

Heart TALK

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

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*Thoughts from
Dr. Amy*

ARTERIOLOGY:

**A Revolutionary New
Approach to Preventing and
Reversing Arterial Disease**

After decades of progress in reducing deaths from cardiovascular disease (CVD), the leading killer of Americans, CVD fatalities are on the rise, particularly among people under age 55. Indeed, middle-aged adults are more likely to die from heart attacks, strokes and other CV events now than they were in 2011. This alarming trend has prompted experts from the Johns Hopkins Ciccarone Center for the Prevention of Heart Disease to issue a call for a new medical specialty to address the changing profile of patients with arterial disease. Compared to those of the past, today's CVD victims are younger, more overweight, much less likely to be smokers and include more women and type 2 diabetics. Many of them are unaware of their risk.

To help save lives, hearts and brains, the BaleDoneen Method has pioneered a new evidence-based medical specialty called "**Arteriology**," which is designed to optimize the health of the more than 60,000 miles of blood vessels in our bodies and help people avoid heart attacks, strokes, diabetes, kidney disease, erectile dysfunction, cancer, Alzheimer's disease and other chronic conditions. Here's a look at how arteriology works — and how you can use our genetically guided, holistic approach to prevent and reverse arterial disease. We have been practicing Arteriology for nearly 20 years.

Why is a new medical specialty needed for patients with CVD?

In the call for a new medical specialty,

published in the American Journal of Medicine, authors Drs. Robert Eckel and Michael Blaha report that the management of today's heart patient is much more complex than in the past due to the epidemic of obesity, metabolic syndrome and type 2 diabetes. All of these metabolic maladies greatly increase patients' risk for developing CVD, yet often go undiagnosed and untreated.

In fact, as we recently reported, it is very common for people to be diagnosed with diabetes or prediabetes — conditions that collectively affect about 115 million Americans — shortly after they suffer a heart attack. Most Americans have never heard of metabolic syndrome or don't know it's a cluster of disorders that triple risk for heart attack and stroke and quadruple it for type

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Heart Attack & Stroke Prevention Center

507 S. Washington, Suite 170
Spokane, Washington 99204
(509) 747-8000

www.TheHASPC.com



Apples:

A Delicious Natural Probiotic that Protects Gut and Heart Health

An apple a day could really keep the doctor away — by reducing your risk for heart disease, cancer, and possibly even Alzheimer's disease, recent studies suggest. What's more, this delightfully crunchy fruit also supports gut health, with a new report describing apples as "the best probiotics," with a more diverse range of "good" bacteria than any dietary supplement on the market.

Indeed, apples have so many documented health benefits that researchers at Florida State University have dubbed them a "miracle fruit" and *Medical News Today* recently ranked them No. 1 in a recent list of the top ten healthy foods. What makes apples such a nutritional powerhouse? Here are some intriguing discoveries about the world's most popular fruit, plus key takeaways from the BaleDoneen Method.

Apples contribute to a healthy gut microbiome — and arterial wellness.

One of the newest — and most surprising — discoveries about apples is that they are a rich source of probiotics: bacteria that enhance gut and heart health. A new study published in *Frontiers in Microbiology* found that an average apple contains about 100 mil-

lion bacteria, almost all of which are either harmless or beneficial. And unlike probiotic supplements, which usually contain only a few types of bacteria, apples have a multitude of different microbes. Most of their probiotics are found inside the apple, rather than on the peel, with the highest concentration in the core. The study did not find any significant difference in the bacteria counts of organic and conventionally grown apples, but the organic apples had 40% greater diversity of bacteria, which could contribute to favorable health effects, the study concluded.

BaleDoneen takeaway: The relationship between the gut microbiome (the trillions of microbes living inside our GI tracts) and arterial health is one of the hottest areas of scientific research. What we eat plays a key role in the composition of our gut microbiome — and the substances it generates (metabolites). For example, when people eat choline (found in red meat, egg yolks and dairy products), gut bacteria break it down to a metabolite called trimethylamine (TMA), which the liver converts to trimethylene N-oxide (TMAO). Studies have linked high levels of TMAO to increased risk for heart attacks, strokes and death from CV causes. Conversely, certain bacteria

found in probiotic foods (such as apples, yogurt and fermented foods like kimchi) and supplements have been linked to improved levels of cholesterol, inflammation, and blood pressure. As a *BaleDoneen* study recently reported, probiotics may also be beneficial to people with diabetes who carry a certain variant of the haptoglobin gene. Always check with your medical provider before taking any supplement to make sure it's appropriate for you.

Flavonoid-rich foods, such as apples, cut risk for cardiovascular disease (CVD) and cancer.

In a new study of more than 56,000 people who were tracked for 23 years, those who consumed about 500 mg of flavonoids in their diet daily were less likely to die from CVD, cancer or other causes than those who ate lower amounts. Flavonoids are found in many plant foods, such as fruits, vegetables, tea, dark chocolate and red wine. Consuming 500 mg a day is easy, the study's lead author, Nicola Bondonno, PhD, told Healthline: "One cup of tea, one apple, one orange, 100 grams of blueberries, and 100 grams of broccoli would provide a wide range of flavonoid compounds

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September Recipe

Ready in just 20 minutes, these crunchy apple sandwiches are a gluten-free, low-fat twist on the classic curried chicken salad. Apples have several benefits for heart health. They're high in fiber, which helps reduce cholesterol, and contain flavonoids: inflammation-fighting compounds that have been linked to lower risk for heart disease and cancer. Studies also suggest that nutrients in apples may also help reduce blood pressure. Turmeric (the compound that gives curry its yellow color) also has anti-inflammatory properties, supports heart health and may help improve memory, studies suggest.



Curried Chicken Salad with Apple Rounds

PREPARATION

Whisk together the yogurt, tahini, lemon juice, curry powder and black pepper in a small bowl. Stir in chicken, cashews, scallion and celery. Core the apples and slice into ½-inch thick rounds with skin on, for a total of 16 rounds. Place a lettuce leaf on 8 of the apple rounds and top with about ¼ cup of chicken salad. Top with remaining apple rounds to create sandwiches and enjoy! Serves four.

Adapted from Diabetesstrong.com and Foodnetwork.com

INGREDIENTS

- ½ cup non-fat Greek yogurt
- 2 tablespoons tahini
- 1 tablespoon lemon juice
- 2 teaspoons curry powder
- ¼ teaspoon black pepper, freshly ground
- 2 cups cooked, skinless, boneless chicken breast, diced
- ¼ cup cashews, chopped
- 1 scallion, diced
- 1 stalk celery, finely chopped
- 4 large, crisp red apples
- 8 small Boston or Bibb lettuce leaves

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and over 500 mg of total flavonoids." The research was published in *Nature Communications*.

BaleDoneen takeaway: Eating more fruits and veggies is one of the easiest — and tastiest — ways to add years to your life. For example, another recent study estimated that worldwide, 7.8 million people die prematurely each year due to low intake of fruit and vegetables, defined as eating less than 800 grams (28.3 ounces) a day. One of the best ways to add more produce to your diet — and keep your weight in the healthy range — is to fill half your plate at each meal with fruits and vegetables. For a heart-healthy lunch on the go, try our [Must-Have Kale Salad recipe](#) or our [other salad-in-a-jar recipes](#).

Apples reduce risk for stroke and may protect memory.

A [recent analysis](#) pooling the results of 20 studies with a total of 760,629 participants found that for each additional serving of produce that people ate daily, their risk for stroke fell by 11%. The investigators reported that apples, pears, citrus fruits and leafy green vegetables may account for this protection. Another study of nearly 10,000 people found that those who ate the most apples over 28-year period had

the lowest risk for stroke, compared to those who ate the fewest apples. There is also [preliminary evidence from animal studies](#) linking apples and their juice to improvements in memory and reductions in the brain's levels of beta-amyloid protein (a protein that builds up in the brains of people with Alzheimer's disease). However, research in humans is needed to investigate if a diet that includes apples has any effect on our memory or risk for Alzheimer's.

BaleDoneen takeaway: The link between a plant-based diet and reduced risk for heart attack and stroke is now well-established in large studies. Emerging evidence suggests that flavonoids have many beneficial effects, including improving blood pressure, inflammation, cholesterol and arterial health, all of which help explain why eating food rich in these compounds, such as produce, helps protect arterial and brain health. To learn about other strategies for stroke prevention, check out our blog posts, "[The No. 1 Risk for Stroke—and What to Do About It](#)," "[The Surprising Stroke Risk that Affects 50% of Americans Over Age 30](#)," and "[5 Healthy Lifestyle Steps that Lower Stroke Risk 90%](#)." To find out what you can do to ward off memory loss, read, "[10 Lifestyle Moves That Could Lower Your Dementia Risk by 35 Percent](#)."

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2 diabetes, a national health survey reported. And only 0.6% of those polled thought they had this prediabetic condition. In reality, it affects 26% of adults — nearly 50 million Americans.

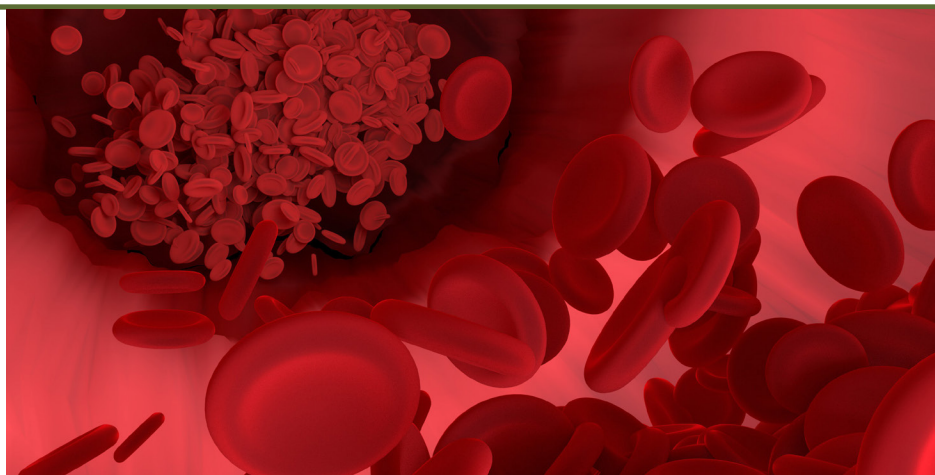
Although the number of patients with cardiometabolic disorders is skyrocketing due to Americans' increasingly unhealthy, sedentary lifestyle, Drs. Eckel and Blaha report that "nearly all cardiology practices are poorly suited" to manage the care of these patients. As a result, patients may be "shunted back and forth among cardiologist, endocrinologist and primary care physician — with uncertain 'ownership' of different aspects of the patient's care." In other words, the situation is like a football team without a quarterback.

What's the best way to fix this dangerous gap in our healthcare system?

Despite major advances in the diagnosis and treatment of CVD, it remains the leading killer of Americans. On average, it claims 2,303 U.S. lives every day — one every 38 seconds. Yet this disease is both preventable and [potentially reversible with optimal care](#). A [recent peer-reviewed study](#) by researchers from the Johns Hopkins Ciccarone Center for the Prevention of Heart Disease found that the BaleDoneen Method is remarkably effective at treating, halting and preventing arterial plaque.

The study, which included 324 patients from the Heart Attack & Stroke Prevention Center, found that our comprehensive, precision-medicine approach rapidly shrank the size of plaque deposits in the neck arteries by 52.7% over a two-year period. Our genetically guided method also significantly improved cholesterol levels and blood pressure and dramatically reduced lipid-rich arterial plaque (the most dangerous kind), helping patients avoid heart attacks and strokes.

An [earlier peer-reviewed study](#) also found that the BaleDoneen Method reduced plaque burden and had positive effects on levels of both cholesterol and inflammation, the dangerous duo that can lead to plaque buildup in the arteries and increased risk for cardiovascular events. Since the publication of these



studies, we have advanced our method of heart attack, stroke and diabetes prevention by developing a groundbreaking new medical specialty called "arteriology," which leverages the latest peer-reviewed science to optimize the health of all of the body's arteries.

How does arteriology differ from cardiology and other medical specialties?

Drs. Eckel and Blaha have proposed a new subspecialty that they call "cardiometabolic medicine" that would combine internal medicine, cardiology and endocrinology to improve the care of patients who have both CVD and metabolic disorders, such as diabetes, insulin resistance (the root cause of 70% of heart attacks and almost all cases of type 2 diabetes) and obesity.

While we applaud this concept and the two doctors' desire to provide more comprehensive care for those with cardiometabolic disease, we don't think it goes far enough. CVD, which is also known as arterial disease, can manifest in a variety of ways that have traditionally been managed by diverse specialists, including neurologists for those who suffer a stroke, vascular surgeons for those with peripheral artery disease (PAD) and nephrologists for those with chronic kidney disease (a potential complication of high blood pressure).

Arteriology has a more holistic focus, by transcending the various medical silos to encompass the total care of the patient with diseased arteries, since our blood vessels nourish every organ

and tissue in our body. Arteriology also has another even more crucial goal: to prevent CVD. 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 if they go undiagnosed and untreated.

For example, [a recent BaleDoneen study](#) has been described as "landmark" in the media because it was the first to identify oral bacteria from periodontal (gum) disease as a new, treatable cause of CVD, not just a risk factor for developing it. This chronic oral infection affects about 50% of Americans over age 30 — and [earlier research](#) has shown that people with periodontal disease have double the risk for heart attacks and triple the risk for strokes as those with healthy gums. Other recent studies have linked chronic gum inflammation (periodontitis) to increased risk for Alzheimer's disease, diabetes and several forms of cancer.

Based on this discovery, 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 encompasses 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.



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