

From the HEART

A newsletter from Saint Luke's Cardiovascular Consultants

Summer 2025

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Do the Hard Thing

Kathleen C. O'Keefe

They say the three most destabilizing life events are death, divorce, and moving. So far, 2025 has handed me all three. Last week, a young, brilliant soul in my family took his own life. My two best friends—the people I speak to more than anyone else, who've been my clearest model of love and commitment for as long as I can remember—are navigating marital separation. And come August, I'll be moving out of my beloved studio apartment in Greenwich Village.

I've weathered change before, but this season feels monumental. Biblical, even. Like I've hit the bookend between the Old Testament and the New. Like stepping out of an airport terminal in a foreign country after losing all my luggage—greeted by a sign that reads *NO RE-ENTRY*, with no clue what's waiting for me on the other side. I'm hoping for a clean bathroom, a cab, or at the very least, a vending machine with a lukewarm beverage.

2025 is also the year I will turn 30. And although I'm thrilled about entering my thirties, I had a feeling that the turning of a new decade would inevitably get a bit murky. The *end of*



Kathleen

the beginning vibes, you know. Ominous. Little did I know just *how* dramatic things would get... and I'm still four months out.

The message in the air around this brutal one-third-life crisis seems to be one of **discomfort**—because nothing about today feels safe. The foundational ground I've known for 29 years—family, home, even, tragically, a very special loved one—is vanishing. Fast. The tectonic plates beneath me are shifting. And truthfully, I'm stumbling to keep my balance. I'm crying on the subway to work. I'm crying on the phone. I'm crying myself to sleep.

There are bright moments, yes—but most days, I can’t catch my breath. It’s been blow after blow lately, and I’m a bit paranoid, just waiting for the next piece of bad news to drop. I can see how this kind of streak can turn a person into a real Negative Nelly. Because when you’re hurting, it’s hard not to see *all* the bad, *all* the time. I’m also scared of the waves of grief. How quickly and intensely they hit. Like, how big will the *next* one be? And will I be able to handle it when it comes?

I’m only sharing this personal hellscape in detail because I know there are other people feeling off, too. There always are. That’s the human condition, right? We are never the only ones feeling what we’re feeling.

I’ve been putting off writing this piece for months. Candidly, I just did not feel like it—because writing is painful. It’s scratching at my psyche until something honest appears. Sitting in silence. Tuning into my internal noise and extracting whatever needs air. It’s deeply uncomfortable. So, I avoided it. For months.

Today is Sunday. Also, the very last day to submit a piece to this issue of *From The Heart*. I like contributing to this newsletter because it allows me to speak directly to a deeply curious audience. One that has embraced me over the years—and, truthfully, helped me believe I can call myself a *writer*. Just so you all know: your support has changed my life. Your emails, stories, and kind comments bring me a profound sense of purpose. And some of the greatest professional joy I’ve ever known. So, thank you. Thank you. Thank you, one million times.

Back to the writing—if there’s one truth I’ve gathered from scribbling in journals since age six and tapping away at Word docs into my twenties, it’s this: I always feel better after I’ve



Kathleen with her beloved, late, first cousin Patrick in Ireland, August 2024

written it down. The act of pulling words from my head and giving them a home on the page somehow dims the fluorescent light of anxiety. It mutes the blaring dread loop. Writing scratches an itch that keeps me sane, maybe even alive. At the very least, it saves me from insomnia.

So, forcing myself to write this piece—about what, I’m still not entirely sure—got me thinking about hard things. What it takes to do them. Why they’re so difficult. And how we get to the other side.

I once heard Andrew Huberman say that a person’s success is directly tied to how good they are at doing the things they don’t want to do. In other words: willpower. Saying no to what you want right now is saying yes to peace later... supposedly. So, I guess the million-dollar question is: how capable are we of denying ourselves short-term comfort in exchange for long-term ease?

Ugh. I’ll be honest: in the wake of suicide, a messy martial split, and a forced move, willpower has felt like a luxury I cannot afford. Hence, this article is arriving at the 11th hour.

But it helps to know there’s a part of the brain dedicated to this. A whole slice of us wired to do what we think we absolutely cannot. It’s called the **anterior mid-cingulate cortex**, and it’s responsible for facing challenges and building resilience, especially as we age. And like any muscle, the more we use it, the stronger it gets. It literally grows in size the more we deny ourselves ‘the easy route.’

Want to simplify your life? I hate to say it, but start doing the hard thing. As Chris Williamson says, the magic you’re looking for is in the work you’re avoiding. So, have the tough conversation. Pick up the book. Sign up for the class. Go to the workout. Ask for help. Transfer the big check into savings. Or in my case, write the damned article.

And if you hop on the discipline train and do the hard things, but then get sick of it and stop, life doesn’t just get easier. Instead, the easy things also become hard. But on the other hand, the more you do hard things, the easier *everything* becomes. In doing the hard stuff, resistance doesn’t disappear entirely, but it softens. Considerably. There’s a snowball effect with discipline, thank God.

But how do you *start* doing the hard thing? Especially when it feels unbearable? There’s no secret sauce. Just this: Let resistance be your compass. If something feels uncomfortable or inconvenient, it’s probably the exact thing you should do.

Say it’s Sunday afternoon. You’re three episodes into a new show. There are

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Your Heart’s Hidden Wisdom: Heart Rate Variability Is the Most Important Number You’ve Never Heard Of

James H. O’Keefe, MD

Have you ever slowed down for a few moments to quietly focus on your heartbeat—not just how fast or slow its rate is, but how it varies from one beat to the next, speeding up as you breathe in and slowing down as you breathe out? If your heart rate is 60, you might think it’s beating once every second. But a truly healthy heart doesn’t tick like a metronome or a clock. It beats with wave-like phasic shifts—perhaps 1.1 seconds between beats as you are slowing exhaling and speeding up to 0.9 seconds between beats while you are inhaling. This subtle back and forth alternating pattern in your pulse is called heart rate variability, or HRV, and it reveals something profound about your overall health.

HRV reflects the real-time tug-of-war happening between your two autonomic nervous systems: the sympathetic system, which speeds things up (your body’s gas pedal), and the parasympathetic system, which slows things down (your brakes). This is the *yin/yang* concept.

The idea of *yin* and *yang* comes from ancient Chinese philosophy and dates back more than 3,000 years. It describes the dynamic balance between opposing yet complementary forces in nature—like light and dark, activity and rest, or heat and coolness. *Yin* is associated with calm, intuition, and restoration, while *yang* represents action, energy, and drive. These two

forces are always interacting, never in isolation, and health depends on their harmonious balance. Interestingly, this ancient wisdom aligns beautifully with modern medicine’s understanding of the autonomic nervous system, where the sympathetic (*yang*) and parasympathetic (*yin*) branches must flow back and forth and remain in sync for optimal heart, brain, and gut function, and emotional health. When your body can shift gracefully between doing and resting, excitement and calm, forceful and gentle, that’s the real essence of well-being.

Finding a balance in many aspects of our lifestyle is essential to a healthy autonomic nervous system, which matters more than you probably realize. When HRV is high, it means your heart is dancing with life—fluid, adaptable, and ready to respond. A high HRV is associated with better cardiovascular health, more emotional resilience, and lower risks for anxiety, depression, and even sudden cardiac death. A low HRV, by contrast, can be a red flag—your body may be stuck in fight or flight mode and unable to shift into rest and recover gear.

Over the past few decades, researchers have found that people with higher HRV live longer, handle stress better, and recover faster from illness or surgery. According to a meta-analysis in *Annals of Noninvasive Electrocardiology*, low HRV was a strong predictor of death after a heart attack—

independent of other factors like cholesterol or blood pressure.

But here’s the good news: HRV isn’t set in stone. You can improve it with these small daily habits that restore the *yin/yang* autonomic balance, calm the nervous system, and increase HRV.

- **Deep breaths** activate your parasympathetic vagal nerve. Breathe out slowly and deeply through your nose to empty out your lungs. Try yoga, meditation, prayers, chanting, singing, or similar activities.
- **Daily movement**—and lots of it, especially walking outdoors, gardening, and swimming.
- **Good sleep**—and for the most restful, rejuvenating sleep, the last train leaves at 10:30 p.m., and getting on board at 10 p.m. may be even better. Keep your bedroom dark, cool, and quiet. Try to be in bed for at least eight hours; you will need that much time to make sure you get at least seven hours of sleep.
- **Less alcohol**—no more than three or four drinks per week. If you drink, make it red wine before dinner, no more than five to six ounces, preferably with at least one other person, though some people enjoy happy hour with their dog or cat by their side. Finish your drink with at least four hours to metabolize it before you climb into bed.

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Novel Ways to Keep Your Brain Sharp

James H. O’Keefe, MD



Many, if not most, of my patients tell me their biggest health fear is losing their mind to Alzheimer’s dementia or stroke. Thankfully, we are discovering that keeping a sharp and clear mind into one’s 70s, 80s, and 90s is possible, and largely under your control. Here are some new and surprising strategies you need to consider if you are determined have a youthful brain throughout your entire life.

Floss

I loved sugar as a child. This was before the days of fluoridated water, so I developed several cavities. My grandfather Emmet was a dentist, and he repeatedly put fillings in my cavities. When I was in medical school, I occasionally noted redness and soreness in my gums, which I knew was bad. Thus was the origin of my lifelong obsession with oral hygiene. My family gives me a hard time about my regimen that includes flossing, using my water flosser,, and brushing with an electric toothbrush at least twice a day. I also get dental cleanings every six months, avoid added sugar, and follow a Pesco-Mediterranean diet.

Poor oral hygiene can lead to systemic inflammation, a risk factor for cognitive decline and neurodegeneration. Inflammation from gum disease may act as a chronic stressor on the brain, predisposing to Alzheimer’s disease and other forms of dementia.

A study reported earlier this year based on the Atherosclerosis Risk in

Communities (ARIC) assessed more than 6,000 participants’ oral hygiene habits, including flossing, brushing, and dentist visits, over a 25-year period. Participants who flossed regularly had a 22% lower risk of ischemic stroke, a 44% lower risk of stroke caused by a blood clot traveling from the heart to the brain, and a 12% lower risk of atrial fibrillation (a-fib) compared with those who didn’t floss.

For long-term brain health:

- floss daily
- brush your teeth at least twice a day for at least two minutes each time, ideally with an electric toothbrush
- get twice-yearly dental cleanings and checkups

Making these dental hygiene practices part of your routine is one of the key components of a long-term brain protection and stroke prevention strategy, along with other important steps such as keeping your blood pressure in the normal range, getting daily exercise, treating high LDL (and

Apo B) cholesterol levels, and avoiding excess alcohol consumption..

Get Vaccinated

Accumulating scientific evidence strongly suggests that the shingles vaccine lowers the risk of Alzheimer’s disease. Multiple large-scale cohort studies and a natural experiment have consistently demonstrated that the herpes zoster (shingles) vaccination is associated with a significantly reduced risk of developing dementia, including Alzheimer’s disease. These studies reported 15–35% lower risks for developing Alzheimer’s with both the Zostavax® and Shingrix® zoster vaccines. These vaccine-related brain protective benefits persisted after adjustment for confounders and across different demographic subgroups.

Be aware that the shingles vaccine can make you feel like you have the flu for 24 hours afterwards, with fatigue, muscles aches, and headache, along with a sore arm at the injection site. This is actually a good thing, as

it means your immune system was activated and mounted a defense against the viral proteins, which will protect you from getting the shingles in the future and might coincidentally protect your brain from dementia as a bonus. Serious adverse effects from the shingles vaccine are very rare—about three cases per million doses.

The mechanism for brain protection from the shingles vaccine is not fully established, but hypotheses include nonspecific immune-related neuroprotection, reduction of neuroinflammation, and prevention of viral reactivation in the brain. There is also evidence that the protective effect is not unique to shingles vaccination, because other adult vaccines like the flu vaccine against influenza, pneumococcal vaccine for protecting against pneumonia, and Tdap vaccine for tetanus, diphtheria, and pertussis are similarly associated with reduced dementia risk (see table on page 4).

While causation isn’t yet proven, the correlation is strong and consistent: Staying up to date on adult vaccines, particularly against, flu, pneumococcal, and tetanus, may contribute to reduced risk of Alzheimer’s. This adds to their already substantial benefits in preventing infectious diseases.

Build Strong Muscles

Large-scale studies have shown that diminished muscular strength (particularly grip strength) is associated with a higher risk of cognitive decline and Alzheimer’s disease. A 2022 study published in JAMA Network Open found that individuals with higher levels of muscle strength had a significantly lower risk of developing dementia, independent of other factors like age or lifestyle. Strength may be a more reliable predictor than muscle mass itself—meaning function matters more than muscle size.

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Mary Kate Fernandez

Dementia Risk Reduction Associated with Adult Vaccines

Vaccine	Dementia Risk Reduction	Strength of Evidence
Shingles (<i>Shingrix</i> ®)	20–30%	Moderate to strong
Influenza	30–40%	Strong (<i>multiple studies</i>)
Tdap (<i>Tetanus booster</i>)	30–50%	Moderate
Pneumococcal	20–30%	Moderate

Source: Wu et al., *Adult Vaccination as a Protective Factor for Dementia: A Meta-Analysis and Systematic Review*, *Aging Clin. Exp. Res.*, 2023

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More Hugs, Fewer Drugs

The Healing Power of Real-Life Connection

James H. O’Keefe, MD

“If we have no peace, it’s because we have forgotten that we belong to each other.” —Mother Teresa

In 1938, the Harvard Study of Adult Development (HSAD) enrolled 724 participants in this comprehensive longitudinal study and put them through detailed checkups every two years for their whole lives. Dr. Robert Waldinger, the director of HSAD, was surprised when his study revealed that the strongest predictor of who was going to live long and stay healthy was “how connected you were to other people and particularly the warmth of your connection to others.”

According to Dr. Waldinger, the crystal-clear message that emerged from this landmark study— the longest-running scientific study of adult health, which has been going on for 86 years—was, “Close relationships, more than money or fame, keep people happy, protect against life’s dangers, help to delay mental and physical decline, and are better predictors of long and happy lives than social class, IQ, genes, and everything else.” The heart is the secret to longevity, not only its pumping capabilities, but also our ability to make heart-to-heart connections.

For 300,000 years, our survival depended on close daily interaction with family, friends, and tribe or community. *Ubuntu* is an African concept from the Bantu tribe that translates to “I am who I am because of who we all are.” Humans are wired to thrive best when we are woven into a network of personal relationships. Homo sapiens are among the most social species on Earth. Like ants, bees, dogs, wolves, and dolphins, humans are pack animals, and we need to be emotionally connected and physically interacting with the people and other living organisms flourishing around us.

The first two *Star Wars* movies were released when I was a college student, and I was enthralled and inspired by the notion of The Force as a mystical energy field that binds all living things together. It’s a source of strength that can be harnessed by those who tune into it and channel its power, allowing them to perform extraordinary feats. The Force as depicted in *Star Wars* reflects a concept that echoes through many ancient myths, religious systems, and philosophical traditions across societies, making it resonate cross-culturally and timelessly. For me, “to become one with The Force”

means aligning your will with nature and selflessly investing time and energy into a noble cause bigger than yourself, such as nurturing the well-being of life around you—your family, friends, coworkers, neighbors, community, pets, and plants.

Strong relationships provide emotional support, boost self-esteem, foster a sense of belonging, and infuse life with meaning. In Okinawa, Japan, locals call it *ikigai*—roughly translated as “reason for being.” In Nicoya, Costa Rica, it’s known as *plan de vida* or “life plan.” In both regions, people with a strong sense of purpose not only live longer but stay mentally sharp well into old age. Scientists think it works by lowering stress, encouraging social connections, and giving people a reason to be enthused to get out of bed each morning.

There is a massive broadband connection of nerves between the heart and the brain, so that your emotions are quickly and powerfully registered in your heart and vascular system. When you experience stress, anxiety, or anger, your pulse and blood pressure rise, your chest may tighten, and your breathing quickens. In

contrast, when petting your dog or cat, happily visiting with a friend or family member, or enjoying time in nature, your heart calms down, your arteries relax and expand, and your blood pressure and heart rate ease back into nice, low, normal ranges. Having someone to confide in or a beloved animal by your side is essential for reassuring us that everything is going to be okay.

Fundamental changes have been taking place in the world of relationships too. In generations past, you couldn’t get out of your family, your church, your community, or your marriage. Renowned psychologist and therapist Esther Perel describes how historically, relationships were seen as “tight knots” that were difficult to undo, so that everybody knew their place, their role, and what was expected of them. This restricted one’s freedom but fostered a sense of security and belonging. In the past (and still too often today), many people—especially women and LGBTQ+ people—were trapped in toxic or dangerous relationships because of those tight knots. Dr. Perel describes relationships today in America as more like loose threads, or fluid networks where people can enter and exit with ease.

But real-life connection is being quietly replaced by solitary activities, like working all day on a computer, answering emails, streaming entertainment, exchanging texts on mobile phones, and scrolling social media. For many people, especially among younger generations, time spent streaming digital entertainment, social media, and online gaming has replaced in-person hangouts. While online activities can be somewhat social, they generally lack the depth and emotional richness of real-life person-to-person contact. By the way,

I’m certain The Force does not flow through the internet or WiFi.

The price of all this freedom, along with the replacement of real-life interaction with solitary digital engagement, is increased loneliness, where kindness and empathy are in short supply. This transformation isn’t just a cultural change—it’s a national health crisis. Studies consistently report that loneliness and social isolation dramatically increase risks for heart disease, stroke, depression, dementia, and even premature death. The U.S. Surgeon General, Vivek Murthy, MD, recently issued an



advisory stating that we are facing an epidemic of isolation and loneliness that is harming our well-being and health. He writes that “chronic

Re-Engage with the Real World

My mother, Leatrice—who had about 15 people who thought of her as their very best friend—used to tell me, “If you want to have a friend, you need to be a friend.” Hang out with your friends more. Invite someone over for dinner. Join an exercise group or volunteer locally. Get a dog, tend a garden, befriend your neighbors. The path to a longer, healthier, and happier life is a wandering one where you’re often hanging out with your people, frequently stopping to smell the roses, or letting your dog smell the fire hydrants. Below are some strategies to help you spend less time on digital devices and more time interacting in person.

- 1. Set clear tech-free zones and times.** For example, no phones at the dinner table or in the bedroom after 9 p.m. or during weekend outings.

2. Schedule regular appointments for social time. Schedule weekly dinners with family or friends, Sunday walks with family, weekly play dates for sports like pickle ball, or monthly game nights.

3. Substitute low-stress social activities for screen time. This could be joining a book club, attending classes for yoga, art, or cooking; going to a religious service regularly; volunteering for a cause you care about; or joining a local club or hobby group.
- 4. Limit passive screen time.** Consider tracking digital usage on your phone. You may be surprised by how much time you spend staring at your phone, computer, and other screens.

5. Prioritize high-quality digital interactions. Reduce time spent passively scrolling or watching others’ Photoshopped lives on social media. Instead, video call a friend or engage in an online community, do group chats or play online games with friends. If you feel lonely, real-time digital interactions are better than nothing for meeting emotional needs, though they generally don’t substitute completely for in-person interaction.

loneliness can be as dangerous to your health as smoking 15 cigarettes a day.”

In 2020, 28% of U.S. households contained only one person, up from just 7.7% in 1940. This trend is also observed globally, where Sweden has more solo dwellers than any nation, with 47% of households having just one occupant—typically a child-free, single adult. Sweden, one of my very favorite places to visit, ranks #4 among all nations for quality of life for its citizens and has one of the best life expectancies in the world at 83 years. The Swedes are proving that it is quite possible to be happy and healthy living alone (see sidebar “The Swedish Paradox” below).

Close relationships are more essential now than ever to give people a sense of belonging and to lead meaningful, fulfilling, and healthy lives. Face-to-face connection is one of the most powerful and underrated medicines we

have. When we interact with someone in person—share a story, a smile, or a meal, or go for a walk or engage in other interactive play—we activate systems in the brain and body that reduce stress, strengthen the immune system, heal the heart, and stimulate new connections in the brain. Building and maintaining a life rich in real human contact isn’t just good for the soul—it’s vital for long-term health.

You intuitively understand that you can’t expect to be physically fit without putting some work into it. Why should relationships be any different? To have good relationships, we must be actively involved in staying in touch with people and investing time and energy into nurturing our relationships. Dr. Waldinger, director of HSAD, reminds us that we tend to take our relationships for granted, but he says becoming intentional about keeping in touch and fostering relationships is a superpower that flies

under the radar. Waldinger says that our modern culture may not always steer us in the right direction when it comes to health and happiness. He says, “These badges of achievement that we all set out for ourselves—money, awards, followers on social media—those badges of achievement are quantifiable, so they look like they’re going to make us happy, but they don’t.”

In our increasingly screen-based virtual world, it’s key to keep up your social fitness by prioritizing face-to-face interactions and real-world relationships. Studies consistently show that people with close social connections have better memory, sharper thinking, and a reduced risk of dementia. Face-to-face interaction keeps your mind engaged, usually reduces stress, and stimulates release of feel-good neurotransmitters like oxytocin and dopamine.

The Swedish Paradox: Alone, But Not Lonely

Sweden has the world’s highest proportion of adults living alone—47% of households are single-occupancy—yet Swedes rank near the top globally in life expectancy, happiness, and overall quality of life. So how do they stay so healthy and content while living solo?

The key is this: In Sweden, living alone doesn’t mean being disconnected. It often reflects independence and self-sufficiency, not social isolation. Swedish culture encourages regular face-to-face interaction with friends, family, and community—even when one lives alone.

Here’s how the Swedes pull off this paradox:

- **Social safety net:** Universal health care, paid parental leave, free college, and generous pensions reduce life stress and support well-being.
- **Urban design:** Walkable neighborhoods, bike paths, and public transit systems encourage people to get out and mingle.

- **Cultural rituals:** From daily *fika* (coffee breaks) to seasonal festivals, Swedes build regular in-person contact into daily life.

- **Work-life balance:** Long hours are discouraged. Time with friends and nature is prioritized.

Contrast this with the U.S., where living alone often means being more socially disconnected, especially for older adults. The U.S. work culture, car-based infrastructure, and screen-heavy lifestyle can make it harder to maintain meaningful in-person relationships.

Sweden’s example shows us that solo living doesn’t have to mean lonely living—but it requires intentional social engagement, strong community design, and cultural support for human connection.

Bottom line: It’s not about how many people you live with—it’s about how connected you are to your community.



I am more grateful than ever to be in a profession that heals. I love caring for my patients—as with my family and friends, they bring meaning to my life. And I am humbled and thankful to be a part of Saint Luke’s Cardiovascular Consultants, one of the best cardiology practices in the nation. I have never been more enthused to see patients, especially in our Cardio Health & Wellness Center, where we take the best of both worlds, recommending diet, exercise, pets, lifestyle strategies, and a few select supplements, in addition to deploying the latest and best drugs where and when needed. Using this hybrid approach, we are much more effective at optimizing robust health and promoting longevity than ever before.

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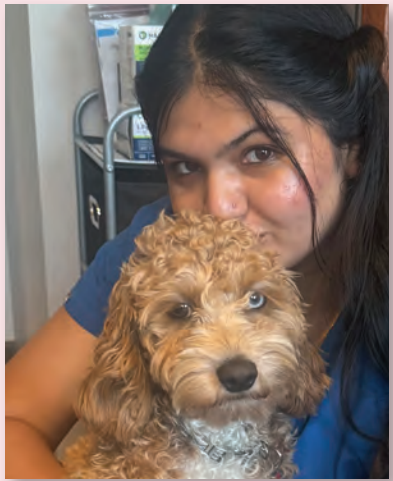


Animal Connections Count!

“A house is not a home until it has a dog.”—Gerald Durrell

One of my all-time favorite studies came from Sweden in 2017. Scientists followed 3.4 million people over the course of 12 years and found that adults who live alone and owned a dog were 33% less likely to die during the study than adults who lived alone without a dog. Furthermore, the single adults with dogs were 36% less likely to die from cardiovascular (CV) diseases like heart attack, stroke, or heart failure. Individuals who lived in a multi-person household also significantly benefited from owning a dog, with an 11% decreased risk of dying from any cause, and a 15% decreased risk of dying from a CV disease during the study. So dog ownership was especially effective at protecting against heart disease and premature death for persons living alone, which is a group that has been shown to be at higher risk for serious health issues than individuals living in a multi-person household.

Blue is an 11-month-old puppy we rescued from the pound. He is the most affectionate animal I have ever owned. He’s smart, easy to train, and eager to please. Blue just became our certified therapy dog at the Cardio Health & Wellness Center and Cardiometabolic Center. For the staff and the patients, Blue’s tail-wagging love with kisses brings smiles to our faces, warms our hearts, and brightens the day. Studies have shown that interacting with dogs, even just petting them, can lower blood pressure and reduce stress hormones like cortisol. The presence of a dog, especially a sweet-natured pup like Blue, can create a sense of comfort and



CardioWellness nurse Ria with Blue

security, helping to reduce stress and anxiety. Bonding with a canine companion can increase happiness and engender a more positive outlook.

Dogs can provide constant companionship, alleviate feelings of loneliness and isolation, encourage a more active lifestyle, improve mood, and boost mental and physical health. I love coming home to a dog who always greets me with enthusiastic unconditional love and support. Studies report that pet ownership may be associated with less cognitive decline in individuals living alone and can lead to increased interaction with other dog owners and pet enthusiasts, expanding social connections and reducing social isolation. Caring for a dog can provide a sense of purpose and routine, which can be particularly helpful for individuals living alone. I often write out a prescription that reads: *One Dog, taken for a walk once or twice daily. Refill as needed. Substitution permitted;* then hand it to my patient saying, “Doctor’s orders.”

Saint Luke's/UMKC Cardiovascular Fellowship: An Elite Cardiology Training Program

James H. O'Keefe, MD



Each year, more than 600 fully qualified physicians from across the nation who have completed their internal medicine residencies apply for four cardiovascular (CV) fellowship training positions at University of Missouri-Kansas City (UMKC) and Saint Luke's Mid America Heart Institute (MAHI).

This has been an upward spiral where we get outstanding young people who choose to come here for cardiology fellowship, and they are such a delight to work with that we 70 cardiologists at Saint Luke's Mid America Heart Institute and UMKC are more willing and enthused to spend time teaching them. This reinforcement generates a steady stream of remarkable young physicians who are among the best-trained cardiologists in the U.S.

Many of the cardiologists at Saint Luke's Cardiovascular Consultants trained at the most prestigious CV institutions in the country, including Mayo Clinic, Cleveland Clinic, University of Texas-Southwestern, Harvard, and Washington University. It is telling that many, if not most, of the new cardiologists we hire today,

including new hires Drs. Andy Godwin and Suchith Vuppala, come from our own Saint Luke's/UMKC Training program. In fact, now about one-third of the cardiologists in our group have been trained in our own program.

Our Fellowship Training Program has been ranked among the top 10 out of the 240 CV training programs in the United States by the National In-Training Exam. Saint Luke's MidAmerica Heart Institute stands alongside only Harvard, Yale, and Duke as one of the few centers designated by the American College of Cardiology to be an analytic center for the National Cardiovascular Data Registry. The mission statement and culture of the cardiology fellowship training program supports each fellow in striving to be a better version of themselves each day—not only as physicians, but as teammates, and holistically as human beings—and to help those around them. The hope is that their time spent in training at the Heart Institute and UMKC will help them be better in all aspects of their lives, and that they will be well-poised to make a positive impact in the world

around them. That ethos resonates with many applicants and creates a special group of individuals with a strong feeling of esprit de corps for our team.

Dr. Suchith Vuppala writes, "I chose to pursue my cardiology fellowship at the Mid America Heart Institute/UMKC for the opportunity to train with world-renowned faculty across the full spectrum of cardiology—nuclear cardiology, interventional cardiology, structural heart disease, advanced heart failure, research, and more."

"Equally important is the exceptional program leadership, including program director Dr. Jonathan Enriquez and associate program director Dr. Taiyeb Khumri, who provide unwavering mentorship, support, and advocacy throughout training. Jeanette Wheeler is the program manager, and many of us think of her as our second mom during the three or four years we spend here training to become a cardiologist. Drs. Enriquez and Khumri, along with Jeanette, are available 24/7, always willing to help fellows with anything—whether professional or personal."

"As I now graduate and reflect on the past few years, what stands out most are the co-fellows I had the honor of training alongside and the attending cardiologists I trained under. I've been fortunate to work with some of the brightest, kindest, and most dedicated individuals; colleagues who have become lifelong friends."

"At Mid America Heart Institute, I've witnessed something inspiring: a culture where even the most accomplished cardiologists routinely collaborate on complicated cases, support each other, and genuinely prioritize cooperation over competition. That spirit of humility and excellence is one of the many reasons I'm proud to stay on as faculty and continue being part of this extraordinary group of physicians."

Dr. Andy Godwin writes, "I chose to pursue cardiology fellowship training at Saint Lukes/UMKC because of the people. The collegial atmosphere is a far cry from the typical hierarchical structure seen at other institutions. From my interview day to orientation to starting as a first year CV fellow and now, completing the fellowship program, I have been surrounded by amazing individuals who have helped me to become a better version of myself."

"When looking for a place to begin my career as a practicing cardiologist, I could find no other institution with a similar caliber of people, facilities, and resources. As a future member of the faculty, I hope to continue this proud tradition of excellence and collegiality."

Fellows-in-training benefit by coming to the Heart Institute and UMKC, where Dr. Geoff Hartzler pioneered the use of angioplasty for patients with heart attacks, and now untold numbers of lives are saved each year globally from that application. Mid America

Heart Institute continues to pioneer in complex, high-risk interventions, and robotic-assisted interventions, and has been a leader in treating heart valve disease as investigators in the initial trials of transcatheter aortic valve replacement for the last 20 years. Fellows can work alongside presidents and past presidents of national CV organizations and leaders in preventive cardiology at one of the top 20 heart transplant centers in the world. They train at the Saint Luke's Muriel I. Kauffman Women's Heart Center, the first center of its kind in the United States,, which was recognized at two White House receptions, and with one of the premier cardiovascular research groups in the world. There are opportunities for them to learn about nation-leading heart care across every aspect of the field.

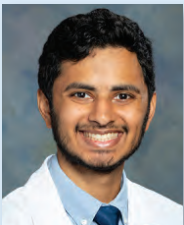
Fellows at the Heart Institute and UMKC are frequently recognized with prestigious national awards for best research from the American College of Cardiology or American Heart Association, such as the Young Investigator Award and Early Career Investigator Awards. Our fellows are often highly sought after upon completion of their training and are recruited to other world-renowned institutions like Massachusetts General Hospital/the Brigham, Columbia University, Cleveland Clinic, and Mayo Clinic, but fellows often choose to stay as faculty physicians at Saint Luke's/ or to return here after additional training. Kansas City and the entire region benefits from the fellowship programs by recruiting and retaining some of the finest cardiovascular medicine specialists in the country to serve and support the health of our community, combining local values and pride with nationally recognized expertise and experiences from across the country.

Drs. Andy Godwin and Suchith Vuppala just completed their CV fellowship training at Saint Luke's Mid America Heart Institute and UMKC and have now joined our group as new cardiologists.



Dr. Andy Godwin graduated magna cum laude from Texas Christian University before earning his medical degree at Tulane

University, where he was inducted into the prestigious Alpha Omega Alpha medical honor society. He completed internal medicine residency training at Emory University in Atlanta. Andy's interests include advanced cardiac imaging and medical education. He has been an invited presenter at the American College of Cardiology Scientific Sessions and his work has been published in the *American Journal of Cardiology*.



Dr. Suchith Vuppala had the privilege of serving with distinction as Chief Cardiology Fellow. He graduated with honors from

University of Texas at Austin, and completed internal medicine residency training and medical school at UT Southwestern Medical Center in Dallas, where he received the award for Best Teacher. He achieved one of the highest scores in the country on the National Cardiology In-Training Exam and the highest score ever in the history of our fellowship training program. He has authored or co-authored nearly a dozen publications in peer-reviewed journals. Suchith's interests focus on advanced cardiac imaging, structural heart disease, medical education, and optimizing patient-centric care and outcomes.

Creatine: Not Just for “Bodybuilding Bros” Anymore

James H. O’Keefe, MD

I have been curious about the supplement creatine for a long time, but about one year ago I started taking it myself. I decided to do this after several conversations with Jane, a friend I often swim with who is savvy about fitness and supplements. She raved about feeling stronger and mentally sharper after she began to take five grams of creatine daily. I had always shied away from taking it myself or recommending to patients due to worries about potential adverse effects on the kidneys. But my conversations with Jane piqued my interest and motivated me to dive into creatine and the science behind it.

Creatine is present naturally in cells throughout the body and is also available as a dietary supplement. It has been popular for years with “bodybuilding bros,” and then serious athletes discovered that creatine not only augments muscular strength but also improves athletic performance. Intriguingly, recent studies have shown that creatine may offer broader health benefits, such as conferring increased energy levels, brightening mood, and enhancing mental functioning.

What is Creatine?

Creatine is an amino acid derivative primarily stored in muscles, where it plays a crucial role in energy production. It helps regenerate adenosine triphosphate (ATP), the body’s primary energy source, which acts as a molecular battery to

temporarily store energy. During high-intensity activities like exercise or deep thinking, the demand for ATP increases, and creatine supplementation can help replenish ATP more efficiently, improving physical performance and enhancing cognition—aka brain function and thinking.

Health Benefits of Creatine Improved Muscle Function and Strength

Creatine supplementation is best known for its role in augmenting muscle strength and performance. This is beneficial not only for athletes but also for those who may experience muscle weakness due to aging or medical issues like arthritis. Creatine has been shown to improve muscle mass and strength, particularly for people who make a habit of doing weight training at least twice a week and consume plenty of dietary protein—about 0.7 to 1 gram per pound of body weight. Some individuals also note that creatine reduces joint and muscle pain, especially after strenuous exercise.

Enhanced Brain Function

Beyond muscle benefits, creatine boosts cognitive performance. In other words, it sharpens thinking and mental acuity. Research suggests that creatine not only increases ATP in the brain but also helps to shuttle the stored energy into the neuronal synapses—the connections between brain cells. This may explain its abilities to improve mental clarity and memory, especially among middle-aged or older individuals.

Creatine could even turn out to be helpful for preventing neurodegenerative disorders like Alzheimer’s disease or Parkinson’s disease, though this is still just an unproven theory that will require future studies to clarify.

Cardiovascular Benefits

Creatine may support heart health, particularly in individuals with heart conditions. Some studies have shown that creatine supplementation can help improve exercise tolerance in people with heart failure, enabling them to become more physically active. Additionally, creatine’s role in energy production could potentially reduce the workload on the heart during periods of high exertion, crucial for maintaining optimal cardiovascular function.

Mood and Depression

The brain is our most energy-intensive organ, burning 20% of the body’s energy despite comprising only about 2% of body weight. Creatine increases levels of ATP—the energy currency of life. Thus, interventions that crank up cellular energy production should benefit cognition and mood. When taken as a supplement, creatine crosses the blood-brain barrier and improves the brain’s energy balance or “bioenergetics.” A recent study of women with major depression found that adding 5 grams of creatine daily to escitalopram, a popular SSRI antidepressant marketed under the brand name Lexapro®, led to faster and more substantial mood improvements than escitalopram alone. Creatine has

also been reported to reduce brain fog or mental fatigue associated with menopause.

Drink More Water

While creatine is generally considered safe for most people, there are a few key factors to consider when taking this supplement: Creatine can increase water retention in the muscles, which is part of its mechanism for improving performance. However, this also means that proper hydration is essential when taking creatine. Dehydration can lead to muscle cramps, digestive discomfort, and other issues. So, if you start creatine, you must drink plenty of water throughout the day to ensure that your body stays well-hydrated. A simple rule of thumb for adequate hydration: Your urine should be almost colorless—like water or diluted lemonade, not like apple juice or iced tea. If it’s noticeably yellow, you need to drink 8 to 12 ounces of water immediately. The other way to know



you’re consuming enough fluid is that you should feel annoyed by the need for frequent bathroom breaks.

Serum Creatinine Levels and Kidney Health

Creatine supplementation can affect blood tests, particularly the serum creatinine, which is most common test we order to assess kidney function. Creatine is broken down into creatinine, a waste product excreted through the kidneys. Supplementing with creatine can lead to an increase in serum creatinine levels, potentially

giving a false indication of impaired kidney function. To avoid this, it is recommended that you refrain from taking creatine for at least two days prior to having a serum creatinine test. Or ask for a cystatin-C test, which is a more accurate measure of kidney function that is not affected by creatine supplementation.

Bottom Line

Creatine is a safe, inexpensive, and well-studied supplement that improves muscular strength and power by about 15% and may even sharpen thinking and improve mood. I have been taking about 5 grams per day for one year now, and I can attest to its noticeable benefits to muscular strength, mood, and energy levels. However, it is important to stay well-hydrated and to be aware of how creatine might falsely elevate blood creatinine levels. Feel free to talk to us in the Cardio Health & Wellness Center at Saint Luke’s Hospital of Kansas City if you have questions about creatine.

Heart Rate Variability *continued from page 3*

- **Gratitude.** Cultivate a daily habit where you spend a moment in heartfelt gratitude for your blessings. This sends powerful signals to your heart that it’s safe to relax.
- **Emotional connection.** Spend time with those you love. Heartfelt conversations, keeping a sense of humor about life, and giving and receiving loving touch also are effective ways to calm your sympathetic nervous system, strengthen your vagal tone, and relax deeply. Petting your dog or cat or holding a baby (when she’s not crying) are also very good for improving HRV. I have a new baby granddaughter, Quinn, and holding her warms my heart.
- **Heat therapy,** like sauna or steam sessions, soaking in a hot bath especially with magnesium (aka Epsom salts), or long hot showers. If you’re brave, a plunge into cold water after heat therapy can also be good for improving HRV.
- **Singing,** and especially humming along to music you enjoy. This can directly stimulate the vagus nerve.
- **High-intensity interval training (HIIT).** For exercise enthusiasts like me, HIIT is great for improving HRV. Do four to eight short intervals, about 15 to 30 seconds each, of maximal effort exercise. Take as long as you need to recover between intervals. Personally, I like to do HIIT when climbing stairs, swimming, or

weightlifting. It only takes one HIIT workout per week to get impressive benefits to overall fitness and HRV.

The first step in managing or changing anything is measuring it. Many smart watches and fitness trackers now offer HRV monitoring, and it’s best measured during deep sleep or upon waking. I wear an Apple watch that tracks HRV.

From time to time, pause to listen to your heartbeat, and know that its nuanced rhythm reflects your resilience, balance, vitality, and capacity to respond to life with strength and grace. So be kind to your heart; it’s listening more closely than you think.

Do the Hard Thing *continued from page 2*

five more to go. It's 2 p.m. and you haven't left the house. The hard thing is getting off the couch. Going for a walk. Hitting the grocery store. Answering a few emails so Monday doesn't feel like punishment. None of these tasks sound fun—but on the other side of them? Anxiety will be quieter. Your body will feel better. Your future self will be grateful, trust me.

So next time something feels terrible—a chore, a deadline, a conversation—consider that dread your North Star. The harder it feels, the greater the payoff waiting on the other side.

I didn't make these rules. And yes, it seems cruel that taking care of ourselves has to be so inconvenient. But here we are. And now that this piece is written, I feel better. Putting words on the page—something I hadn't done in months—reminded me that even when everything is crumbling, I can still find a bit of myself on the other side of a five-hour Word document dump.

Because she's still there. The good me. The calm, bright, lustful-for-life version of me. The me that's not scared, or paranoid, or dreading tomorrow. I can still access her—I just have to scrub a little harder. Slow down, squint, and turn the windshield wipers up one more notch. Show some focus. That luminous version of me doesn't arrive through self-pity. She arrives—annoyingly—when I fight for her.

So do the hard thing. And do it often. It's good for your brain, apparently. And maybe it's also a key to long-term happiness—that elusive, slippery, shimmering thing we're all chasing.

But maybe most importantly, doing the hard thing might be the fragile, golden thread that leads you back to you. The

person buried beneath the sludge of sadness and nostalgia. The girl on the other side of the lull. Even if you can't always see her—she's still there.

If you're in a rough patch, know that it's just that: a patch. Not your permanent front lawn. Just a moment that, someday, will be a shrinking speck in the rearview mirror.

Doing the hard thing will always feel ten times harder in darker seasons. That much is true. But I'm a firm believer that effort never goes to waste. It's like carrying a weighty backpack. At first, it's heavy. Then it's just irritating. And eventually, you forget it's there—because you've adapted. You've grown strong enough to carry the weight without thinking twice about it. One day, the backpack simply becomes a part of you.

That's what it means to do the hard thing. And so far, that's also what it feels like to hold grief: an added weight that never fully disappears. The hope is, one day, I'll be able to carry it with more grace and ease than I am today. Maybe that's what health is all about, too—mental and physical. Uncomfortable at first, but eventually, it leaves us with something good. Something earned. Something—maybe more than anything else in this life—that we can really hold on to.

To read more from Kathleen C. O'Keefe, visit her **free** substack by scanning the QR code with your smartphone camera.



Keep Your Brain Sharp

continued from page 5

Muscular strength improves blood flow, insulin sensitivity and glucose metabolism, which are critical for brain function. Active and strong muscles produce myokines signaling proteins with anti-inflammatory and neuroprotective effects.

Exercise, including resistance training, increases Brain-Derived Neurotrophic Factor (BDNF), which promotes the survival and growth of neurons and improves memory and learning. Muscle strength is linked to a lower risk of diabetes, cardiovascular disease, and obesity, all of which are major risk factors for Alzheimer's. Strength training supports overall physical activity levels, which contributes to cognitive reserve—the brain's ability to resist damage. Active people tend to have better sleep, mood, and social engagement, all of which lower dementia risk.

Bottom line: Maintaining muscle strength through resistance training or weightlifting and aerobic exercise is one of the most accessible, evidence-backed ways to reduce Alzheimer's risk. Shoot for two 20-minute weight-lifting sessions per week. It's a powerful part of a prevention strategy, especially when combined with the steps mentioned above and these habits:

- A healthy diet like the Mediterranean or MIND diet (see article on page 16).
- Good sleep.
- Doing challenging tasks like real-world problem solving or learning a new language, musical instrument, or computer program.
- Social interaction and emotional support.



Living Wholeheartedly

All you need is love. But a little chocolate now and then doesn't hurt.
—Charles M. Schulz

A friend is someone who knows all about you and still loves you.
—Elbert Hubbard

Sometimes people are beautiful. Not in looks. Not in what they say. Just in what they are.
—Markus Zusak

There is nothing I would not do for those who are really my friends. I have no notion of loving people by halves, it is not my nature.
—Jane Austen

Don't walk in front of me... I may not follow. Don't walk behind me... I may not lead. Walk beside me... just be my friend.
—Albert Camus

Intelligence is like underwear. It's important that you have it, but not necessary that you show it off.
—David Graham

When two givers indulge in a connection, it's like magic. It's alchemy. I water you, you water me. We never drain each other, we just grow.
—Nina Vukas

Modern life leaves our minds restless and underutilized because we are confined, inactive, and too comfortable.
—Art Devany, MD

One only sees what one looks for. One only looks for what one knows.
—Johan Van Gothe

Practice does not make perfect. It is practice followed by a night of sleep that leads to perfection.
—Matthew Walker

Youth is wasted on the young.
—Oscar Wilde

I know that I am intelligent because I know that I know nothing.
—Socrates

It is better to be hated for what you are than to be loved for what you are not.
—Andre Gide

Not all those who wander are lost.
—J.R.R. Tolkien

We are all in the gutter, but some of us are looking at the stars.
—Oscar Wilde

The opposite of love is not hate; it's indifference.
—Elie Wiesel

Keep your face always toward the sunshine—and shadows will fall behind you.
—Walt Whitman

Life shrinks or expands in proportion to one's courage.
—Anaïs Nin

You do you, my friend.
—Carrie Dayes

One of the reasons I love to garden is that it embodies the interconnected synergy of life at its most fundamental level. We nurture and water the plants, flowers, and trees, and in return they give us nutritious food, gorgeous blossoms, lush greenery, shelter, and oxygen. We grow stronger, happier, and healthier together.
—James H. O'Keefe, MD

Ecologists are reevaluating the assumption that intense competition is the only force regulating evolutionary success. Competition makes sense only when we consider the unit of evolution to be the individual. When the focus shifts to the level of a group, cooperation is the better model, not only for surviving but for thriving. Symbiosis exists at every level of life on Earth, and you cannot compete in a zero-sum game with creatures upon whom your existence depends.
—Robin Wall Kimmerer

If you love life, don't waste time, for time is what life is made up of.
—Bruce Lee

We don't ever make time for talking and wine. We keep it bottled up.
—Halzlett

What is the difference between ignorance and apathy? I don't know and I don't care.
—David Graham

Longevity Starts on Your Plate

Dietary Strategies to Make You Glow

Grace E. Webb, RD, MS, and James H. O’Keefe, MD



In today’s fast-paced world, nutrition has become more important than ever. The food we eat not only fuels our day-to-day activities but also



Grace E. Webb, RD, MS

supports our health and well-being. It can be overwhelming to understand the basics of a healthy lifestyle with the constant stream of trends, fad diets, and conflicting advice we hear every day. People are looking for easy-to-follow, clear, and science-backed nutrition tips that will help them meet their health



James H. O’Keefe, MD

goals. We hear from patients all the time that even just one small change sets off a cascade of positive effects in their diet. The following tips are geared to help you make sustainable changes and enjoy the food you eat.

Benefits of Breakfast

Have you ever heard that breakfast is the most important meal of the day? Well, it’s true. Breakfast is a

combination of the words *break* and *fast*, which refers to the idea that there is a period of fasting that needs to be broken with the first meal of the day. During the night, the body needs sleep to rest, recover, and heal, but also to regulate hormones involved in glucose control, energy balance, and appetite regulation. Leptin is a hormone that inhibits hunger and reduces food intake, especially overnight. Ghrelin, also known as the hunger hormone, peaks right before mealtime and stimulates the brain’s desire to eat. Leptin levels typically rise during the overnight fast, whereas ghrelin levels are lower during this time. What does this have to do with eating breakfast? In the morning, ghrelin levels rise to signal that the body needs to eat. Eating breakfast will suppress ghrelin levels and increase leptin levels, leaving you more satisfied, with better appetite control and energy balance throughout the day.

Eating a well-balanced breakfast can have a significant impact on glucose control. Skipping breakfast can lead to greater fluctuations in blood sugar throughout the day. A balanced breakfast may look like eggs scrambled with vegetables and a piece of peanut butter toast. The idea is that we can better manage our blood sugar if we eat plenty of protein, healthy fat, and fiber first thing in the morning; this will also energize your system. People who

eat breakfast tend to be more likely to follow sustainable eating patterns and maintain body weight. It all starts with the choices we make in the morning to break our overnight fast.

Do you have late-night food cravings? Typically, not enough protein, healthy fat, and high-fiber foods and too much sugar and refined carbohydrates throughout the day can impair satiety and cause those blood sugar fluctuations that make you crave sugar late in the evening. If you find yourself snacking late at night, we encourage you to consider two things: 1) Are you getting enough protein, fat, and fiber? and 2) Are you consuming too much sugar and white flour? If you can correct these issues, the late-night cravings will disappear.

Think Outside the Cereal Box

Traditional breakfast meals can be high in sugar, sodium, and saturated fat but low in protein and fiber. Instead of pouring yourself a bowl of sugary cereal, try these savory breakfast ideas: plain Greek yogurt with berries and walnuts, veggie egg scrambles, oatmeal with nuts, avocado toast, eggs, overnight oats, berries and nuts with kefir or milk drizzled over them.



Triple Crown: Fiber, Protein, and Fat

Breakfast isn’t the only meal that should be balanced with protein, fat, and fiber. Rather, every meal and snack throughout the day should have these three elements. Before talking about how to build a balanced meal, let’s break down the macronutrients.

Carbohydrates support the body by providing immediate energy in the form of glucose. The presence of glucose in the blood stimulates insulin release. Foods like white bread,



chips, cookies, soda, candy, and juices are considered simple carbohydrates. They have lots of sugar in them. On the other hand, fiber is an indigestible nutrient found in plant foods that forms a gelatinous mesh in your gastrointestinal (GI) tract that slows down the absorption of glucose and helps to regulate

blood sugar levels. It also can reduce cholesterol and improve digestion. Aim for a minimum of 28 grams of fiber per day (the average American eats less than 13 grams per day)—the more fiber the better. Eating plenty of fruits, vegetables, whole grains, nuts, seeds, and legumes can help you meet your fiber needs. James eats an avocado as part of his breakfast most days and also drinks a tall glass of cold water into which is mixed a heaping tablespoon of a psyllium fiber like Metamucil; this combo provides about 25 grams of fiber.

Protein provides vital nutrients and performs several functions in the body. Protein is found in animal foods like red meat, poultry, fish, eggs, and dairy, as well as plant foods, including nuts, seeds, beans, whole grains, and vegetables. A diet low in protein, or a diet based on poor quality protein, contributes to many symptoms such

as fatigue, mood instability, difficulty building muscle, lackluster hair, dull complexion, and hormone imbalance. When we eat protein, it is digested and absorbed slowly, keeping us feeling fuller longer after a meal. The key to creating a balanced and filling meal is to choose a variety of high-quality, plant or animal sources of protein.

Fats provide unique structure and function to the body. Fat acts as building blocks for cell membranes and structures, while also helping us absorb the fat-soluble vitamins A, D, E, and K. Fat is also brain fuel. Including a healthy fat source with each meal and snack is important to avoid lost nutrient opportunities. Saturated fat is found mainly in animal foods, whereas unsaturated fats are abundant in plant foods. Saturated fat sometimes gets a bad rap, and while we should be mindful of the amount of saturated fat we consume, saturated fat can be a part of a healthy diet if we make sure that the rest of the diet includes unsaturated fat, fiber, and plenty of antioxidants from plant foods. Unsaturated fats are considered heart healthy and are found in foods like avocados, olives and olive oil, nuts, and seeds. Including fat in each meal not only ensures adequate nutrient absorption but also slows down digestion and makes us feel more satisfied after a meal or snack.

Building a Healthy Plate

How do we put these elements together to create a balanced meal? The goal of building a nutrient-dense plate is to make sure we are meeting our nutrient needs, feeling full and satisfied after we eat, and balancing our blood

sugar levels. Start by filling half or three-quarters of your plate with non-starchy vegetables. Non-starchy vegetables are any vegetables except potatoes, sweet potatoes, yams, squash, peas, and corn. Building your plate around the non-starchy vegetables ensures that you are getting plenty of fiber and antioxidants with your meal.

Next, add lean protein to a quarter of your plate. This can include fish, chicken; turkey; beans; lean, fresh red meat; tofu; eggs; or other sources of protein. This should be about the size of the palm of your hand and the thickness of your little finger. Optionally, one quarter of your plate can be for whole grains or more starchy vegetables. This section is going to be higher in carbohydrates, but still full of fiber for blood sugar regulation. Be sure to incorporate healthy fat on your plate as well. Use Greek yogurt or avocado as a topping, cook with a high-quality oil, or use extra-virgin olive oil high in polyphenols for a salad dressing. Ultimately, you get to decide what is on your plate, but using this method of building a nutrient-dense meal is a great way to simplify the meal planning process and ensure that you are getting the energy and nutrition you need throughout the day.



Healthy Sweets

We have talked a lot about vegetables, but what about fruit? Fruit is an excellent source of dietary fiber and antioxidants. It provides a touch of sweetness and energy, without spiking blood sugar. Fruit is a great addition to a meal or a snack, especially when we pair it with a protein or healthy fat. Berries are the best type of fruit for health because they are high in fiber and antioxidants but low in sugar. Try snacking on fruit with cheese, cottage cheese, yogurt, nuts and seeds, hard-boiled eggs, nut butter, or avocados. This will create a more filling and satisfying snack.



Another healthy sweet treat is dark chocolate. Choose one that is at least 70% cacao, and keep the serving size small—not more than one ounce (28 grams) or one to two small squares. This serving size allows you to enjoy the rich flavor and potential health benefits, like antioxidants and improved heart health, without consuming too many calories or too much sugar.

Limit Added Sugar

Did you know that one of the most common hidden ingredients in food is sugar? Sugar lurks in most packaged and processed foods and beverages. Added sugar has a significant effect on blood sugar and can contribute to weight gain, cardiovascular disease, type 2 diabetes, metabolic disorders, dementia, and dental cavities. Added sugar includes any sugar or syrup added to foods or beverages during processing or preparation. The American Heart Association suggests that adult females should consume less than 24 grams of added sugar per

day, and adult males should consume less than 36 grams per day. And to be clear—the less the better. One can of Coca-Cola has 39 grams of sugar.

It is important to recognize that all added sugar is created equal when it comes to their impact on blood sugar: Maple syrup = cane sugar = honey = high fructose corn syrup, and so on. One of the best ways to decrease added sugar intake is to limit your intake of sugar-sweetened beverages, including soda, sweet tea, sweetened coffee drinks, fruit juices, and energy drinks. Additionally, choose to *eat* your fruit, rather than *drink* it. Fruit is an excellent source of dietary fiber, but juicing removes this essential nutrient and can cause a spike in blood sugar.

The added sugar content of food is found on the nutrition facts panel, so be sure to read food labels and look for the various names of sugar in the ingredient list. It is easy to exceed the daily maximum of added sugar, so be diligent and read food labels.

Refined carbohydrates have a similar effect on the body. People who regularly overconsume refined carbohydrate foods like white flour, pasta, chips, rice, and potatoes are often plagued by cravings and hunger due to the dramatic rise and fall of blood sugar and insulin levels after a meal or snack.

Eat the Rainbow

There is an age-old saying that eating carrots will improve your eyesight. This is largely based on the myth that carrots can enhance night vision. However, carrots do have beta-carotene, which the body converts into vitamin A, that boosts eye health.

The idea of eating the rainbow encourages people to eat a variety of colorful fruits and vegetables, which are rich in antioxidants, including



beta-carotene. Antioxidants fight against free radical damage in the body and can help reduce inflammation. These powerful nutrients also help your body resist sickness and disease. Different fruits and vegetables have different antioxidants, hence why we should eat the rainbow. For each meal, include multiple brightly colored vegetables and fruits like berries, greens, cantaloupe, onions, radishes, purple cabbage, grapefruit, watermelon, and peppers.

Dairy Without the Downsides: The Benefits of Going Fermented

Dairy is a controversial topic in nutrition. Many people demonize dairy for upsetting their gut or raising cholesterol. Lactose is the sugar in dairy that causes some people to have an upset GI system and increases inflammation in many adults. But fermented dairy products like cheese; unsweetened non-fat yogurt; and low-fat, unsweetened kefir are loaded with human-friendly bacteria that eat up the lactose, leaving little to no sugar in the final products. These fermented dairy products are good for your microbiome—the trillions of cells in and on your body, mostly inside your small and large intestines—which in turn is important for developing a strong immune system. Cheese and yogurt are also rich sources of high-quality protein and bioavailable calcium, so these dairy products are good for building and maintaining strong bones and muscles. Greek yogurt with nuts and berries is one

of our favorite breakfasts. Cheese, though it is the single biggest contributor to saturated fat in the U.S. diet, also seems to be linked to good health and longevity when consumed in moderation.

Eat More Beans!

Legumes like edamame, black beans, and lentils are nutritional powerhouses that are especially beneficial for people with heart disease or risk factors for heart disease such as diabetes. They have a low glycemic index, which means they help keep blood sugar levels steady instead of causing spikes. Packed with fiber and plant-based protein, legumes help improve insulin sensitivity, keep you full longer, and even support heart health. They're also rich in essential nutrients like magnesium, potassium, and B vitamins. In fact, studies show that eating one cup of legumes daily can improve blood sugar, lower cholesterol, and reduce blood pressure. Edamame, lentils, and black beans are among the healthiest legumes, as they are lower in carbs and higher in protein and antioxidants. Bottom line: Adding more legumes to your meals is a smart, delicious way to support better blood sugar and overall health.



Hydration Is Key

You should get used to drinking water as your go-to beverage. Consume at least two quarts per day, or about 64 ounces. If you are physically active, you may need more water; you can aim for half your weight in fluid ounces daily, so if you weigh 150 pounds,

you should try to drink 75 ounces of water per day. One way to do this is to drink four or five standard 16-ounce water bottles per day. Many people become cranky or anxious when they are dehydrated. And because they often mistake thirst for hunger, they consume high-calorie foods instead of giving their body what it needs—water.

The only juice we enthusiastically endorse is Low Sodium V8 juice, which has a small amount of naturally occurring sugar but is loaded with vitamin C, potassium, and antioxidant nutrients. Sweetened sodas like Coke, Pepsi, and Sprite are among the worst things you can consume and are addictive. Even the artificially sweetened, zero-calorie versions of soft drinks are not healthy for you. Instead, choose carbonated flavored water like La Croix, Pellegrino, or Spin Drift. These are perfectly healthy options for hydration, but you will have to get used to drinking beverages that aren't sweet. If you need caffeine, coffee and tea are healthy options. It's best not to add sweeteners, but a bit of added milk or cream is okay.



What Is the Deal with Fasting?

The problem with intermittent fasting is that most people tend to do it by skipping breakfast, then eating a big lunch and an even bigger evening meal. An ancient adage says for ideal health it's best to eat breakfast like a king, lunch like a shopkeeper, and dinner like a pauper. When you eat a big meal, your blood levels of sugar, fats and insulin spike. If you have a big breakfast, and then get active with work, thinking and moving about, the insulin will shuttle the sugar

and fat into muscles and the brain, where it will be burned for energy. In contrast, after a large evening meal the tendency is to sit down and watch TV followed by a long sleep, but when muscle tissue isn't doing work and demanding fuel, the sugar and triglycerides get stored as belly fat.

So try to eat a lighter evening meal, best done early—5 to 6 p.m.—and get out for a light stroll afterwards. Do not consume any calories after you finish dinner—this is where the fasting comes in. If you minimize sugar and other refined carbohydrates, it will be easier to avoid snacking after dinner because your hormone levels, such as insulin, will not be stimulating hunger.

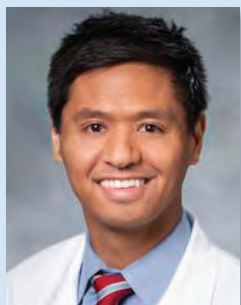
Summary

If you eat an ideal diet, you will look and feel amazing, have a healthy glow, be brimming with energy, and be almost bullet-proof with respect to your health. Admittedly, it is difficult to sift through all the conflicting noise you hear about nutrition, but as much as possible follow the eating style outlined in the article.

We will leave you with this piece of encouragement: Start small. Begin with one change you feel ready for. Maybe that is eating breakfast three or four times a week, putting a new vegetable in your cart at the grocery store, drinking one extra bottle of water a day, eating some avocado daily, consuming no calories after dinner until breakfast the next day. Whatever modification you choose to make, know that small changes can turn into lifelong habits that will get you closer to meeting your health goals.

From the Heart: 23-Time Winner of the National Healthcare Advertising Awards, including a 2023 Gold Medal Award!

Cardiology Fellows on the Front Lines



Dr. Jonathan Enriquez,
director of
the Saint
Luke's/UMKC
Cardiovascular
Fellowship
Program (see
page 10), is
a passionate

advocate for the program and the fellows he guides. Of the more than 600 applications the program receives each year, Dr. Enriquez and his team choose four.

They look for candidates who are well-rounded. "It's not just about being smart or getting the best score on the exam," says Dr. Enriquez. "We want people who can apply that knowledge to take great care of patients at the bedside, who are great communicators, who know how

to listen and how to communicate things to patients in ways that are understandable."

Fellows receive rigorous classroom instruction, but Dr. Enriquez believes it's the practical bedside experience that's at the heart of their training. "At the hospital, fellows are always on duty," he says. "They're the ones on the front lines, providing exceptional care to patients. It's a privilege and honor to see how they work. That's where I take my family."

Dr. Enriquez and his team want to nurture that well-rounded combination of skills and compassion so that it follows their fellows throughout their careers. "It's part of our mission statement that we strive to be better versions of ourselves every day and help those around us," he says. "We hope that our fellows will not only

become excellent cardiovascular medicine specialists at the end of their training, but also will be better people, better human beings because of it."

According to data from the American Association of Medical Colleges, the United States will need an additional 125,000 physicians within the next 10 years. The team at the Saint Luke's/UMKC Cardiovascular Fellowship Program would like to help close that gap. "If anyone wants to help or get involved with expanding our fellowship to meet the needs of our community and our nation," says Dr. Enriquez, "please reach out to me. We're always looking for engagement with the community and anyone wanting to get involved."