anxiety. It is a great way to find camaraderie and boost your mood, and improve your health – even if the snow and ski slopes are hours away.

Tips for Effective Nordic Walking

Nordic walking requires specific skills and techniques. While training is highly recommended for new walkers, here are some basic tips to keep in mind:

- Dress comfortably, in clothing that will accommodate arm-swinging.
- Stay hydrated by drinking water before and during your walk.
- Incorporate a 10-minute warm-up and a 10-minute cool-down.
- Be sure to use authentic poles that have special wrist straps and grips.
- Stand tall while walking, with shoulders back, chest up and eyes looking forward.
- Lightly grip each pole and hold it at a diagonal angle behind your body.
- As you step, push the pole into the ground behind you.
- Loosely grip your poles to prevent wrist injury.
- Always ensure poles are positioned at an angle and never bring them in front of you.
- Walk with friends to make it more social!



The Heart-Healthy Benefits (and More!) Eggs Bring to Your Table

Eggs and Heart Health

Your heart has many reasons to love eggs. Eating eggs can boost levels of high-density lipoprotein (HDL) or “good” cholesterol, which works to lower your risk for heart disease and stroke. Many eggs are high in omega-3 fatty acids, especially when they come from hens fed with omega 3-rich feeds, like flaxseed. Studies have shown that consuming eggs enriched with omega-3 fatty acids can effectively help lower high blood triglycerides. Omega-3 fatty acids can also help fight inflammation, which can be bad for your health and heart if it lingers for too long.

When eaten as part of a well-balanced diet, eggs can support weight loss, which can be good for the heart. Because eggs are high in protein, which makes you feel full for longer, eating them can reduce your daily caloric intake. A 2020 study published in the *Journal of the American College of Nutrition* showed that eating eggs correlated with a 38 percent lower risk of excessive body fat and a 34 percent lower risk of central obesity, or visceral fat around the abdomen, a known risk factor for metabolic syndrome. Metabolic syndrome is a combination of certain health issues such as high blood pressure, high blood sugar and high cholesterol that can increase your risk for heart disease, stroke and type 2 diabetes.

Eggs Versus Cholesterol and Fat

A common misconception about eggs is that they should be avoided due to cholesterol, as the average large egg contains about 186 mg. Eggs are low in saturated and trans fats and are mostly made of heart-healthy polyunsaturated and monounsaturated fats. These fats promote good cholesterol and decrease cardiovascular disease when used as a replacement for saturated fat.

How Many Eggs Are OK?

For many adults, having up to one whole egg (yolk + white) per day is shown to be healthy with no adverse effect on rates of cardiovascular disease. For those who already have cardiovascular disease or diabetes, it's recommended to

limit egg consumption to less than three egg yolks per week. Egg whites, much lower in cholesterol and fat, but high in protein, can be consumed more frequently.

According to Marissa Parminter, RD, WakeMed registered dietitian, your overall diet is important in deciding how many eggs per week is healthy. “If your diet consists mostly of lean proteins, beans/peas/lentils, whole grains, vegetables, and fruits, your consumption of saturated/trans fats and dietary cholesterol may be quite low, and you may have more flexibility to include more eggs,” Parminter explains. “Moderation and preparation are important with eggs. Hard-boiled eggs, or eggs cooked in a non-stick pan, are healthier than those fried in butter or paired with bacon.”



MARISSA
PARMINTER, RD
WakeMed

Tips for Managing Egg Prices & Shortages

In recent weeks, the cost of eggs has increased significantly due to an outbreak of avian flu – making it more difficult to enjoy them. Here are a few tips for finding great, affordable eggs.

Find a farmer. You can often find affordable eggs provided by local farmers at a roadside stand or a farmers’ market. Find your nearest farmers market at visitraleigh.com/things-to-do/shopping/farmers-markets/

Buy on sale. Check your local grocers’ weekly sales flier (in the newspaper or online) to see where to find the best price.

Shop discount stores. Big box retailers and warehouse stores (think Walmart, Sam’s Club, Costco and even Trader Joe’s or Aldi) can often offer lower prices.

Consider egg substitute. These products can be more affordable than fresh eggs, but offer many of the same great health benefits.

Stock up. Eggs stay fresh in the refrigerator for three to five weeks, so buy in bulk when you find a good deal!



Spinach Soufflés

4 SERVINGS
(SERVING SIZE: ONE SOUFFLÉ)

INGREDIENTS

Cooking spray
1 tbsp plus 1½ teaspoons
whole-wheat bread crumbs
(lowest sodium available)
4 large egg whites
¼ tsp cream of tartar
6 ounces baby spinach

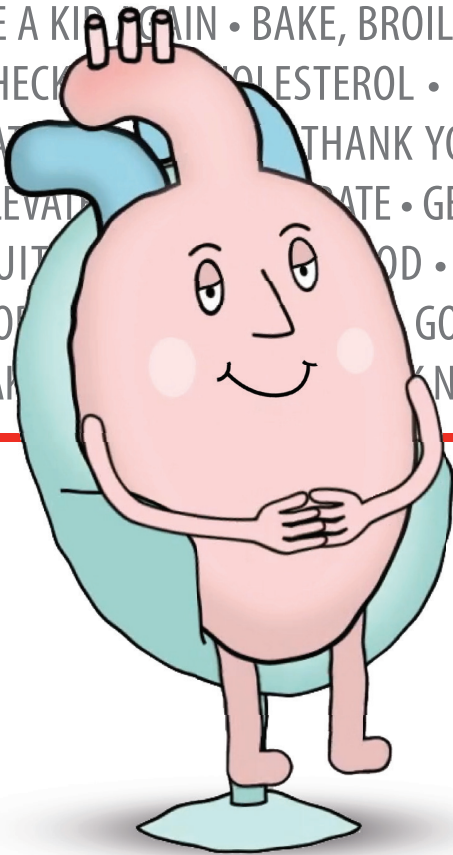
1 tsp minced garlic
1 tbsp chopped parsley OR 1 tsp dried parsley
⅔ cup fat-free milk (cold)
2 tbsp all-purpose flour
⅛ tsp black pepper
2 ounces grated Parmesan cheese
2 large egg yolks

INSTRUCTIONS

- 1 Preheat the oven to 425°F. Lightly spray four 6-ounce ramekins with cooking spray. Lightly sprinkle the bread crumbs in each, spreading to coat the bottom and sides completely.
- 2 In a medium bowl, whisk together the egg whites and cream of tartar. Set aside.
- 3 Lightly spray a small skillet with cooking spray. Cook the spinach and garlic over medium heat for 3 to 4 minutes, or until the spinach is wilted but still very green, stirring constantly. Remove from the heat. Stir in the parsley. Set aside.
- 4 In a medium saucepan, whisk together the milk, flour, and pepper. Bring to a boil over medium-high heat for 4 to 5 minutes, or until the mixture thickens, whisking constantly. Remove from the heat. Let cool for 10 minutes.
- 5 Meanwhile, using a hand mixer or stand mixer, beat the egg white mixture on high speed for 20 to 30 seconds, or until medium peaks form.
- 6 Stir the spinach mixture into the milk mixture. Stir in the Parmesan and egg yolks until well combined. Gently fold in one-third of the egg white mixture at a time until well combined.
- 7 Spoon ½ cup of the soufflé mixture into each of the ramekins. Gently tap the ramekins on the counter 2 or 3 times to level the mixture. Place the ramekins on a baking sheet.
- 8 Bake for 5 minutes. Reduce the oven temperature to 350°F. Bake for 20 minutes, or until the soufflés are puffy and golden brown. Serve immediately.

Nutritional Information Per Serving: 144 calories, 14g protein, 6g fat, 3g sat. fat, 9g carbohydrates, 3g sugar, 354 mg sodium, 96g cholesterol, 1g fiber

EAT YOUR VEGGIES • MANAGE YOUR WEIGHT • GIVE A HUG, GET A HUG • WALK THE DOG (AGAIN)
MONITOR YOUR BP • DANCE, DANCE, DANCE • TAKE TIME FOR YOURSELF • GET UP AND MOVE
GIVE YOGA A TRY • SHAKE OFF THE SALT • TAKE THE STAIRS • WARM UP TO OATMEAL
EXPLORE YOUR GREENWAY • GET HOOKED ON FISH • SPICE THINGS UP • GET REGULAR
CHECKUPS • DREAM SWEET DREAMS • KNOW YOUR NUMBERS • KNOW YOUR RISK FACTORS
BE A KID AGAIN • BAKE, BROIL OR STIR FRY YOUR FOOD • PAY IT FORWARD • BE ACTIVE
CHECK YOUR CHOLESTEROL • LEARN TO MANAGE STRESS • DON'T WORRY, BE HAPPY
EAT HEALTHY • THANK YOUR CARDIOLOGIST • GO TO THE MOVIES • HIT THE GYM
ELEVATE YOUR METABOLISM • GET PLENTY OF EXERCISE • GET PLENTY OF SLEEP • MEDITATE
QUIT SMOKING • GO FOR A RIDE • KNOW YOUR FAMILY'S HEALTH HISTORY
TAKE CARE OF YOURSELF • NOTHING BUT POSITIVE THOUGHTS • LISTEN TO YOUR HEART



Hey, it's me, your heart.

With a very special Heart Month message.

Remember all those heart-to-heart talks about diet, exercise and managing stress? Well, they're working. You're listening to me. Not just how to keep me healthy, but who to go to if and when I need the leader in heart and vascular care. So keep up the good work. Because, should you revert to old habits, I can still be a real pain in the chest.

wakemed.org/hearts

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