

# FROM THE HEART

Newsletter from  
 **Saint Luke's**  
 CARDIOVASCULAR CONSULTANTS

## A Lifesaving Change of Heart for Steve White—Heart Transplant Patient #900 at Saint Luke's

By James H. O'Keefe, MD

**S**teve White is a close friend who's a beloved person in Kansas City. He became the 900th heart transplant recipient at Saint Luke's Mid America Heart Institute on June 20, 2021. Steve is a doctor of veterinary medicine (DVM) and he's been taking care of generations of our family pets for over three decades.

Because my wife, Joan, is an over-the-top animal lover, our family typically has two or three dogs and a couple of cats in the house. Indeed, Joan spoils our adopted four-legged kids much more than she dotes on me. When we finished our training at Mayo Clinic and moved here from Rochester, Minn., in 1988, one of the first things Joan did was find the best veterinarian in Kansas City to help keep our animals healthy. So, Joan got to know Steve before I did.

In the spring of 1989, Steve was a very physically fit young man who was training for and competing in triathlons. He was out on one of his first dates with his future wife, Lisa, when without any warning he passed out headfirst into his salad. Steve

said, "Fortunately, it wasn't the very first date, and I didn't order the soup, or that spell might have scared Lisa away!"

When he arrived at the Emergency Department at Saint Luke's on the Plaza, he was in heart block. This is where the heart's main wire shorts out, thereby disconnecting the heart's intrinsic pacemaker in the atrium at the top of the heart from the ventricles (the main pumps) at the bottom of the heart. That's when Steve and I met, now 33 years ago, and I personally put in his first permanent pacemaker.

As it turns out, Steve has a rare inherited genetic mutation that predisposes him to heart block and eventually to heart failure, when the heart's ability to pump enough blood becomes impaired. To the outside world, Steve has lived a normal and active life, working full time as a vet, as well as serving as a deacon in the Cure of Ars Catholic Church.

However, through the decades, Steve has needed multiple upgrades to his pacemaker, and he's had two extensive open-heart surgeries—one to



*Steve White and his family, Kathryn (Kit), standing, Kimberly, seated, and his wife Lisa, next to Steve. Photo courtesy of Jamie White.*

remove scar tissue that was impeding the flow of venous blood back to his heart, and one to replace his tricuspid valve, both done by Michael Borkon, MD, cardiothoracic surgeon.

Despite our best efforts, Steve's heart continued to fail, forcing us to default to our last best hope—cardiac transplantation. Now understand,

## A Lifesaving Change of Heart

there may not be another surgeon in the country who would have shouldered the responsibility of transplanting a heart into a chest having suffered 32 years of accumulated scar tissue and altered anatomy from repeated interventions. But Dr. Borkon had the experience and expertise in cardiac transplantation, and the profound courage to take on this difficult case.

### *It Takes a Village*

It takes a village of dedicated experts to take care of a heart transplant

patient, before, during, and after the surgery. Fortunately, the heart transplant team at Saint Luke's is world-class. There are 140 heart transplant programs in the United States, and their patient outcomes are all closely monitored by a national quality supervising committee.

The programs are rated on a



*Dr. Michael Borkon*

composite metric based on patient survival before, during, and after the heart transplant surgery, the average wait time to get a heart once a patient has been cleared to be on the list, and the number of transplants the hospital does each year.

In these rankings, which are updated every six months, Saint Luke's has consistently ranked as one of the top five in the nation. Dr. Borkon told me, "Heart transplantation has always been a team sport and it requires incredible commitment and dedication from all. As a leader, my job has been to challenge everyone up to a level of performance that ensures success."

Heart transplant programs tend to come and go because they are extremely labor intensive, requiring a large team of expert physicians, nurses, and other support staff. The Saint Luke's Heart Transplant program has been continually operating now for over 36 years without interruption.

Among the many reasons why heart transplant patients need close attention after surgery and for the rest of their lives is to ensure that their immunosuppressive medicines are adjusted precisely—enough to prevent rejection of the organ but not so much that it would leave the patient vulnerable to infection and cancer.

Andrew Kao, MD, is the medical director of our heart transplant program. Dr. Kao is a bright, experienced, and extraordinarily dedicated cardiologist who provides every patient with exceptional care.

Getting Steve a new heart was a race against the clock because his heart was failing dramatically. While Steve was on the waiting list, Dr. Kao and Taiyeb Khumri, MD, associate director of the heart transplant program,



*Dr. White with one of his furry patients.*



*The heart transplant team at Saint Luke's Mid America Heart Institute, led by Andrew Kao, MD, far left in the white coat, is consistently ranked as one of the top five in the nation.*

admitted him to the intensive care unit (ICU) to get a balloon pump—a temporary mechanical device to help support circulation to all his major organs.

His organs were rapidly failing and this device was necessary to keep him alive before the ultimate lifesaving gift of heart transplantation.

Dr. Borkon knew the transplant surgery would take much longer than usual because of the scar tissue in and around Steve's old heart, making it very difficult to remove the diseased organ and then to sew a healthy new one in its place. That's why Dr. Borkon and the transplant team had to be extra picky about the donated heart. It had to be the exact right size for Steve.

In fact, Dr. Borkon turned down several hearts that he felt were not quite right for Steve. Dr. Kao praised Dr. Borkon's grace under fire. "It takes a lot of guts to say no to an organ when you're taking care of someone so sick. But we knew that we couldn't compromise on the quality of the heart because the surgery was going to be so long and difficult," Dr. Kao said.

Other cardiologists besides Drs. Kao and Khumri on the heart transplant team include Bethany Austin, MD, Mark Everly, MD, Tim Fendler,

MD, Stephanie Lawhorn, MD, Anthony Magalski, MD, Michael Nassif, MD, Brett Sperry, MD, and Deepthi Vodnala, MD. Each one is a superb physician with expertise in heart failure.

The heart transplant surgeons include Jessica Heimes, MD, and Eric Thompson, MD, along with Dr. Borkon. Assisting this remarkable cadre of physicians, is a focused team of pre-transplant nurse coordinators including Jennifer Carl, Julie Key, Pat McDonald, Courtney Schmidt, and Angie Magdziak.

Michelle Haines, MD, is the director of the cardiovascular ICU. She and her expert team are critically important for managing the heart transplant patients in the early days after surgery. This is a multidisciplinary team, with important contributions from nurse practitioners, nurses, pharmacists, social workers, dietitians, financial counselors, cafeteria personnel, and housekeeping staff.

Dr. Kao also expressed gratitude to the family members of the donors, "who display an act of ultimate generosity by deciding to donate their loved one's organs at a time of extreme grief."

Dr. Kao and the rest of the cardiology team hold themselves to very high standards, and he said caring

for heart failure patients is, "All in a day's work." Still, Dr. Kao said that being part of the team responsible for dramatic lifesaving cases like Steve's is his highest satisfaction in his professional life.

Steve has had his new heart for two months now, and he is doing remarkably well. An important factor in his phenomenal recovery is his mental toughness and resilience. Steve has a strong faith, and also has great emotional support from family and friends, and many of those people were praying for him. Three weeks after his surgery he told me, "I'm so impressed with the heart transplant team. They are a really top-notch crew of committed, expert, caring, and compassionate people."

Steve has given so much to our community through the years, which makes us thankful to have the opportunity to reciprocate. Incidentally, Mike and Peggy Borkon generally have about three dogs in their household, usually Labrador retrievers, and Steve has been taking great care of their canine family members for 35 years.

During most of his life, Steve has been in superb health, but his heart had gotten so bad that he was "circling the drain." Without a new heart he would very likely not be here today, and if he were alive, he would be bedridden and debilitated. But with his new heart, he's got his energy and enthusiasm back, and is re-engaging in life, enjoying his brand-new baby granddaughter. We have every expectation that Steve will thrive for decades to come and will continue to be an inspiration to Kansas Citians and a healer of their pets. It's amazing what a difference a "change of heart" can make.

# Mothers Are the Unsung Heroes of Life

By James H. O’Keefe, MD, with Katie O’Keefe, MA, LPC

*“The greatest lessons I have ever learned were at my mother’s knee. All that I am, or hope to be, I owe to my angel mother.”*

*Abraham Lincoln*

Looking at it purely from the scientific perspective, life on planet Earth would have long ago gone extinct if not for motherhood. A mother’s selfless, unwavering love and courage often makes the difference between life and death for her baby.

For unconditional love, you can count on your mother; after that, your dog might be the next closest thing. My wife, Joan, says that no matter what your age, when your mother dies you feel like an orphan. Maybe so, but our mothers and grandmothers can leave us a legacy of love, kindness, and joy that can stay with us forever.

A scientific survey done by the University of Richmond asked people of all ages and from all walks of life “Who is your hero?” The hands-down winner was “my mother.” And indeed, a strong case can be made that mothers are the true heroes of life.

Our mother, Leatrice, passed away at age 91 on Dec. 30, 2020. She was a practical, humble, down-to-earth woman. Lee treated everyone like family. With her gentle and lovely disposition and friendly sense of humor, one might think she led a charmed life. And she did marry the love of her life—Jim O’Keefe, a handsome lawyer



*Leatrice O’Keefe*



*Lee holding Kerry, with back row, left to right, Kevin and James; front row, left to right, Maureen and Gigi. Katie would be born about two years after this picture was taken.*

who turned out to be a wonderful companion and father.

But the fact is she was born into poverty. Leatrice arrived six days before Black Friday, the stock market crash that kicked off the Great Depression. Her mother, Alice, was a hard-working though penniless seamstress who raised four kids mostly alone. Her father struggled with alcohol addiction and was often homeless. Lee was a first-born child who by age 12 was scrubbing floors and washing dishes for a few of the wealthy families in Crookston, Minn. The money she earned helped her mother keep food on the table of their small, rented apartment.

Leatrice almost never did anything stupid. But there was this one time during a North Dakota snowstorm when she needed to pick up some things from Wally’s grocery store before dinner and brought her six little kids along. After hurrying to load all the bags and kids into the car, she

took a hard right as she pulled out of the parking lot ... 2-year-old Katie tumbled out the driver’s side rear door that was ajar. Fortunately, Katie was wearing a puffy yellow snowsuit and landed unscathed in a snowbank. We all shrieked in horror, but by the time Mom looked in the rear-view mirror, Katie was already on her feet and running toward the family station wagon.

Our sister, Gigi, recalled another hectic time from our childhood when Mom was upset and frustrated because of some mischief my brother, Kevin, and I had gotten into and she said in a loud voice, “I knew I should have been a nun!”

Our mother, like many mothers, was a self-proclaimed worrier. Katie asked Mom a few years ago, if, looking back on her life, she would have worried so much. She looked at Katie as if she had three heads. To Leatrice, worrying was only thinking of others and caring deeply about them. And she turned her worries into prayers. She

believed in the power of prayer and would often refer to a seemingly miraculous event as “Divine Providence,” which to her was simply an answered prayer. With her large family and many friends, she had a lot to pray for.

Leatrice insisted on relaxing and enjoying life. She loved to garden, sew, play the piano, knit, and read. She and Jim always carved out time for enjoyment—weekends at the lake cabin, travel adventures, and of course, the legendary happy hour. Everything stopped at 5 p.m. daily. That’s when it was time to talk, laugh, visit with friends and family. Even while she was in the hospital for the last few weeks of her life, she’d whisper to us, “Can you sneak me in a beer for happy hour?”

Growing up with a loving mother or grandmother makes the world seem like a more happy and secure place, and it brings out the best in us. Leatrice had a real gift for making each of the people in her life feel special. For her, love was a verb. Her daily actions were founded in thoughtful consideration, kindness, and generosity.

Our sister, Maureen, often said of our mother, “To know her, is to love her. And Leatrice had at least 12 people who thought of her as their very best friend.” One was Louie—a paranoid schizophrenic man who she befriended and looked out for. He didn’t trust anyone in the entire world except Leatrice. Mom showed us by example that to have a friend you need to be a friend.

Mothers and grandmothers are often the glue that bonds the family together. They instinctively understand that relationships are the most important thing in life. Lee stayed close with her family, neighbors, and friends, and actively engaged with her Birthday Club, Bridge Club, exercise class, morning coffee get-togethers



*Leatrice and Henri*

at Hardee’s, volunteering at St. John’s Church and the Sunset Nursing Home.

In my opinion, this proclivity to establish genuine emotional bonds with people was the single most important factor that kept her happy, healthy, and youthful throughout her long life. Despite all my health advice, which would generally “go in one ear and out the other,” Leatrice was never particularly conscientious about exercise or diet and for the first five decades of her life she would even smoke the occasional cigarette. But she was a star at building and maintaining meaningful, affectionate social connections.

Our mother’s favorite TV show was *Lucky Dog*, where Brandon takes a forlorn pup from an animal shelter, trains it and then finds it a forever home. About once every decade or two, Kevin or I would do something like that and expect Mom to adopt the dog. When her dog Gus died, Leatrice had just turned 80. We knew she needed another dog to keep her company and to get her out for walks, but Mom was insistent that she was too old for another dog.

So, we took matters into our own hands and found a super-cute little toy

poodle mix at Wayside Waifs Rescue in Kansas City. Then, my sister, Kerry, and I flew up unannounced and arrived at our childhood home to our mother’s great surprise. When she saw Henri in my arms she said, “He’s very cute, but he’s not staying!” I told her, “Mom ... Kerry and I have round-trip tickets, but Henri only has a one-way ticket.” I said if needed, I’d come back by year-end, which was just two months away, to take him back to our house to live with us in Kansas City. About a month later, her Christmas card arrived in the mail. Pictured were Lee with Henri perched on her lap, both sporting matching Christmas outfits (see adjacent photo).

Forest Witcraft said, “A hundred years from now it will not matter what my bank account was, the sort of house I lived in, or the kind of car I drove ... but the world may be different because of the love I showed to a child.” A century from now the love and caring your mother and grandmothers invested in you as a child will likely still be making a difference in the world. Leatrice’s lasting impact is easily appreciated by looking at the names of some of her granddaughters and great-granddaughters: Bridget Lee, Caroline Leatrice, Mazie Lee, Navy Lee, and Josie Lee.

Near the end of 2020, Leatrice had a cardiac arrest and had been airlifted from our little hometown of Grafton, ND, to a hospital in Fargo. She survived it, and we were scrambling to find the best rehab in Fargo where she could be transferred.

Unbeknownst to us, however, Lee had a plan of her own. Having her credit card number memorized, she had called an ambulatory transport service from her ICU bed to take her back to Grafton, and she pre-paid for the trip. After she had it booked, she told us, “I am going back home now,

## Mothers

and THAT’S THAT!” She made it back to her beloved Grafton for what would be her final weeks. This was classic Leatrice—she didn’t beat around the bush. She took charge and she remembered her numbers!

Lee had a deep faith and many times during her final weeks she would smile serenely at us and say, “I’m not afraid to die.” Ken Robinson wrote, “What you do for yourself dies with you when you leave this world, what you do for others lives on forever.”

Leatrice, like many mothers and grandmothers, spent most of her time caring for the people in her life, and her graceful and generous spirit is still alive. Taylor Swift sang about her late grandmother, Marjorie, “What died didn’t stay dead. You’re still alive, so alive in my head. And if I didn’t know better, I’d think you were talking to me now. I know better, but I still feel you all around.”

For decades when people would compliment Leatrice on how great she looked, she would say, “I wish I felt as good as I look.” Mom had a radiant beauty even up to the very end. But at the moment she passed, it was striking how her beauty suddenly vanished. I realized the secret behind her enduring beauty was her loving and caring spirit.

Kerry wrote, “Under the light of a full moon, my mom became our angel today. She retained her vitality, her absolute mental sharpness and sense of style to the very end. She loved and cared for her family, her friends, and her community fiercely.”

So, here’s to our mothers and grandmothers, to whom we owe our very existence. Mitch Albom wrote, “When you look into your mother’s eyes, you know that is the purest love you can find on this Earth.”

## Saint Luke’s Cardiovascular Consultants

Suzanne V. Arnold, MD  
Bethany A. Austin, MD  
Dimitri V. Baklonov, MD  
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Alan P. Wimmer, MD  
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Martin H. “Tony” Zink, III, MD

*Emeritus: James E. Crockett, MD, Allen Gutovitz, MD, Warren Johnson, MD, David McConahay, MD, Daniel Scharf, MD, and David M. Steinhaus, MD. In Memoriam: Robert D. Conn, MD, Geoffrey O. Hartzler, MD, and Ben McCallister, MD.*

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Dr. O’Keefe

**James H. O’Keefe, MD**  
**Editor-in-Chief**  
saintlukeskc.org

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## Wisdom Disguised as Humor

"When God made time, he made plenty of it."

**Irish saying**

"Give me six hours to chop down a tree, and I will spend the first four hours sharpening the axe."

**Abraham Lincoln**

"If you can't measure it, you can't improve it."

**Peter Diamandis**

"Life shrinks or expands in proportion to one's courage."

**Anais Nin**

"They tried to bury us; they didn't know we were seeds."

**Mexican proverb**

"I want to live my life like an incandescent light bulb: burn brightly my entire life and then one day suddenly go out."

**Okinawan adage**

"Honor those who seek the truth. Beware of those who found it."

**Voltaire**

"Everyone has a plan until they get punched in the mouth."

**Mike Tyson**

"Service which is rendered without joy helps neither the servant nor the served. But all other pleasures and possessions pale into nothingness before service which is rendered in a spirit of joy."

**Mahatma Gandhi**

"In order to keep a true perspective of one's importance, everyone should have a dog that will worship him and a cat that will ignore him."

**Derek Bruce**

"My wife kisses the dog on the lips, yet she won't drink from my glass."

**Rodney Dangerfield**

"You want a friend in Washington? Get a dog."

**Harry Truman**

"I never feel more alone than when I'm trying to put sunscreen on my back."

**Jimmy Kimmel**

"I'm at a place in my life when errands are starting to count as going out."

**Anonymous**

"Always tell the truth. It's the easiest thing to remember."

**Glengarry Glen Ross**

"We don't live longer when we try not to die, we live longer when we're too busy living."

**Matthew McConaughey**

"The first principle is that you must not fool yourself—and you are the easiest person to fool."

**Richard Feynman**

"Any fool can learn from experience. The trick is to learn from other people's experience."

**Bismarck**

"As our island of knowledge grows, so does the shoreline of our ignorance expand."

**John Wheeler**

"It is time to let go of the past. Live consciously and you will see that this moment cannot be fragmented into past and future. The present is your only address. Here and now is our only abode."

**Sadhguru**

"Evolution gave us eyelids to close our eyes but no corresponding structure to close our ears. This suggests that always listening is essential to our survival."

**Kate Murphy**

# Honoring the Legacy of Dr. Ben McCallister

If you're reading this newsletter, you've probably been a patient of one of the many physicians with Saint Luke's Cardiovascular Consultants, but do you know about the man behind the practice, Ben D. McCallister, MD, MACC, and the legacy that he inspired during his lifetime?



*Dr. McCallister*

Dr. McCallister was a visionary whose focus was on providing his patients with the best care possible. His career in medicine began after graduating with his medical degree from the University of Kansas, followed by service in the U.S. Army Medical Corps based at Tripler Army Hospital in Hawaii.

Dr. McCallister completed his training in internal medicine and cardiology at Mayo Clinic. In 1969, he left his staff position to move back to Kansas City to help create Saint Luke's Cardiovascular Consultants, and co-founded the world's first dedicated heart hospital, Saint Luke's Mid America Heart Institute.

His vision was to create a stand-alone heart hospital equipped and staffed with all the tools necessary to optimize outcomes for cardiovascular patients. His passion for his patients, for clinical research, and for the community, led to him being honored as a Master of the American College of Cardiology. When bestowing this title, the College highlighted Dr. McCallister's leadership roles and his contributions to the development of cardiovascular guidelines and his initiatives in measuring the quality of cardiovascular

care, including the formation of the College's National Cardiovascular Data Registry.

His commitment to cardiovascular research led to him being named the Missouri Endowed Chair and Director of Cardiovascular Research at Mid America Heart Institute and a Professor of Medicine at the University of Missouri–Kansas City.

Through his leadership, one of the first cardiovascular outcomes research programs in the world was created and posthumously renamed in his honor as the Ben McCallister, MD, Clinical Scholars Program. His foresight provided subsequent generations of cardiovascular researchers with the support and dedicated time needed to pursue research interests, resulting in one of the premier and most academically productive cardiovascular research programs in the United States.

In 2005, the first clinical scholar in this program was Mikhail Kosiborod, MD, now the vice president of research for Saint Luke's Health System, and co-director of the Saint Luke's Michael & Marlys Haverty Cardio-metabolic Center of Excellence, as well as a Professor of Medicine at the University of Missouri–Kansas City.



*Dr. Kosiborod*

An internationally recognized expert in the fields of diabetes and cardiovascular disease, he has authored or co-authored over 250 peer-reviewed publications and has now been named the first Ben McCallister, MD, Endowed Chair in Cardiovascular

Research.

"Dr. McCallister's passion and drive were contagious, with quality and professionalism evident in all he did," said Tracy Stevens, MD, medical director of the Muriel I. Kauffman Women's Heart Center and one of the many cardiologists Dr. McCallister inspired.

"When I was a medical student at Saint Luke's, the respect for Ben was immediately obvious. On the busy general surgery rotation, the chief resident sat me down and said, 'Look—this is our motto: you eat when you can, you sleep when you can, you don't mess with the pancreas, and you don't mess with Big Ben!'"

Dr. McCallister's dedication went beyond the hospital's walls, extending to the community at large. He contributed to the development of the Saint Luke's Cardiac Rehabilitation program. Mill Creek Park to the east of Saint Luke's Hospital on the Plaza was not only largely designed and developed by Dr. McCallister, but its future was secured through an endowed fund established by his fundraising efforts.

Though Dr. McCallister's contributions to his profession were many, his love for his family stood out to Dr. Stevens. "I will always remember the way Ben's eyes lit up and the corners of his mouth rose when sharing photos and stories about his wife, Ginny, their five children, and their 16 grandchildren," she added.

"Our patients, their families, and our community have all benefited from the strong foundation Dr. McCallister built here at Saint Luke's," Dr. Stevens said. "We may have lost our innovative colleague and honest friend in 2012, but we stand proudly on his shoulders and remain committed to carrying on his lifesaving vision."

# More Evidence that Omega-3 Benefits the Heart

By James H. O’Keefe, MD

**T**he latest studies provide solid evidence for the benefits of omega-3 (fish oil) in improving overall health and longevity. An expert meta-analysis of well-designed, randomized placebo-controlled trials is considered the most reliable (highest level) evidence in modern medicine for determining the efficacy of a drug or other therapy.

Benasconi, Lavie, and colleagues very recently performed such a meta-analysis, which included 42 randomized placebo-controlled trials with approximately 150,000 participants in total. This definitive meta-analysis showed that omega-3 supplementation conferred cardiovascular (CV) protection, including a highly significant 35% reduction in risk of fatal heart attack, and a statistically significant decrease in all heart attacks. These authors concluded that omega-3 specifically in the form of EPA and DHA, is an effective lifestyle intervention for protection against cardiovascular disease.

Another impressive new meta-analysis, this one published in the *American Journal of Cardiology*, showed that the combination of omega-3 and a statin is effective for reducing atherosclerotic plaque in the coronary arteries. The study found that when omega-3 supplementation was combined with a statin cholesterol-lowering medication, it was better than the statin alone for regressing atherosclerosis (melting plaque) and decreasing the vulnerability of the plaque to rupture (the usual cause of a heart attack). The omega-3 + statin combination was also more effective for reducing inflammation than a statin alone.



My good friend, William Harris, PhD, also known as the “cod-father” of omega-3 research, recently published a comprehensive meta-analysis. This one was comprised of 17 prospective cohort studies examining the associations between blood omega-3 levels and risk for death during 16 years of follow-up. This study, which was published in one of the prestigious *Nature* journals, included 42,466 individuals, and found that having a high level of omega-3 in one’s cell membranes was associated with a 15 to 18% lower risk of death from any cause.

Yet another new study by Dr. Harris and colleagues, based on the famous Framingham Offspring study, reported that the decrease in life expectancy due to a low omega-3 blood level, was about equal to the life-shortening effects of chronic cigarette smoking—about five years for either one. It’s important to point out that unlike many risk factors for death or heart attack such as age, gender, diabetes, and family history, your omega-3 level is very easy to change for the better. Just eat more fish and/or take an omega-3 supplement.

One potential downside of omega-3 is a possible increase in the risk of developing atrial fibrillation (AFib). In

a recent large, randomized placebo-controlled trial, the REDUCE-IT study, 3% of the group receiving 4 grams per day of EPA (one of the major omega-3 fats) had AFib during the study compared to 2% of the patients in the placebo group.

Importantly, even with this increase in AFib occurrences, the omega-3 patients had a 29% lower risk of stroke and a 25% lower risk of major adverse CV events, like heart attack or death. This increase in risk of AFib from omega-3 appears to be dose dependent, with minimal effects on AFib at doses of 1 to 2 grams/day of EPA + DHA.

For most individuals, the benefits of omega-3 far outweigh the risks, especially if you don’t consume oily fish like salmon or sardines at least two or three times per week. Keeping your omega-3 levels in the high-normal range appears to increase life expectancy, reduce risk of heart attack and stroke, and improve brain health. If you have AFib, talk to your doctor about whether omega-3 is right for you; and discuss what dose of EPA + DHA is best for your issues.

*Dr. O’Keefe is the founder and Chief Medical Officer of CardioTabs, a nutritional company.*

## Drugs for Weight Loss That Also Protect Cardiovascular Health

By James H. O’Keefe, MD

**B**ill has had type 2 diabetes for over 20 years, and 11 years ago he had a heart attack. For most of his life, he has struggled with obesity, which has played a major role in causing his heart disease and diabetes. Over the past two years we added Ozempic and Farxiga to his metformin, and his weight has gradually come down 30 pounds, so that now he is no longer obese.

Most importantly, he feels dramatically better and finds it easier to enjoy swimming and walking. His cholesterol and blood pressure are much better, too. Bill says, “I no longer have cravings for snacks all the time, and I’m satisfied with smaller meals, like cottage cheese and vegetables. I’m not denying myself treats, but I just don’t desire them like I used to.”

Bill is like approximately 70% of American adults who are overweight or obese. This is not just a vanity issue. Obesity increases risks for heart disease, stroke, diabetes, and 13 different types of cancer, including breast, colon, pancreas, and kidney cancers. Encouragingly, dropping 5 to 10% of one’s body weight through diet and exercise has been associated with decreased cardiovascular (CV) risk in obese or overweight patients.

Two relatively new classes of drugs for type 2 diabetes don’t just lower elevated blood sugar levels, they also produce substantial weight loss for most overweight or obese individuals. Oh, did I mention that these drugs also reduce risks for heart attack, stroke, atrial fibrillation, heart failure, and kidney failure? This is why physi-



*Adding weight loss drugs to Bill’s medical care is helping him control his weight, his diabetes, and his risk for heart disease.*

cians like me are prescribing more of these game-changing drugs all the time.

The most effective class of drugs for weight loss is the glucagon-like peptide-1 (GLP-1) agonists. These include semaglutide (Ozempic), dulaglutide (Trulicity), and liraglutide (Victoza or Saxenda). Among the GLP-1 agonists, we prefer semaglutide and dulaglutide because these require only one injection per week, and patients can easily do it on their own at home. These two medicines also have the best data in this drug class for weight loss and CV protection.

The GLP-1 agonists suppress appetite by mimicking a hormone that targets brain regions regulating hunger and food intake. These drugs also slow the movement of food from the stomach into the small intestine—making

a person feel full faster and longer, so they tend to eat less. These effects combine to produce dose-dependent weight reduction— typically 6 to 15% of body weight is lost with the higher doses stimulating more weight loss.

Wegovy, a higher dose of semaglutide, was just approved in June 2021 by the U.S. Food & Drug Administration (FDA) for weight loss. A recent study using this higher dose of semaglutide (2.4 mg injection once weekly) reported about a 15% reduction in body weight (the average patient lost 33 pounds). These medications must be dosed up gradually over three to five months to minimize gastrointestinal side effects such as nausea, constipation, diarrhea, and indigestion.

The second new class of medications associated with weight loss and improved cardiovascular health are the sodium glucose cotransporter 2 (SGLT-2) inhibitors. These once-daily oral medicines (taken as one pill each morning) include empagliflozin (Jardiance), dapagliflozin (Farxiga), and canagliflozin (Invokana).

The SGLT-2 inhibitors are less potent at weight loss than the GLP-1 agonists, typically lowering body weight by 3% (about four to eight pounds) by causing the kidneys to excrete approximately 300 calories of sugar per day in the urine, even in someone without diabetes. This off-loading of sugar into the urine stimulates the body to tap into belly fat to use as a fuel for energy, resulting in weight loss especially around the waistline.

Here at Saint Luke’s Cardiovascular Consultants in the Haverty Cardio-



## HEART HEALTHY LIFESTYLE

metabolic Center and Duboc Cardio Wellness Center, we use these GLP-1 agonists and SGLT-2 inhibitors as standard treatment for our patients with type 2 diabetes, and increasingly we also use them in non-diabetic patients who are overweight or obese and/or who are at risk for developing heart failure or progressive kidney disease.

We are proponents of the SGLT-2 inhibitors and GLP-1 agonists because these drugs significantly lower future risks of heart attack, stroke, heart failure, atrial fibrillation, and renal failure. In several landmark studies, these benefits were conferred equally well in people with and without diabetes.

When we use a GLP-1 agonist and a SGLT-2 inhibitor together, the patients tend to experience even better weight loss than when we use either drug alone. Patients taking GLP-1 agonists and/or SGLT-2 inhibitors typically see improvements in their blood pressure and cholesterol levels as well, and reduced levels of inflammation.

The GLP-1 agonists are usually administered by injection (though we now have an oral form of semaglutide called Rebellus). As with any medication, there is a risk of side effects, some serious. The most common side effects with GLP-1 agonists are nausea, diarrhea, and constipation. These usually improve with time, often abating after the medication has been taken for a few weeks. Also, pancreatitis can be a rare complication of GLP-1 agonists.

The main side effects of the SGLT-2 inhibitors occur due to the sugar in the urine, so they can increase risk for yeast infections of the genitals and groin regions, particularly among females. This risk can be minimized

by paying extra attention to hygiene (taking a bath or shower once or twice daily) and using a wet wipe to remove any excess urine off skin surfaces after urination. These drugs also act as mild diuretics, causing some fluid excretion in the urine, so we encourage anyone starting an SGLT-2 inhibitor to stay well hydrated.

The GLP-1 agonists and SGLT-2 inhibitors are newer drugs that are still on patent so they are expensive. Metformin is an old drug that dates back to the 17th century, when it was used as French lilac—an herbal remedy for treating diabetes. Metformin lowers blood sugar by reducing the liver's production of glucose, and it mildly suppresses appetite. For decades, it has been the first-line treatment for diabetes.

Metformin has also been increasingly popular among non-diabetic and prediabetic people because it might improve overall longevity. This theory is being tested in a large ongoing study. Metformin causes modest weight reduction that varies from person-to-person, but typically is in the range of about four to seven pounds. The main side effect of metformin is nausea.

We encourage people who are actively trying to lose weight to start with diet, exercise, and lifestyle changes, including making it a priority to get at least seven hours of sleep each night. Then, if appropriate, we can consider adding one or more of these weight-loss medications.

A *New England Journal of Medicine* article from May 6, 2021, reported that a GLP-1 agonist works synergistically with diet and exercise to achieve

and maintain weight loss. All patients in the study were obese at baseline and were encouraged to follow a healthy diet for inducing weight loss. Then they were randomized into four groups, 1) liraglutide at a dose of 3 mg per day, 2) an exercise program (150 minutes/week of moderate exercise or 75 minutes/week of vigorous exercise), 3) the combination of exercise + liraglutide, or 4) placebo injections daily.

All three active treatments—exercise alone, liraglutide alone, and combo exercise + liraglutide, each significantly decreased body fat and waist measurement compared to placebo.

However, the reductions in weight and waistline were twice as large in the combo group compared to the exercise-alone group or the liraglutide-alone group. At the end of the one-year study, the people in the GLP-1 agonist + exercise combo group lost an average of 15.7% of their body weight, which translated to a mean weight loss of 37 pounds per person.

In this study, the participants who received the GLP-1 agonist treatment reported more gastrointestinal side effects like nausea and decreased appetite, and had gallstones more often than the people in the placebo group.

We are entering an exciting new era in weight management where we have safe and effective drugs that when used in conjunction with diet and exercise, can produce substantial and lasting loss of body fat. Talk to your doctor about the risks and benefits of these therapies and whether you might be a candidate for one of them.

*Dr. O'Keefe speaks at educational programs for Boehringer Ingelheim, Lilly, and Astra Zeneca, makers of SGLT-2 inhibitors and GLP-1 agonists.*

## Keto—The Most Effective Diet for Weight Loss

James H. O’Keefe, MD

**G**ary Taubes lays out the scientific rationale for a low-carb, high-fat diet and lifestyle in his excellent new book *The Case for Keto*. Taubes said he wrote this book to help “those of us who fatten easily.” And he identifies himself in this group of people for whom controlling weight is not easy.

Standard diets don’t work for many, in part because the modern diet is chock full of easily digestible and delicious carbs—aka carbage—which causes an insulin spike in your blood. This leads to insulin resistance, where your brain is fooled into thinking it’s starving all the time. In fact, many Americans are addicted to carbs, leaving them constantly craving the sweet and starchy treats that are everywhere in our culture. This vicious cycle makes it all but impossible for many people to lose weight and keep it off.

Some people can get away with eating carbohydrates like products made from wheat (which stimulate the opiate receptors in the brain), rice, potatoes, and foods and drinks with added sugar (which are also addictive), without gaining weight, but many others can’t. Those who tend to have high insulin levels will easily put on pounds when consuming even a moderate amount of carbs.



Insulin is a hormone that tells your body to store the calories you consume as fat around your midsection. Taubes argues that the keto diet can be an effective solution for people who can’t lose excess weight. “Lean folks aren’t like us. They don’t get fat when they eat carbohydrates; they have a choice to live with carbs or not. We don’t.”

For this strategy to work, keto should not be a short-term diet “fix,” but a low-carb lifestyle for the long-term. If you keep your carb intake to less than about 50 grams per day, you will switch your metabolic engine over from a sugar-burning machine to a fat-burning machine.

In this state you melt belly fat, and then your liver turns these fatty acids into ketones—a super fuel that generates more energy and throws off less smoke compared to sugar. Ketones can help you think more clearly, and they also suppress hunger and keep insulin levels low, so you won’t be craving food and longing for carbs.

Following the keto diet means largely eliminating staples like bread, rice, potatoes, sweets, chips, pastries, baked goods, donuts, beer, pasta, and all sugary drinks (including fruit juices). Like many addictive substances, the more you “use” refined carbs, the more you need them. But if you shun these sweet and starchy foods and sugary drinks, they will lose their grip over you, so that it will become easier and easier to avoid them.

Most cardiologists think of keto as a dangerous diet, and for good reason. People on a keto diet need to get 70% or more of their calories from fat, and traditionally this has been done by eating mostly foods high in saturated fats like cheese, butter, cream, fatty red meat, poultry skin, and coconut and palm oils. These foods may help you lose weight if you avoid carbs, but will skyrocket your bad LDL cholesterol—which is a recipe for igniting atherosclerosis (plaque build-up) in your arteries and heightening your risk of heart attack and stroke.

But there is a healthy way to follow keto by getting most of your calories from healthy foods naturally high in unsaturated or monounsaturated fats. This is, unfortunately, a relatively short list that includes nuts, seeds, avocados, olive oil, and fatty fish like salmon, trout, herring, and sardines.

The other crucial part of the heart-healthy keto diet is consuming a ton of non-starchy veggies like broccoli, leafy greens, onions, garlic, tomatoes, cucumbers, peppers, mushrooms, and asparagus. Beverages ingested should be almost exclusively water, sparkling water, unsweetened coffee and/or tea, and if desired, a modest amount of alcohol in the form of dry (not sweet) red wine or distilled spirits. The standard keto diet is highly effective for weight loss, and lowers blood glucose and triglyceride levels, quelling the fires of chronic inflammation. The healthy keto diet will also accomplish these things while generally keeping your blood cholesterol in the normal range.

Many people find it easier to follow a keto diet if they take a daily fiber



supplement like unsweetened psyllium (such as Metamucil), mixed in a large glass of cold water. This helps to prevent constipation that can come from cutting out fiber-rich foods like whole grains. Additionally, you may need to be on a cholesterol-lowering drug like a statin if your bad LDL cholesterol levels rise on the keto diet.

Kristin is a 56-year-old who has always been an exercise enthusiast and takes very good care of herself. She is of normal weight and is highly fit. Out of the blue about seven years ago she developed latent autoimmune diabetes in adulthood (LADA)—which is essentially late-onset type 1 diabetes.

Shortly after being diagnosed with diabetes, Kristin had a severe life-threatening spell of hypoglycemia (low blood sugar) triggered by an accidental overdose of insulin due to a malfunction of her insulin pump. So, she decided to control her type 1 diabetes predominantly with diet, not insulin, a radical plan. But Kristin is a highly disciplined and intelligent woman who figured out that if she

avoided eating sugar and virtually all starchy carbohydrates, she could get by on very little insulin.

Kristin said, “My insulin needs are minimal due to the healthy keto diet. My daily need for short-acting insulin is minimal, only 7 to 9 units (about 90% less insulin than most people with type 1 diabetes), because of the way I eat. I hate to call it the ‘keto diet’ because it’s really a lifestyle that’s a sustainable way to live a high-quality life. You’ll have more energy and focus, with fewer cravings and less inflammation. And a person can adhere to this diet whether they’re a lazy cook or a great cook. I wish more people would make a conscious choice to eat this way. The benefits are astounding.”

Now Kristin never has low blood sugar spells anymore, and her hemoglobin A1c, which is a measure of long-term glucose control, is 5.3, which would be excellent even for a person WITHOUT diabetes.

The specific eating style that Kristen follows is the low-carb, high-fat keto lifestyle that is rich in foods like nuts, seeds, avocados, fatty fish, and extra-virgin olive oil. It also is very high in non-starchy vegetables, along with about one-half cup of berries per day—the exact diet I am proposing in this article, and pretty close to what I eat myself.

To summarize, this low-carb, high-unsaturated fat eating style that is rich in vegetables will keep your insulin and hunger levels low and make it easier to get rid of excess baggage around your waistline. Ask your doctor if this type of diet might be good for you. If you get the thumbs up, give it a try. What do you have to lose?



## Saunas: A Secret Weapon for Longevity and Health?

By John Camoriano, MD,  
Mayo Clinic, Scottsdale, Ariz.

**D**uring my integrative medicine fellowship at the Andrew Weil College in Tucson, Ariz., we had an optional activity that was offered one night—Indian sweat lodge. Having nothing else planned, I signed up, and joined 10 strangers in baggy clothing as we shuffled nervously into a low-roofed, thatched structure made of desert brush.

We formed a semicircle in the dark while someone carefully loaded red hot rocks with a shovel into a fire ring in the center of the room. A native “medicine man” poured water and aromatic leaves over the red-hot coals. Our group exited the sweat lodge about 40 minutes later, relaxing in the cool desert air, sweaty, yet strangely refreshed and connected with one another, as well as with the earth and our inner spirit. This was my introduction to the benefits of sauna.

Over the centuries, many cultures around the world have adopted practices of personal heat exposure in saunas, sweat lodges, and hot mineral springs for improving health and wellness. Why has this practice popped up across the globe? The short answer is, “because it works.”

A literature review in the *Mayo Clinic Proceedings* in 2018 summarized the extensive medical research done on sauna use. The benefits read like a “Who’s Who” list of amazing superpowers. Sauna use has proven benefits in reducing blood pressure and lowering risks of cardiovascular death, all-cause mortality, stroke, Alzheimer’s, respiratory disease, pneumonia, muscle pain, and arthritis.



*Dr. Camoriano enjoys the benefits of sauna on a regular basis.*

The Finns are the culture with the greatest national adoption of sauna use. Their practices vary, but in general, the Finnish sauna uses a “dry heat” that emanates from hot stones, much like the Navajo sweat lodge. Water is poured over the sauna stones until the humidity reaches about 10 to 20%, which generates more heat and sweat. Temperatures reach 170° to 200° Fahrenheit, and the duration of exposure typically varies from 5 to 20 minutes.

What do the data show from long-term Finnish studies of sauna? One study of over 2,300 Finnish men followed for 20 years showed that there was a dose-response (more sauna use = more benefit) in the reduction of sudden cardiac death, fatal coronary heart disease, non-fatal heart disease, and all-cause mortality. You read that right—fewer deaths from ALL causes! This study was particularly convincing because it controlled for other factors that can affect heart disease like age, obesity, blood pressure, cholesterol, smoking, alcohol use, previous heart

attacks, diabetes, inflammation, resting heart rate, exercise, and socioeconomic status.

But wait, there’s more! That same study showed men who had four to seven sauna sessions per week compared with those who had one sauna session per week had a 65% reduced risk of Alzheimer’s disease.

Another Finnish study showed that sauna also conferred benefits to women. That study of 1,628 men and women followed for 15 years showed that having regular sauna baths (four to seven sessions per week) compared with one sauna session per week was associated with a 62% reduced risk of stroke.

Some have theorized that sauna use merely mimics the effects of exercise without the effort. Indeed, the heart rate of a person in a sauna can increase into the 130 beats-per-minute range. The Finns have shown, however, that the effects of sauna use are different from and additive to the benefits of exercise.

Another study evaluated 2,277 men over 26 years for the interactive effects of cardiovascular fitness and frequency of sauna bathing. It showed that exercise and frequency of sauna bathing are independently associated with a reduced mortality risk and that a combination of good cardiovascular fitness and frequent sauna bathing appeared to bestow additional survival benefits.

But how does it work? More research is needed but some clues exist. Regular Finnish sauna baths are associated with decreased levels of inflammatory markers such as high-sensitivity C-reactive protein, fibrino-

gen, and white blood cells at baseline and long-term follow-up. There is evidence that sauna exposure could boost the immune system, which may partly explain why sauna baths reduce susceptibility to common colds and prevent infections in healthy individuals.

It has recently been discovered that a class of proteins called heat shock proteins (HSP) are key proteins that protect us from Alzheimer's by carrying damaged proteins out of the brain. Sauna use increases these beneficial HSPs.

Beyond the physical health benefits, most people who develop a habit

of sauna bathing find it works like magic for boosting mood, decreasing stress, and improving sleep. Just make sure you rehydrate well and restore lost beneficial minerals like magnesium and potassium after a sauna. You can do this by drinking lots of water (mineral water is ideal) and an 8-ounce glass of low-sodium V8 juice. If you have heart disease, talk with your doctor to get clearance to do sauna therapy. Start slow, with lower heats and shorter sessions. Bottom line: consider adding regular sauna use to your toolbox of tricks for living a longer, healthier life!

## FAME Classes Provide Foundation for Better Diet

Tracy Stevens, MD, cardiologist, and Lucas Schubert, FAME educator and nutritional health coordinator for Saint Luke's Hospital of Kansas City, are on a mission—a mission to help you learn that food is powerful medicine!

Dr. Stevens, who also serves as the medical director of the Saint Luke's Muriel I. Kauffman Women's Heart Center, said she's seen the difference a healthy diet can make in her patients' lives. Her journey to find a program the hospital could partner with to teach these principals led her to the Food as Medicine Institute at the National University of Natural Medicine in Portland, Ore., and a course called Food as Medicine Everyday (FAME).

The FAME course doesn't focus on a diet for a specific condition, such as diabetes, but instead offers individuals help improving their overall health through diet and other lifestyle changes. Since the pandemic began, the 12-week virtual nutrition education series has been broadcast live from the FAME kitchen at Saint Luke's Muriel I. Kauffman Women's Heart Center.

From the comfort of your home, Lucas can teach you about foundational nutrition concepts that illustrate the benefits of a more whole-foods way of eating. The highlight of the class is Lucas' guided cooking demonstrations showcasing the ease of making delicious and nutritious meals.

In addition to cooking, the virtual series features interactive nutrition lessons. Topics include the benefits of whole foods versus processed foods and learning about macronutrients and their food sources. Students also are taught to read food labels, establish realistic strategies for healthy eating, learn about foods' impact on blood sugar regulation, and acquire tips for grocery shopping and eating on the go.

Classes are 90 minutes each, and the series lasts for 12 weeks. There is a minimal fee of \$100.

For more information about the FAME courses, visit [www.saintlukeskc.org/FAME](http://www.saintlukeskc.org/FAME). To register, call 816-932-5784.



Lucas Schubert, FAME educator and nutritional health coordinator, and Tracy Stevens, MD, cardiologist, in the FAME kitchen.

## When It Comes to Your Genes, Knowledge Is Power

By James H. O’Keefe, MD

**W**ant to discover some truly captivating reading? Have your DNA analyzed and you’ll get an easy-to-read translation of the genetic code that makes you, you.

23andMe is an American-based personal genomics company that for \$200 out-of-pocket cost (not covered by health insurance) will do a comprehensive analysis of your DNA.

To be transparent, I have no financial relationship with 23andMe, other than ordering kits for all seven of the people in my immediate family. Then I had to badger each of them until they spit a few milliliters of saliva in a little test tube and sent it back in a self-mailer box supplied by the company. It takes about a month until you get an email with a link to your genetic analysis.

When you go to the 23andMe website and sign in, you will find a treasure trove of useful personalized genetic insights and fascinating information about your ancestry and potential future health issues.

The information is all explained with cool graphics and suggestions about precise steps that will help you to maintain ideal health as the years go by. I also love that 23andMe continually updates their database and regularly re-analyzes your DNA, probing for important additional genes without asking for more saliva or more money.

For instance, the precise make-up of my ethnic ancestry has morphed through the years as 23andMe has refined their algorithms. Currently, I’m 61% Irish, 25% Norwegian, 10% Scottish/English, 3% French, and 1% Native American—though I’m sure the



mix may change again as more data accumulate.

23andMe has been doing genotyping since 2006, and by now has analyzed the DNA of over 12 million people. This is a direct-to-consumer genetic test that screens for hundreds of genes that code for specific traits, conditions, or diseases, including over 55 health reports that have been approved by the U.S. Food and Drug Administration (FDA).

These reports will tell you, for instance, if you have an increased risk for Alzheimer’s disease, macular degeneration (a preventable form of blindness), breast cancer (via BRCA variants), Parkinson’s disease, or diabetes, just to name a few. It will also tell you precisely where and when your ancestors lived, and whether you’re likely to have any number of traits such as early hair loss, stretch marks, muscular potential to be an elite athlete, fast metabolizer of caffeine, light sleeper, fear of heights, freckles, and facial flush with alcohol.

If you grant 23andMe permission to do so, it will give you names of DNA relatives who are directly related to you, such as a parent, with whom you would share 50% of your DNA, all the

way down to a distant cousin, with whom you might have only 0.08% shared DNA. I have 1,500 relatives on my list so far. Be warned, this is probably the most potentially fraught aspect of precise DNA analysis. Many people discover blood relatives on close-by limbs of their family tree who they never knew existed until they had their genome analyzed.

A substantial portion of people believe that they would rather not know about diseases for which they might be at increased risk of developing in the future. This ostrich strategy, or “head-in-the-sand” approach is a natural tendency. In scientific jargon this is a cognitive bias that makes us prefer to avoid information which is potentially unpleasant. But forewarned is forearmed—when you know about a potential problem or disease that you are predisposed to, you can take proactive steps to avoid coming down with this condition.

My perspective is that “genes load the gun, but lifestyle/diet pulls the trigger.” In other words, your genes are virtually never your destiny; nearly always there are things you can do to influence whether those genes get expressed—that is to become activated.

And let's be clear, we all have issues, whether you know about them or not. Choosing to remain "in the dark" about hidden landmines on the road of life seems unwise to me. And in the 21st century, this kind of genetic information will be increasingly relevant and necessary for staying healthy.

For example, 30 years ago I figured out that I have one copy (allele) of the C282Y gene that predisposes to hemochromatosis, a disease where the affected person stores too much iron. This can cause liver disease, heart failure, and diabetes. If I had two copies of that specific hemochromatosis gene, I would be at an even higher risk, but even with one allele, I noticed that my iron and ferritin (measure of stored iron) levels tended to run high. So, for three decades I have given blood about four times each year. By now I've given over 100 pints of blood at the Community Blood Center of Kansas City, and my ferritin stays low normal—just where I like it to be.

In my opinion, 23andMe is a great value in modern health care testing; right up there with a \$50 Cardioscan—the high-speed CT scan that screens for calcified coronary plaque.

Nuanced genotyping will enable you to understand and benefit from the intriguing and diverse things that your DNA has to say about you based on your unique genetic make-up.

Nobody's perfect. Figure out what your vulnerabilities are and do things to protect yourself. A survey of people who underwent genetic screening via 23andMe revealed that in response to their genetic findings, 76% reported making healthier lifestyle choices, 55% reported eating a healthier diet, 51% reported setting new personal health goals, and 45% reported increasing their exercise.

## The Stoic Outlook on Life as a Modern Philosophy

By James H. O'Keefe, MD

**T**here is an ancient branch of philosophy called Stoicism that is being rediscovered as an effective tool for successfully dealing with the unique stresses imposed by the modern world. Stoicism, when followed on a daily basis, can make us happier, wiser, more resilient, and more virtuous—all of which can make us better people. Many great leaders have embraced aspects of the Stoic philosophy including George Washington, Thomas Jefferson, Theodore Roosevelt, Warren Buffet, and Elon Musk.

### *Stress Can Make Us Stronger*

A few decades ago, a grand experiment called the Biosphere was conducted in the Arizona desert where eight people lived under a huge steel and glass enclosure with water, air, sunshine exposure, and nutrient-rich soil. One of the many failures of Biosphere was that its trees, after growing to a certain height, would simply fall over. Why? Because the Biosphere lacked an essential element for their health—wind. In nature, trees are buffeted by winds, which activate genes that cause them to grow deeper roots and stronger bark—making them sturdier and more durable.

We waste a great deal of time and energy trying to stay in our own bubble and avoid being affected by the winds of change and the strains imposed by modern life. But the challenges and burdens of our lives can be like the winds that strain a tree throughout its existence. These "winds of change" can force us to grow deep and strong roots and make us more resilient to stress.

Every single one of your ancestors lived long enough to have and successfully raise at least one child. You are the end product of an unbroken string of survivors extending back to the beginning of life on Earth 3.7 billion years ago! Resourcefulness, creativity, and toughness are hardwired into your nature but you won't uncover that resilience unless you push yourself to face life head on and become stronger—physically and mentally.

About 2,000 years ago a famous Stoic, Marcus Aurelius, was championing a fundamental truism that is more relevant today than ever—the connectedness of all life. He wrote, "Meditate often on the interconnectedness and mutual interdependence of all things in the universe." Marcus is talking about the Stoic philosophers' concept of *sympatheia*—the notion that all living things are mutually woven together and therefore share a kinship with each other.

We need to frequently remind ourselves of *sympatheia* because it's easy to lose sight of this concept, and become selfish. It's simpler to just care for the people in our immediate surroundings—our family and friends, and not care about the rest of the people in the world, but Marcus knew *sympatheia* was as key to man's survival then as it is now.



## Stay Sharp: How to Build a Resilient Brain

By James H. O’Keefe, MD

In his great new book *Keep Sharp*, Dr. Sanjay Gupta, a neurosurgeon and journalist, spells out how to build a hardy and durable brain that propagates new neurons and mental abilities regardless of one’s age. He writes that to stave off age-related brain disease like Alzheimer’s and Parkinson’s disease we must get out in front of it preventively.

Dr. Gupta says, “Clean living can slash your risk of developing a serious mind-destroying disorder, including Alzheimer’s disease, even if you carry genetic risk factors.” But the seeds of dementia are planted decades before symptoms appear, so there is no time to waste—nurturing a healthy brain must become one of our top priorities.

The villains trying to destroy the brain are a rogue’s gallery of familiar faces that are also out to ruin our heart. These include an inactive lifestyle, unhealthy diet, tobacco, social isolation, depression, inadequate or disturbed sleep, lack of mentally stimulating activities, and overconsumption of alcohol.

Dr. Gupta says, “Sharing a smile and a laugh may be the best medicine there is. And don’t underestimate the power of appropriate touch. Hand-holding has been found to decrease levels of the stress hormone cortisol. A friendly touch can also be calming. In other words, the simple act of touching another human is a way of connecting with others to protect ourselves and them.”

Tara Parker-Pope, in her recent *New York Times* article, suggested that we all get back to hugging each other. There is a surprisingly robust body of science documenting the health benefits of hugs. The bottom line is that hugs are great for your mental and physical health and help us cope better with life’s inevitable stresses.

During the pandemic many people missed out on physically connecting with others, and COVID-19 made us worry about hugging friends and even family members who weren’t living with us. But now, especially if you’ve been vaccinated, you can start to hug again, but wear a mask.

Hugs help many people feel more emotionally supported and personally connected and can calm anxiety and even improve our ability to cope, especially during trying times. Supportive touch is a powerful way to remind our family and friends that we love them and that we care about each other.

Another superb book on the topic of avoiding age-related erosion of mental acuity is *The End of Alzheimer’s Program: The First Protocol to Enhance Cognition and Reverse Decline at Any Age*, by Dale Bredesen, MD. The foundation of this program is what he calls the 12/3 ketoflex diet. This means fasting every night at least 12 hours and making sure that three of those hours without calories come after dinner, but before going to bed. The ketoflex refers to a low-carbohydrate, mostly plant-based diet that is high in good fats like omega-3, extra-virgin olive oil, avocados, nuts, and seeds, and devoid of sugar and grains. Most of the animal protein in this diet comes from fish and seafood.

# Tips to Build a Resilient Brain

## **Connect**

- Get a dog and be affectionate (lots of hugs and kisses), and get them out for at least one walk every day.
- Make socializing with family, friends, neighbors, and co-workers a top priority.
- Go outside and play with your friends. Physically interactive play is like Miracle-Gro for the brain.
- Plant and tend a garden. Nurture plants inside and outside your home.

## **Reboot and Restore**

- Seek out new experiences, learn new skills on your computer or smart phone, learn to play a musical instrument, study a foreign language. Create something. Dance.
- Shoot for seven to nine hours of sleep nightly. Get to bed by 10 p.m. each night.
- Make yoga and/or mindfulness meditation part of your routine.
- Get at least 8,000 steps per day; 10,000 would be even better.
- Fast 12 to 16 hours most days. Ideally, eat breakfast later and dinner earlier.
- If you drink alcohol, keep it to not more than one drink per day, preferably wine before or with the evening meal. It's a perfect time to visit with friends/family.

## **Nourish Your Mind**

- Choose mostly natural whole foods and salt to taste. Unprocessed foods are naturally low in sodium, so a little added salt won't hurt. Besides, we tend to eat more nutritious foods like vegetables, nuts, and fish if we have the green light to add a pinch of salt.
- Consume at least 4 or 5 tablespoons of extra-virgin olive oil per day; best on leafy greens with vinegar or lemon juice.
- Make nuts your go-to snack; tree nuts are best.
- Shun any and all added sugar—it's brain poison.
- Avoid fried foods, fast food, snack food, and processed meat.

## **Extinguish Fires of Inflammation**

- Consume water as your primary beverage.
- Get at least five servings per day of vegetables (potatoes don't count); brightly colored veggies are ideal.
- Eat a half cup of berries daily.
- Consider taking omega-3 and curcumin supplements.
- Be meticulous about your oral care. Brush at least twice daily, best done after major meals, ideally with an electric toothbrush (Phillips Sonicare and Oral-B are the top-rated by dentists). Brush for two full minutes per session. Floss at least once daily. The Waterpik Ultra Water Flosser is a pulsating water jet that cleans between teeth and below the gumline to help prevent gingivitis and gum disease. This is another great tool to add to your daily oral care routine for keeping your teeth and gums squeaky clean and healthy.

**20-Time Winner of the National Healthcare Advertising Awards!**

# Get the COVID-19 Vaccine!

**Saint Luke's is now offering vaccination to individuals age 12 or older. You do not have to be a Saint Luke's patient, or a resident of Kansas or Missouri, to receive a vaccine. Go to [saintlukeskc.org/covid-19/vaccine](https://saintlukeskc.org/covid-19/vaccine) to learn more.**