

Heart TALK

Heart-healthy and Stroke-free Living with Dr. Amy L. Doneen, DNP, ARNP

Nov./Dec. 2022



Thoughts from Dr. Amy

Seven Simple Ways to Avoid Type 2 Diabetes



PHOTO BY KIKE VEGA ON UNSPLASH

Nearly 100 million Americans — 38 percent of U.S. adults — have a disorder that magnifies their risk for type 2 diabetes, heart disease, stroke and dementia. Although this disorder, prediabetes, can be easily detected with a simple test covered by almost all health plans, 84 percent of those with this condition don't know they have it, because they haven't had their blood sugar checked. That's dangerous, because if prediabetes goes undetected and untreated, it can often progress to full-blown type 2 disease in four to seven years.

Also known as "insulin resistance" (IR), prediabetes can also damage the heart, brain and arteries. It's the root cause of 70 percent of heart attacks and a major contributor to stroke. Recent studies also report that 80 percent of people with Alzheimer's disease also have IR or diabetes. The good news, however, is that diabetes and IR are preventable — and in many cases, prediabetes is potentially reversible. Here are seven tips from the BaleDoneen Method to help you avoid diabetes.



GET TESTED

In the time it takes to watch a movie you can get the best screening test for diabetes and prediabetes. The American Diabetes Association (ADA) advises the screening start at age 40 or older, or a younger age if

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advised by your medical provider due to obesity or family history. The ADA rates the 2-hour oral glucose tolerance test, in which you drink a sugary liquid after an overnight fast, as the “gold standard” in accuracy. Your blood sugar levels are measured at the 1- and 2-hour marks. Studies show that other screening tests, such as the A1c test, which doesn’t require fasting, are much less accurate.

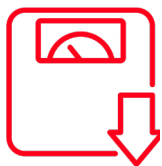
AIM FOR 30



To prevent or reverse prediabetes, the treatment that surpasses all others is aerobic exercise, such as running, brisk walking, and biking.

Working out 30 minutes daily, five or more times a week, has been shown to prevent prediabetes 60 percent of the time. Even low-intensity exercise, such as walking slowly, substantially improves insulin sensitivity for the next 24 hours, the ADA reports. Always check with your provider before starting a new exercise regimen.

SHED A FEW POUNDS



Large studies report that combining regular exercise with moderate weight loss (5 to 7 percent of your body weight) prevents prediabetes from progressing to type 2 disease 70 percent

of the time. Research also indicates that weight loss plus boosting physical activity is far more effective than medication for keeping prediabetes from progressing to full-blown diabetes.

RETHINK YOUR DRINK



Consuming just one or two sugar-sweetened beverages daily — such as energy drinks, soda or coffee drinks — raises risk for a heart attack or dying from heart disease by 35 percent, diabetes

risk by 26 percent, and stroke risk by 16 percent, according to a Harvard study. Quench your thirst with plain, sparkling or fruit-infused water.



PHOTO BY GABIN VALLET ON UNSPLASH

HAVE A DENTAL CHECKUP



About 50 percent of Americans ages 30 and older have periodontal disease (PD), a chronic oral infection that’s also known as “gum disease.” PD has been linked to higher risk

for developing type 2 diabetes and many other chronic diseases of aging. Here’s more motivation to take great care of your teeth and gums: A landmark Bale-Doneen study was the first to identify oral bacteria from PD as a contributing cause of heart disease. Use our easy four-step plan to optimize your oral health.

STRESS LESS



Having a moderate-to-high level of stress more than doubles risk for developing type 2 diabetes three years later, according to a

study of more than 12,000 middle-aged women. The researchers theorize that by repeatedly activating the “fight-or-flight” response, chronic tension may increase levels of inflammatory compounds and impair glucose metabolism. One of the best ways to reduce stress is mindfulness, which has a wide range of health benefits.

SLEEP WELL



Many studies report that people who sleep seven to eight hours a night have the lowest risk for type 2 diabetes, while slumbering for five or fewer hours — or more than

nine — boosts risk by up to 52 percent. Chronically skimping on slumber is linked to lower production of insulin, a hormone that regulates blood sugar, and increased risk for heart disease, obesity, depression and other chronic disorders. To get the restorative rest you need for optimal health, try our five natural ways to sleep better.



Tender and delicious, baked acorn squash makes an edible bowl for a savory filling that abounds with healthy autumn flavors. Acorn squash is rich in antioxidants that help protect against heart disease, stroke, high blood pressure and certain cancers. This savory recipe is festive enough for a holiday meal yet easy enough for satisfying family dinner. For a vegetarian version, replace turkey with lentils, chickpeas or quinoa. For a flavor variation, replace rosemary with ½ teaspoon of dried thyme, or add some heat by sprinkling some red chili pepper flakes in the ground turkey stuffing.

INGREDIENTS

For the squash:

- 3 small acorn squash (about 1 ½ pounds apiece)
- 2 tablespoon avocado oil, divided
- Pinch of freshly ground black pepper

For the stuffing:

- 1 medium onion, diced
- 3 garlic cloves, minced
- 1 pound ground turkey, extra lean
- 3 cups of spinach or kale, coarsely chopped
- ½ cup dried cranberries
- 2 tablespoons tomato paste
- 2 teaspoons dried rosemary
- 3 tablespoons parsley, finely chopped
- Ground black pepper to taste
- Optional garnish: grated parmesan cheese, nutritional yeast, toasted pepitas or minced herbs

PREPARATION


Preheat oven to 450 degrees F. Halve squash and remove seeds. Place squash halves on a large baking sheet, cut side up. Brush with one tablespoon of avocado oil and season with black pepper. Bake for 30 minutes. Meanwhile, prepare stuffing by putting a large skillet over low-medium heat. Add remaining avocado oil and tilt skillet to coat. Add onion and garlic and cook until translucent and fragrant (about 5 minutes), stirring occasionally. Add turkey and cook another 7 minutes, stirring and breaking into small pieces. Add all remaining ingredients, except optional garnishes, and cook an additional 5 minutes.

Remove stuffing from heat and divide evenly to fill the baked squash halves. Return stuffed squash to oven and bake an additional 25 minutes. Transfer squash to plates or a serving platter. Top with parmesan cheese, nutritional yeast, toasted pepitas, or minced herbs, if using — and enjoy!

Serves six.

Adapted from ifoodreal.com and eatingeuropean.com.

Can Healthy Blood Vessels Help Prevent Diabetes?



It's very common for people to be diagnosed with diabetes soon after they have suffered a heart attack. Patients often chalk this double whammy up to bad luck, believing that they were hit inexplicably with two seemingly unrelated diseases at once. In fact, there is a strong link between insulin resistance — the disorder that leads to type 2 diabetes — and heart attack risk. In a study of patients treated in the ER for a heart attack, the researchers found that after excluding known diabetics, 66 percent of the remaining patients had abnormal blood sugar levels that met criteria for diabetes or prediabetes.

If untreated, heart disease and diabetes typically progress silently over many years until they become severe enough to trigger devastating complications. But in people with both diseases, which one occurs first? An intriguing new study published in *Circulation Research* challenges prevailing medical beliefs — and may offer clues about better ways to prevent these potentially life-threatening disorders. Here's a closer look at the study and key takeaways about protecting arterial wellness from the BaleDoneen Method.

What was the purpose of the study?

Scientists from the Joslin Diabetes Center, Harvard and other centers conducted a [series of studies](#) to examine the interplay among insulin, body fat, and the vascular system. Normally, insulin — a hormone produced by the pancreas — helps cells in the body use glucose (blood sugar) for energy. In people with insulin resistance (IR), the body becomes insensitive to insulin, forcing the pancreas to crank out higher and

higher amounts, trying to keep up with demand. Eventually the pancreas becomes exhausted and blood sugar starts to rise.

Very often, people with IR have high levels of both insulin and glucose circulating in their bloodstream. As long as IR goes untreated, a perfect storm of dangerous events occurs at the cellular level, affecting all the body's arteries. IR, which primarily strikes people who are overweight or obese, plays a role in every stage of the development of atherosclerosis, the buildup of plaque inside the artery wall that can lead to heart attacks and strokes.

Obesity, especially when coupled with a sedentary lifestyle, is also a major culprit in the development of heart disease. However, the precise mechanisms through which excessive body fat and blood-vessel activity contributes to atherosclerosis and diabetes have been unclear.

What did the researchers discover?

Led by George King, MD, Joslin's chief scientific officer and director of research, the team identified a new pathway through which cells in the blood-vessel lining — known as the endothelium — drive energy metabolism. Some doctors call the endothelium "the brain" of the arteries because it plays a major role in regulating blood pressure and many other blood-vessel functions.

The discovery challenges scientific dogma by suggesting that, contrary to what was previously thought, endothelial dysfunction may actually be the root cause of unhealthy metabolic changes that lead to diabetes — not an effect of the disease. "In people with diabetes and insulin resistance, the idea has always been

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that white fat and inflammation causes dysfunction in the blood vessels, leading to the prevalence of heart disease, eye disease and kidney disease in this patient population,” said King in [a news release](#).

In addition to blood-vessel abnormalities, diabetes is also linked to undesirable reductions in the body’s storage of brown fat. Unlike white fat, which stores energy — and can lead to obesity if we have too much of it — brown fat burns energy, maintains body temperature and helps regulate our weight. In one of the team’s experiments, they found that mice that were genetically engineered to have increased sensitivity to insulin were thinner and had healthier arteries than control animals — even when fed a high-fat diet.

What did the researchers conclude?

“Everything is connected,” said King. “We think blood vessels and endothelial cells play an important role not just in regulating brown fat, but also in regulating whole body’s metabolism. Thus, these endothelial cells are a key factor in regulating weight and developing diabetes and, as other labs have shown, blood vessels appear to be a major regulator of brain function as well. Intervening at the level of endothelial cells could have a major impact on many diseases.”

The study also revealed that insulin signals blood vessels to produce more nitric oxide — the best “food” to protect the endothelium and boost its health. This, in turn, raised production of healthy brown fat. “What we found here is that the endothelial cells lining the blood vessels can have a major controlling effect on how much brown fat you develop,” added Dr. King. “That finding is very exciting because in the past we thought diabetes causes cardiovascular problems, but that relationship appears to be reversed in this scenario.”

What’s the BaleDoneen Method takeaway about this research?

While these findings were made in animals — and further investigation is needed to see if they apply to peo-



PHOTO BY GABIN VALLET ON UNSPLASH

ple — the study adds to a vast body of literature highlighting the importance of arterial wellness in chronic disease prevention. To that end, [the BaleDoneen Method has pioneered](#) a new evidence-based medical specialty called “Arteriology,” which is designed to optimize the health of the 60,000 miles of blood vessels in our bodies and help people avoid heart attacks, strokes, diabetes, chronic kidney disease, erectile dysfunction, fatty liver disease, Alzheimer’s disease, heart failure, and other chronic diseases of aging.

The BaleDoneen Method uses a team approach in which medical and dental providers work together to protect our patients’ oral and systemic health, bridging the traditional gap between medicine and dentistry. Arteriology also encom-

passes the work of many other healthcare specialties, including family physicians, functional and integrative medicine doctors, sleep specialists, psychologists, nutritionists, cardiologists, neurologists, geneticists and other specialists looking to incorporate personalized medicine and genetically guided treatment into their areas of practice.

BaleDoneen practitioners have been called “disease detectives” because our comprehensive evaluation checks for a wide range of root causes that can lead to arterial disease, diabetes and other chronic illnesses if they go undiagnosed and untreated. Ultimately, our mission is to save lives by protecting and enhancing the wellness of our patients’ hearts, brains, and other vital organs, along with the blood vessels that supply them.



A COMPLETE TURN AROUND:

Dr. Wade Marler's Story

BY RICK MERIZON

PHOTO BY JIM WILSON ON UNSPLASH

I am humbled and so inspired to have been asked to write this new addition to the BaleDoneen newsletter. This is going to be a space through which we can all learn the incredible journey others have taken to wellness through the BaleDoneen Method (BDM). I hope this new column can be data-driven, experiential and, most of all, inspiring.

It is so fitting to have this first story detail the experience of Dr. Wade Marler. After reading his story, all of us will be able to relate to some or all his struggles and subsequent incredible successes. Wade is a 52-year-old father of five young boys, has been married for 27 years, lives in the Seattle area and is a practicing dentist. What follows is Wade's story in his words.

Tell me a bit about you and your life prior to seeking the BaleDoneen Method:

I was very active in high school sports in a small town in Ohio. I was your typical tall, thin high school boy who was really into sports. I played basketball and was part of the winningest team in my high school's history. It is a small accomplishment, I know, especially for a small-town school, but was pretty fun. I have also always loved to water-ski. After high school I served a two-year mission for the Church of Latter-day Saints in Brazil. While there I was very humbled and realized how most of the rest of the world lives. I was extremely grateful for all that I had in this very wealthy country. After my mission I went to Ohio State University for dental school. I've been practicing since and try to keep up with my boys and their active life.

Tell me about your journey that brought you to the Bale Doneen Method:
In dental school I started gaining weight

and became less active the busier I became. Over time, I developed [metabolic syndrome](#) (a combination of factors, including high blood pressure, high cholesterol, high fasting blood glucose, and excess abdominal fat). Over 20 years I gradually became sicker and developed anxiety, for which I have a family history. I began medication for my anxiety. However, it continued to limit my interest in doing things that I would have otherwise wanted to do. As time went by, I became less active, gained more weight, and struggled to maintain the lifestyle I wanted. Only one year ago I planned to retire in four years because of the stress and I didn't think I could continue to do my job physically because my body didn't seem like it could handle the stress. I was achy every morning and developed [sleep apnea](#) (a major risk factor for heart disease and one that limits sufferers from getting a productive night's sleep). I found the BDM through Doug Thompson. Doug runs a dentistry wellness center in Michigan and worked with Dr. Bradley Bale (co-founder of the BDM) to develop the periodontal guidelines for BDM dental providers. After reading [Beat the Heart Attack Gene](#), I was sold. I had my initial assessment with Dr. Pierre Leimgruber at [The Prevention Center for Heart & Brain Health](#) in Spokane in January, 2022.

Tell me about what Dr. Leimgruber discovered during your initial assessment:

When I visited Dr. Leimgruber for my initial assessment, my total cholesterol was 259 (anything over 200 is high), I had high systemic inflammation, Lp-PLA2 was 138 and Hs-CRP was 6.3 (anything <0.5 is high), my fasting blood sugar was 111 (anything over 80-90 is considered high), and even though I've never partaken alcohol, I had a fatty liver thanks to a [high-sugar diet](#). I also discovered I had several significant genetic risk factors for cardiovascular disease. I was overweight and [prediabetic](#), and Dr. Leimgruber confirmed I had metabolic syndrome.

How has the treatment plan been working?

Incredible! My life has taken a 180-degree turn. I actually love my job because now that the anxiety is gone, the stress is very manageable and no longer debilitating. I can also move throughout my day without aches and pains. I have been eating much healthier foods and sticking with my [genetically appropriate Mediterranean diet](#). I've lost more than 70 pounds since January. My most recent lab results provide the hard data for what I've been feeling. My total cholesterol is 131 (down 128 points), my inflammation markers are down considerably. My Lp-LPA2 is 73 (down from 138) and my Hs-CRP is 1.9 (down from 6.3). My fasting blood sugar is 78 (down from 111 and back to a healthy level). I no longer have a fatty liver or am prediabetic. As far as my bloodwork goes, I look like a young adult.

I've also started taking several supplements including Omega 3, vitamin D, CoQ10, and a daily aspirin, and completely cut out sugary drinks. My dietary changes weren't easy, but I was very motivated. The

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rewards have far outweighed the drawbacks. I'm trying to eat "farm to table" style with lots of whole foods. I've continued to use my CPAP machine for sleep apnea. I know I'm not sleeping as well as I could be, but I am working on that

Have you been able to improve your overall quality of life?

Absolutely. The anxiety part was very significant, and I've been able to get control of that. As the inflammation in my body decreased, my anxiety went away. I understand that one of the effects of the microvascular inflammation in the brain can be anxiety, depression, ADHD, memory loss, dementia, and other brain disorders. There is a growing body of evidence that shows links between inflammation and mental health. People with high levels of anxiety often have the same inflammation markers that contribute to heart and arterial disease.

I'm still getting well and improving, but my bad days now are much better than my good days were before. I'm hoping to start water-skiing again and am excited for that. I'm also very excited to go to work every day, which is a big change from before. I no longer plan to retire any time soon because

I look forward to helping others. I feel so much better, and have more energy and new, reinvigorated joy for my daily life. My brothers (a physician and a pediatrician) and I are starting to utilize the BDM in our own practices and will be offering the BDM for all our dental and medical patients.

Do you have any thoughts for other prospective patients?

Yes, I'm trying very hard to point my patients to the BDM to improve their health. The approach and treatment are life-changing and very different from the symptom-based healthcare system of today, as opposed to the root-cause-based treatment of the BDM. Like I said, my brother and I will be practicing the BDM and providing those insights for our patients.

We Americans are sicker than we know. Ironically, there are 10 million more thin people with metabolic syndrome than overweight people; though I acknowledge if you are obese your chances of

having metabolic syndrome are much higher than the thin population. Many people don't realize there

are better answers, and in many instances it's not just drugs. So many ailments stem from unhealthy arteries (eg. brain, limbs, eyes, kidneys, and heart). These diseases collectively affect the majority of Americans and can be controlled, or more likely reversed, through modifications in diet, lifestyle, and including certain supplements.

What did you think about the process of finding a BDM provider and submitting your new patient forms?

It wasn't bad at all. Before becoming a patient, I was very concerned and knew the BDM was my best option. The whole experience was very pleasant and impressive. The initial assessment was incredible and a very rare phenomenon in today's medical field. I spent four to five hours with Dr. Leimgruber to learn all about the BDM, root causes of inflammation, insulin resistance, arterial disease and my treatment plan. I had lots of time to ask questions.

Is there anything else that you want to add about the experience?

What the BDM offers is to live your longest, but most importantly, healthiest life. The BDM improves your health span and allows you to live a longer, healthier, and more enjoyable life.

