

FROM THE HEART

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

Nurses Are the Heart of Saint Luke's Hospital

By James H. O'Keefe, M.D.

When I was an intern, a savvy charge nurse said to me, "Every doctor should have to undergo major surgery once; and there are a few cold-hearted arrogant physicians around here who would probably benefit from going under the knife about once a year."



The vision statement for Saint Luke's Health System is: "The best place to get care. The best place to give care." Honestly, I thought of this as just a marketing slogan until a recent personal experience.

In May 2017 I underwent a total hip replacement, performed by orthopedic surgeon Jeffrey Salin, D.O., at Saint

Luke's South Hospital. Dr. Salin did a spectacular job replacing my worn-out hip via the less invasive anterior approach.

Amazingly, the whole surgery from the skin incision (which was only 3 inches long) to the last closing stitch took him just one hour. Apparently, I sleepily chatted with Dr. Salin and his surgical team during the hip replacement, but thanks to the spinal anesthesia and gentle sedation, administered by anesthesiologist William Stark, M.D., I remember nothing about the surgery.

Today more than ever, doctors can't be successful in healing our patients without a whole network of support personnel, from the nurses and pharmacists, to the nursing assistants and physical therapists, along with countless others on the health care team.

Nurses: Compassion, Expertise and a Healing Touch

I've worked closely with nurses my entire career. In fact, my sister, Kerry, and mother, Leatrice, are both nurses. So, I've always had a deep appreciation and respect for the nursing profession. But the experience of being in a hospital bed looking up, rather than

at the bedside looking down, gave me a whole new perspective: nurses are the unsung heroes of Saint Luke's.

Sure, Yvonne the R.N. who admitted me the morning of surgery started my IV and gave me my pre-op meds, but more importantly she reassured me with her friendly smile and calming presence. The only thing I remember about Stephanie, the surgical nurse, and Mary, the nurse anesthetist, was briefly meeting them before I drifted off into la-la land.

Angie was the delightful R.N. who took care of me in the recovery room. She did a quick bedside ultrasound scan of my bladder and raised her eyebrows as she looked at the images.

"Looks like you need a little help here." Within about five minutes she expertly slipped in a catheter, drained off over a liter of urine, then removed the catheter. I shudder to think what might have happened had she not promptly diagnosed and solved that problem.

Upon arriving to the post-op floor, my nurse, Erika, asked me, "Would you like vanilla or chocolate pudding, or apple sauce?" I answered, "Do you have kale?" Erika rolled her eyes.

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Nurses Are the Heart of Saint Luke's Hospital

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My longtime friend and colleague at Saint Luke's Cardiovascular Consultants (SLCC), Michael Main, M.D., sometimes tells hospital patients who are spending an excessive amount of time just lying in their bed, "The most dangerous place in the hospital is the patient's bed. Almost every single person who dies in the hospital does so in a bed. I want you to be up in a chair and on your feet more."

I suspect Dr. Main's admonition was haunting my subconscious mind when Kelly, an enthusiastic physical therapist, showed up in my room about four hours after surgery and said she wanted to take me out for a walk. I was eager to get out of that bed and go for a stroll down the halls, despite my baggy hospital gown that seemed quite drafty in the back.

This experience reminded me that it takes a village to successfully care for patients in the modern medical setting. We physicians like to think that we cure patients with our surgeries, procedures, drugs and other technologies. In truth, the nurses and the others on the team also make critical differences.

I felt firsthand how the nurses' healing touch relaxed and comforted me, and I appreciated their practical wisdom and gentle nurturing—they had my back when I was defenseless. It was a team of genuinely compassionate experts working alongside Dr. Salin that made



Dr. O'Keefe

Great Nurses with Heart

Yvonne Engelken Angie Valdez Erika Franks

Saint Luke's Health System has an exceptional nursing staff that's among the best in the nation. I've known that for decades working as a cardiologist here, but now I appreciate Saint Luke's dedicated, caring and talented nurses even more.

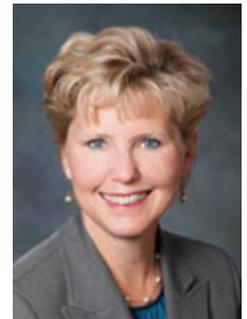
it possible for me to walk out of the hospital with a new hip just 27 hours after I limped in.

Built on a Nursing Foundation

You can't build a house without a foundation, and you can't build a hospital without nurses. Saint Luke's Hospital is Kansas City's only locally owned not-for-profit health system. Shortly after our hospital opened its doors 130 years ago, the Saint Luke's School of Nursing was established in 1887. Since graduating from medical school I have only worked at two places: the Mayo Clinic in Rochester, Minn., and Saint Luke's Hospital of Kansas City. Both places are defined by the excellence and dedication of their nurses, many who are hired right out of their own nursing schools.

For decades I had the privilege of working side-by-side with Jani Johnson, R.N., caring for patients at Saint Luke's. She rose through the ranks and Jani is now CEO for Saint Luke's Hospital of Kansas City. Jani said, "I

think starting as a nurse and having that background, you never lose track of your priorities, and what your priorities are in the organization. Your priorities are your patients."



Jani Johnson

Saint Luke's Nursing Leadership

Interestingly, Saint Luke's has evolved to be a health care system that is largely run by nurses.

Kathy Howell, R.N., previously served as CEO of Saint Luke's



Kathy Howell

South Hospital and now is Chief Nurse Executive for the entire health care system.

Becky Captain, who runs the Duboc Cardio Wellness Center, worked for years as a registered nurse before she became a nurse practitioner, and more recently, earned her doctorate in nursing. Becky says, "People often choose their hospital based upon the quality of nursing care more than anything else."

Our RNs in the Cardio Wellness Center, Katy Martin, Heather Crabb, and Michelle Henderson, are first-rate, experienced and resourceful nurses who ensure our patients get the care they need.

Christopher Lipp, R.N., is System Director of Cardiovascular Services for Saint Luke's. Chris and I grew up in neighboring towns up in North Dakota. While working on his masters degree in health services administration, Chris focused on improving nursing quality using the national database of the American Nursing Association.

Since 2004, Saint Luke's Hospital of Kansas City has maintained its status as a Magnet® hospital. This is the highest honor an organization can receive for nursing quality. Magnet Recognition has become the gold standard for nursing excellence and is a major factor in Saint Luke's ranking as one of "America's Best Hospitals" in U.S. News & World Report.

Having many smart and enlightened nurses in leadership roles seems to work particularly well for our hospital system. Nurses tend to instinctively focus on the well-being of patients, families and those in need.

Putting the Patients' Interests First

Dr. Will Mayo founded the Mayo Clinic 100 years ago on the principle

that, "The best interest of the patient is the only interest to be considered." Unfortunately, health care in America today is increasingly controlled by mega-corporations that often place business interests ahead of the patients' interests.

Yet, under the leadership of Dr. Ken Huber, President of Saint Luke's Cardiovascular Consultants, we have the freedom to care for our patients in accordance with Dr. Will Mayo's axiom. Unlike most cardiology practices today in America, we are not paid according to how many stents or pacemakers, echo studies or stress tests we do. When I am caring for a patient at Saint Luke's, I can say without reservation that I am able to focus on simply doing what is best for that patient.

One of my most memorable teachers during my clinical years as a medical student was a renowned cardiologist—let's call him Dr. Donnelly. One day after stepping out of a hospital room and closing the door, I asked him, "Dr. Donnelly how can you be so sure when you tell this relatively young man that everything's fine and he doesn't need a coronary angiogram? He just survived an anterior MI (large heart attack) yesterday?"

He looked down at me from his imposing 6'4" frame, and proclaimed in his self-assured British accent, "James, as a physician you must learn to be right or wrong, but never in doubt." Truthfully, this condescending "physician knows all" mindset is a vestige of an obsolete era of medicine; and it's an attitude that I've never even tried to adopt.

These days, we assess each patient's specific situation, and determine the potential best courses of treatment. Then we explain the risks and benefits of the various options to the patient and his or her family. This is called the informed consent process, and it helps

us to work with the patient and family to make sure they are comfortable with any important medical decisions being made.



Dr. Spertus

Saint Luke's is leading the world in delivering such patient-centered care. In 2005, our researchers, led by John Spertus, M.D., MPH, began creating personalized consent forms—documents written in lay terms that provided much clearer descriptions of what a coronary angiogram and stent were so that patients could better understand their procedure.

Importantly, these forms were personalized to each patient and summarized their clinical characteristics to show the specific risks and benefits of treatment in their situation. As the entire country strives to deliver "precision medicine," Saint Luke's has been doing this for over 12 years.

When asking Dr. Spertus about his experiences, he said, "The nurses were the key to its success. When we first started this, it was a three-month pilot project at Saint Luke's Plaza Hospital. However, the nurses thought it was so helpful to patients and their informed consent process, they demanded that we continue the process and extend it throughout the Saint Luke's System. We have been doing this for over a decade and now have some of the nation's best outcomes, in terms of preventing bleeding, protecting against kidney injury, and avoiding heart attacks and death."

This kind of innovation—blending science, compassion and clinical excellence, is what makes Saint Luke's truly the best place to give, and get care.

Life With(out) A-Fib

By Steve White

If it felt like my heart was jumping around in my chest—it's because it was. My grandfather died of a massive heart attack at 58. And his son, my dad, had his own history of heart issues—25+ years. But there was no way I was going to take my bad genetics lying down.

Nonetheless, I met Dr. James O'Keefe for the first time as a patient in 2011 thanks to some fleeting arrhythmia episodes. James had me do a CardioScan that wasn't much to worry over, but combined with the arrhythmia, it was enough for him to say, "Let's keep an eye on you."

My dad always spoke highly of James as a doctor and a person. Then there was the simple, indisputable fact that James had done a stellar job (starting way back in the early '90s) of keeping Dad alive and as healthy as *my dad* could possibly be. No small task considering Pops wasn't big on exercise and nutrition.

But I was. As my mid-40s approached, my knees and ankles weren't as happy with my decades of soccer as my heart seemed. Which is why I took up cycling. My wife Mary says I don't do anything small. So of course I found a way to make cycling big.

Cycling is easy on the joints, a lot of fun and as challenging as you want to make it. Soccer and cycling can also both be intense endurance sports. Perfect for getting in shape and developing an amazingly low resting heart rate. Oh, and if you're not so lucky, a-fib.

Too Far, Too Fast

By 2014, I had joined a racing team to match my racing heart. And kept up my other athletic pursuits. The rare arrhythmias stayed mostly rare. But a bigger storm was ahead.

In the spring of 2016, my few episodes of a-fib became weekly, and then daily reminders of my mortality. It was disconcerting, at times even alarming. My longest episode was about 12 hours.

James diagnosed me with full-blown atrial fibrillation. Gone were my 200-mile cycling adventures. Gone were the beautiful Rocky Mountain sufferfests.

Hitting the Reset Button

After serious de-training (riding my bike at about half-effort and only a few hours a week), and a new focus on medication, walking and yoga, I found the a-fib improved, but not gone. I was down to a few episodes a week.

But by the end of 2016, it returned to daily, hours-long aggravation. Sapping my strength, there were times on a ride when I could barely push the pedals. And there was heart pain, too. Scary stuff.

Knowing that I hated taking and tracking meds, that I couldn't just "live with it," nor was it advisable for me to



Steve White with his father, John.

be on a bike and a blood thinner... we decided to explore ablation. James referred me to electrocardiologist Dr. Sanjaya Gupta for the consult.

Sanjaya showed us a computer animation of a-fib. He also showed us how the cryo-ablation procedure works and what to expect if things went as planned. And we talked about options, if things didn't go as planned.

Almost There, Then Tragedy

My cryo-ablation was scheduled for April 10, but my dad was diagnosed with Acute Myeloid Leukemia (AML) on April 9. We were told "weeks to months" for him, with no hope of treatment.

There was just no way I was going to have the ablation done this spring. I kept my focus on caring for my Pops. He passed on May 18. AML moves that fast. As it turns out, what took him had nothing to do with his heart. But it sure broke ours.

We Have Lift-off

On June 5, I was wheeled in for ablation prep a little after 8 a.m. at the Mid America Heart Institute. Five hours later, I was in recovery and learned that everything went well. Sanjaya did a great job.

I had a few short a-fib episodes the first few weeks, which is normal as the heart heals. But now, six weeks out, there's a catch to it. Literally. It wants to take off, but then suddenly the throttle is cut. Instead of speeding away, it goes nowhere. Just stops cold. Each passing week proves that out.

A New, Better World

Now I'm six weeks post-ablation. I can feel the a-fib is close to being in complete remission. It lasts seconds now, not hours. I'm walking, doing yoga and back on the bike—slowly. Just taking it super-easy these first several months.

I'll stay fit and active going forward, but it'll be tempered. I figure living well (and smart) is a great way to honor my dad, and the gifts of love, friendship and health I'm given each day.

Editor's Note: Steve White is riding (slowly!) a Century in Lake Tahoe next June to raise money for a Leukemia & Lymphoma cure and treatments. The first AML treatment in 27 years was announced this past April, thanks to donations from generous people like you. To donate, please visit goo.gl/rLd9Q

The Heart of Our Mission

Our Cardio Wellness Center is named for Charles Duboc, my great friend and mentor. He was a deep thinker with an unquenchable curiosity about the natural world.



During our decades-long friendship, he reshaped my perspective on life, and I miss Charles deeply. We are now entering a new and exhilarating era in our field—breakthrough discoveries are presenting us with powerful new tools to prevent heart attacks, strokes, and Alzheimer's disease, which will help people to live longer and healthier lives.

Charles shared our vision for making this happen, and his ideals and spirit are at the heart of our mission at the Duboc Cardio Wellness Center.

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Funds generously donated to Saint Luke's Foundation by grateful patients enable us to publish From the Heart and send it to more than 250,000 homes and offices. All materials are created by our physicians solely for the education of our patients and referring physicians.



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Nature Rx: Go Outdoors to Get Healthier, Happier and More Productive!

By James H. O’Keefe, M.D.

One pleasant June evening this summer I was out hiking in the Flint Hills of rural Kansas when ominous-looking black clouds appeared on the western horizon and rolled across the prairie with startling speed. I turned around and made haste toward the car, but the storm overtook me before I made it there. Driving rain, lightning, and blustery winds made the last 15 minutes of my hike quite unpleasant. Yet, after I settled down and started driving back to Kansas City I felt alive and exhilarated—euphoric almost.

Florence Williams in her superb new book *The Nature Fix* says getting outside in natural surroundings is kind of like taking a combo-pill—a short-acting antidepressant and a smart pill; but what is an adequate dose and is there a recommended daily requirement to get these benefits?

The effective dose will vary from one person to the next, but in general, the more time you spend outdoors the better you will feel. Even so, mini-doses of nature, such as a brief walk around the block, or a moment spent gazing out a window at the sky and trees, will perk up your mood and sharpen your ability to focus. Bigger doses are better if you are looking for a major boost to your vigor and overall sense of well-being.

For me it’s easy to feel awestruck by nature: staring out at the ocean, and being entranced by the pounding surf; or watching birds soar through the sky, or looking into the heavens to take in the moon and the stars. A study published in the *Journal of Personality and Social Psychology* reported that volunteers in Berkeley, Calif., who



Photo by Joe Glynn.

were told to gaze up at tall trees for even just one minute subsequently were more kind and helpful to the people around them.

My close friend and longtime colleague, Iain McGhie, grew up immersed in nature, on the Isle of Skye in Scotland. These days Iain goes for a quick five to 10-minute stroll around the sidewalks and small gardens near



Dr. McGhie gets outside during his workday with a stroll in the gardens at Saint Luke’s.

Saint Luke’s Hospital. Sometimes he does this multiple times in a day. He was raised in the Scottish Highlands on an island with breathtaking scenery and landscapes, but he’s found that getting outdoors any time of year here in Kansas City for just a brief “exercise snack” keeps him focused and happy—Iain also gets in 10,000 steps per day using this strategy.

Recent studies from Professor Marc Berman and colleagues at the University of Chicago show that even when we are out in nature during unpleasant conditions, such as frigid winds or cold rain (like the weather in Scotland nine months of the year), we benefit from the experience.

In a paper that appeared in the journal *Psychological Science*, study volunteers were asked to take walks in a large outdoor arboretum in Chicago during various conditions. Not surprisingly, the walkers reported that they enjoyed their strolls when the weather was lovely, whereas they reported feeling uncomfortable while walking in the cold and snowy winter



Photo by Joe Glynn.

weather. But regardless of the climate conditions and whether or not volunteers reported enjoying or suffering through their hikes in the park, when they were tested immediately afterward, they performed better on tests assessing mood, short-term memory, and ability to focus.

Our Nature Deficit

The burning question is why we don't indulge more often in the free, widely available, cure-all for our mood and physical well-being? In an effort to better understand how our day-to-day routines affect our happiness, an economist named George MacKerron developed an iPhone app he named Mappiness. This app has been checking in with about 20,000 volunteers multiple times each day to document where they were, what they were up to and how they felt emotionally. MacKerron discovered that most people tended to be least happy when they were sick in bed, or when they were at work; and they were most happy when were spending their free time with friends, families or their significant others. No real shockers there.

Yet some surprises surfaced as they analyzed the data further: perhaps most astonishing was the tremendous effect that the environment had on mood. People tended to be substantially happier when they were outside, particularly in a natural environment. Still, the researchers were baffled by the fact the participants seemed to

be oblivious to this profound effect, and thus they rarely ventured out-of-doors. In fact the subjects were inside or cooped up in vehicles for 96 percent of their time.

"How we spend our days is how we spend our lives." Ann Dillard

The Mappiness study graphically depicts how completely we have abandoned our natural outdoor lifestyle. If being outdoors is so essential to being happy, why don't we go outside more often? Certainly, most of us work indoors, and tend to lead demanding overbooked lives. Still, even when we have a little white space on the calendar, most of our free time is spent watching screens, or sitting in cars or on planes. The best things in life really are free, but for the same reason that no one is creating glitzy marketing to convince you to get a good night's sleep or to eat your vegetables, nobody is trying to sell us outdoor activities like walking or gardening—there's little money to be made in such ventures.

This can be a vicious cycle: we don't get outside enough to notice how good it makes us feel good, so we spend even less time outdoors. We particularly overlook nearby nature such as small urban parks and tree-lined sidewalks because we think of them as too commonplace and not awe-inspiring. But scientists are discovering that even short excursions to stroll outside among urban nature can

quickly improve mood, and enhance our cognitive abilities like memory, creativity, focus and resourcefulness.

After working all day under the fluorescent lights in the hospital and office, when I get home I instinctively go outdoors. It relaxes me to just get out for a walk with the dogs, or to pull some weeds, or water the plants, or trim bushes. Heck, I'm even happy doing dog poop patrol in the back yard. One of the many things I love about living in Kansas City is how lush with greenery it is. When my niece, Bridget, came from Denver to stay with us one summer she said, "I feel like I'm living in the middle of a forest."

Living by nature can even lengthen life expectancy. Harvard researchers studied the 108,000 women enrolled in the U.S. Nurse's Health Study to see if the amount of trees, shrubs, grass and other vegetation near their homes affected their longevity. They found that those who lived in neighborhoods with the most greenery were 12 percent less likely to die during the eight-year follow-up period compared to the people who lived in neighborhoods with little or no greenery. The women who lived around trees and other plants had reduced risks of death from kidney disease, cancer, and respiratory disease, and also reported significantly better mental health.

A different study found that being around blue spaces like lakes, oceans, streams and rivers also helps to lower stress and foster a sense of well-being.

Clues from the Rainforest for Survival in the Concrete Jungle

By James H. O'Keefe, M.D.



Dr. Randy Thompson hiking the Inca Trail on a recent expedition.

Dr. Randy Thompson, like a real-life Indiana Jones, has studied pharaohs from the tombs of Egyptian pyramids, and ancient mummies from the Inca Empire in Peru. His latest scientific adventure has taken him to the depths of the Amazon rainforest to study the Tsimane people.

The Tsimane are a tribe of hunter-gatherers who continue to live a native lifestyle. They are isolated from contemporary society and lack modern technologies, such as electricity, running water and waste management.

The Tsimane eat only unprocessed foods. They fish, hunt and forage plant and animal foods from the forests and rivers.

World's Healthiest Hearts

Dr. Thompson presented these findings at this year's American College of Cardiology meeting, and published the study in the journal *Lancet*. This study was widely reported in major news media outlets around the world.

The researchers used a CardioScan (CT) machine to see if the Tsimane adults had any plaque in their coronary arteries. Of the entire group of 705 people, 85 percent had a coronary artery calcium score (CACS) of 0 (no coronary calcification). Only 3 percent of the Tsimane group had anything more than mild coronary calcification. These natives had the lowest amount of coronary plaque ever recorded in a population; lower even than among Japanese women.

These results indicate that coronary atherosclerosis is a highly preventable disease. The Tsimane generally have lifelong normal blood pressure, with excellent cholesterol and blood sugar levels, normal weight, rare tobacco use, and they stay very physically active throughout life.

Take-Home Messages

Although vegetarian and vegan diets are commonly perceived as heart healthy, the Tsimane, with the lowest prevalence of coronary disease ever documented, consume about the same percentage of calories from animal protein sources as does the average U.S. resident. However, the Tsimane animal food sources are exclusively wild game and fish, which are low in saturated fats, but rich in cardio-protective omega-3 fats. In fact the Tsimane, when compared to U.S. residents, have omega-3 levels that are three-fold higher. Importantly, the Tsimane consume virtually no added sugars or refined grains—staples of the standard American diet.

The Tsimane walk about 15,000 to 17,000 steps per day (about seven to



Photo by Ben Trumble.

eight miles), generally doing light-to-moderate outdoor physical activities; they sit for just 10 percent of their waking hours.

In contrast, a typical adult in the U.S. takes about 5,000 steps per day, and sits for 60 percent of their waking hours. The Tsimane live in small villages usually consisting of 50 to 150 people, and sustain lifelong close relationships with their immediate and extended family members, as well as their neighbors.

We homo sapiens remain genetically adapted to thrive as physically active, socially connected omnivores. So, while it may not be doable to precisely follow the diet and lifestyle of humans living in the wild, there are practical lessons for longevity and robust cardiovascular health we can learn from the Tsimane:

- Stand up, get outside and walk every chance you get.
- Eat plenty of unprocessed plant foods, such as fresh produce, legumes and nuts.
- Choose wild-caught fish, with only modest amounts of lean fresh meat.
- Avoid tobacco and processed foods, especially added sugars and refined grains.
- And most importantly, stay close with your tribe.

Heartfelt Quotes



"No beauty shines brighter than that of a good heart."

"Life is short. Smile while you still have teeth."

"Feelings that you bury are buried alive." **Ronald Siegel**

"I have a good heart. But this mouth ..."

"In times of great change, learners inherit the earth." **Eric Hoffer**

"Everybody is a genius. But if you judge a fish on its ability to climb a tree, it will live its whole life believing it is stupid." **Albert Einstein**

"Sleep is the best meditation." **Dalai Lama**

"Be brave. Even if you're not, pretend to be. No one can tell the difference."

"Rock bottom became the foundation on which I rebuilt my life." **J.K. Rowling**

"Argue for your limitations and you get to keep them." **Elizabeth Gilbert**

"You're perfect just as you are—but there's room for improvement."

"For the first time in history, more people die today from eating too much rather than from eating too little; and more people commit suicide than are killed by soldiers, terrorists and criminals combined. In 2012, throughout the world about 620,000 people died from human violence—war killed 120,000 and crime killed another 500,000. In contrast, 800,000 committed suicide, and 1.5 million died of diabetes. Sugar is now more dangerous than gunpowder." **Yuval Noah Harari**

"Your best teacher is your last mistake."

"Don't give up on your dreams ... keep sleeping."

"Life is tough my darling, but so are you." **Stephanie Bennett Henry**

"Your vibe attracts your tribe."

"If you can sit quietly after disturbing news; if during financial downturns you remain perfectly calm; if you watch your neighbors travel to glamorous places without a twinge of jealousy; if you can gratefully eat whatever is put on your plate; if after a day of running around you can fall fast asleep without a drink or a pill; if you can always be contented just where you are ... you are probably a dog." **Jack Kornfield**

"Let go ... or be dragged."

"The price of security is insecurity." **Dan Harris**

"How many psychiatrists does it take to change a light bulb? Just one; but the light bulb must truly want to change."

Ignore These 10 Myths about Weight Loss And Learn the Real Secrets for Burning off Belly Fat

By James H. O’Keefe, M.D., and Joan O’Keefe, R.D.

Cutting-edge science has discovered that much of what we previously considered to be dietary common sense is actually nonsense. If you want to look and feel great, and lose the excess baggage around your midsection, ignore myths and pay attention to these proven nutritional secrets instead.

1. All diets are destined to fail.

Nearly any diet, whether it be low-fat, vegan, Paleo, Weight Watcher’s, Atkins’ or the Whole 30, when followed will result in temporary weight loss. Yet, nearly all of these fail in the long run unless followers permanently change their eating patterns and lifestyles.

Better than falling for the latest fad diet, is to gradually change your daily routine to include the right kinds of natural whole foods and avoid the nasty but tasty processed foods. We have discovered that it can be as simple as eating lots of vegetables, a modest-sized serving of healthy protein with each meal, and avoiding sugar, as well as processed carbs. Healthy is the new wealthy, and one of the best ways to invest in your future happiness and well-being is to change your eating habits—one at a time.

2. It’s necessary to count your calories.

You’ll be relieved to know that counting calories is entirely unnecessary if you eat the right foods. To your body, food is information. As an example, 100 calories of a processed

breakfast cereal is digested in a flash and spikes your blood glucose and insulin, leaving you famished and defenseless two hours later when you walk by that plate of cookies at work. Contrast that with 100 calories of lightly salted mixed nuts, which don’t even nudge your blood glucose and keep you filled up for hours longer.

Processed carbs and added sugar hijack your metabolism and hormone levels, making you crave junk food. You will be much less likely to overeat plain almonds or binge on vegetables dipped in guacamole. Also, a person will quickly absorb all of the calories after eating a bagel with cream cheese, whereas about one-third of the calories from nuts are never absorbed and instead just end up adding bulk to the stool. So stop counting calories, and instead start being picky about the foods you put in your mouth.

3. Willpower is essential.

Hormones can overpower willpower every time. This is especially true when you’re driven by your hormones to crave the sweet, starchy, processed foods that are available

24/7 almost everywhere you go. Using willpower to resist these temptations is virtually impossible.

The take-home message is that if you are relying on willpower to lose your belly fat, you are probably eating the wrong diet.

4. Carbs cause obesity.

A carb is not a carb. Without question, carbs from added sugars and refined grains lead to weight gain, inflammation and disease, but carbs in the form of non-starchy vegetables, legumes, berries and other fruit will help to burn off fat.

Importantly, the difference between carbs that cause weight gain versus those that foster weight loss is how much fiber they contain and how fast they raise the blood sugar. For example, a slice of whole wheat bread will spike the blood sugar faster and higher than a Snickers bar. In contrast, the carbs in a kale or arugula salad take a long time to eat and a longer time to digest. They won’t even budge the blood sugar.

A Harvard and Tufts University study followed 130,000 people for almost 25 years and found the more carbs you eat in the form of vegetables, fruits, and legumes, the lower your risk of



obesity. In contrast, a different Harvard study reported that the more carbs you consume in the form of sugars, sweets, and processed foods, the more fat you will carry on your body. In our experience as a dietitian and a cardiologist, the most important factor in being obese or fit and trim is the type of carb you get in the habit of eating.

5. Just exercise more to lose weight.

Usually my patients' main excuse for gaining weight is that they haven't got time to exercise. In reality, what you eat is the main determinant of your weight. Diet accounts for 70 percent of body composition. You simply can't outrun a bad diet.

Changing your food and beverage choices will cause weight loss much more effectively than any exercise program.

On the other hand, exercise is crucial for maintaining a healthy weight. My favorite way to increase exercise is to track my daily steps.

The first step in changing anything is measuring it—once you begin tracking your steps, you will magically increase your daily activity by almost one-third.

6. Eating fat will make you fat.

Even today many "experts" try to convince us that eating fat is what makes us fat. Meanwhile, diabetes and obesity rates exploded among those people who faithfully ate their fat-free cereal topped with skim milk each morning. To the contrary, eating a high-fat breakfast like yogurt with pecans, or smoked salmon with guacamole will prevent obesity and diabetes.

Tragically, many folks still shun some of the most wholesome foods

such as avocados and nuts believing that eating fat makes them fat. The single most important nutritional study ever published, the PREDIMED trial, studied 7,500 patients at risk for heart disease and found that consuming extra-virgin olive oil or nuts every day not only didn't cause weight gain, but it markedly reduced strokes, dementia, diabetes and cardiovascular disease.

As with carbs, all fats are not created equal. Some of them, like trans fat, are delicious but poisonous and will expand your waistline while constricting your coronary arteries. Trans fat, despite what you read on the labels, is found in nearly all processed foods. The big food companies deceive us by proclaiming "zero trans fat." But if you read the fine print in the ingredient list, you'll see: partially hydrogenated vegetable oil—this is a code word for trans fat. Even these small doses of trans fat are toxic to your brain, heart and body, so don't eat anything with hydrogenated fats anywhere on the label.

The key is to eat a high-fat diet rich in natural whole foods like nuts and seeds, olive oil, avocados, and oily fish such as salmon, trout, sea bass and sardines. Indeed, in this eating style you will get at least 50 percent of your calories from these healthy fats. The take-home message is that you have to eat something. When you avoid fat and animal products you tend to eat way too many processed carbs.

7. Never skip breakfast, and eat frequent small meals.

For decades, nutritional gurus have been telling us that breakfast is the most important meal of the day, and that you should snack often and never miss a meal. Turns out these experts



were heavily subsidized by cereal companies that make billions selling us "carbage" breakfast cereals and junky snack foods.

In fact, fasting for at least 12 hours every 24 hours is one of the best things you can do for preventing obesity, cancer, Alzheimer's and diabetes. So missing, or at least delaying breakfast for a few hours can be very good for you. Joan says don't snack unless it's necessary. Shockingly, the more often we swallow calories, the more weight we tend to gain. The bottom line is that you shouldn't feel compelled to eat breakfast or eat frequent small meals; that advice is designed to make big food corporations wealthier, but won't make you healthier.

8. You need to go gluten-free.

When my patients tell me they follow a gluten-free diet, I tell them they need to also avoid all gluten-free products. It's not the gluten that is the most toxic aspect of wheat—it's the refined starch. Eliminating refined grains and added sugars from your diet is critically important if you want to be fit and healthy.

Gluten is a protein in wheat and other grains that can cause an allergy, which triggers digestive problems or autoimmune diseases in about 1 or 2 percent of people. But nearly 100 percent of people who eat a diet high in starchy processed carbs and sweets will suffer health consequences. On the other hand, modest amounts of whole grains are healthy when you consume them in foods like oatmeal, quinoa, or barley (ideally in vegetable soup).

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Ignore These 10 Myths about Weight Loss

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9. You must starve yourself to lose weight.

Hunger is like gravity, you can fight it for a time, but it always wins in the end. So, although you can starve yourself to lose weight for the short term, it's nearly impossible to avoid regaining the weight if you're constantly hungry.

Hunger is a complicated and powerful craving that's often driven by raging hormones, which can go up for reasons other than a lack of calories. Too much stress spikes your cortisol; excess sugar and processed carbs elevate insulin, and too much junk food and not enough sleep can cause leptin resistance.

All of these hormones make your brain think it's starving and you will be compelled to overeat, even though you may have just consumed a giant

meal and are already obese. Or maybe you think you're hungry when actually you're thirsty due to dehydration.

A secret to losing weight is to keep your tummy full and your hunger suppressed. The best way to accomplish this is to eat more vegetables, fruits, and legumes, and eat a modest-sized serving of protein at each meal. Choose healthy fats; and you must shun sugar and processed carbs. You cannot overdo the non-starchy vegetables—the more of these you eat the healthier you will look and feel.

10. You can't have your favorite foods.

Most people have their "comfort foods," and if they can't eat them as an occasional treat they feel deprived. The key is to substitute healthy alternatives for some of your comfort

foods. For instance, I love potatoes, but generally avoid them because they tend to spike the blood sugar.

Even so, Joan uses a couple of tricks so we CAN enjoy our potatoes. She has a scrumptious recipe that tastes as good as mashed potatoes, but is made instead from mashed cauliflower mixed with garlic and olive oil.

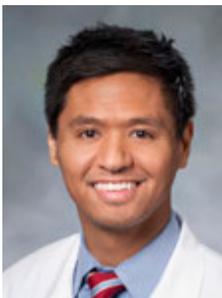
In fact, researchers found that cauliflower is the single best vegetable for burning off excess fat. The other way we enjoy potatoes is to bake them, scoop out all of the white middle, sprinkle some cheese into the potato skins, then drizzle extra-virgin olive oil inside them and put them back in the oven for another 10 minutes to make the skins crunchy and melt the cheese. As delicious as any junk food out there—except it's actually good for you in moderation!

Meet the Newest Members of the SLCC Team

Meet the newest members of the Saint Luke's Cardiovascular Consultants team. They include:

Jonathan Enriquez, M.D.—A

board-certified cardiologist, Dr. Enriquez is the Program Director of the Cardiovascular Diseases Fellowship and Director of Cardiovascular Education for



Dr. Enriquez

Saint Luke's Mid America Heart Institute. He is originally from Kansas City, earning his medical degree from the University of Missouri-Kansas City. He performed his residency in internal medicine at Rush University Medical Center, Chicago, Ill., and performed a cardiology fellowship at the University of Texas Southwestern Medical Center, Dallas, Texas.

John Saxon, M.D.—A board-certified cardiologist, Dr. Saxon performed a one-year fellowship in interventional cardiology at the Mid America Heart Institute, followed by

a one-year advanced fellowship in structural interventional cardiology. He completed medical school at the University of Mississippi School of Medicine. He also did his fellowship in cardiovascular diseases at the University of Mississippi Medical Center, where he served as Chief Fellow in Cardiology as well.



Dr. Saxon



Curcumin: Cooling the Fires of Inflammation

By James H. O’Keefe, M.D.

Curcumin, the bright yellow pigment found in the spice turmeric, may turn out to be a game-changer of an over-the-counter supplement. In India, tumeric has been valued for its medicinal properties for millennia. Curcumin is the active compound found in turmeric, and it’s a natural and safe plant compound with powerful anti-inflammatory and antioxidant properties. Promising studies suggest that curcumin may prove to be helpful for preventing or controlling a wide spectrum of illnesses from arthritis to Alzheimer’s.

Though acute inflammation is useful in the short term for combatting infections and promoting healing, when the inflammation is ongoing it can contribute to many chronic illnesses including coronary disease, arthritis, diabetes, and dementia.

We have hundreds of drugs to fight chronic inflammation, such as aspirin, naproxen and other NSAIDS, steroids, and many potent new biological agents. Unfortunately, many of these agents have serious side effects and/or are expensive.

On the other hand, curcumin confers potent anti-inflammatory benefits, which in some studies match

or exceed those provided by prescription drugs, without any known serious toxicities. Curcumin is a bioactive substance that extinguishes inflammation right at its source—at the molecular level.

Studies consistently show that curcumin reduces powerful cytokines such as NF-kB, TNF-alpha, and Interleukin-1. These cytokines make their way into the nuclei of cells and activate genes that generate inflammation. In this way curcumin not only provides anti-inflammatory benefits, but also may help to prevent tissue destruction—thereby potentially preserving normal function and structure of the joints, blood vessels and the brain.

Curcumin is a strong antioxidant that neutralizes free radicals and also naturally boosts our body’s antioxidant enzymes, which may explain why curcumin in animal models seemed to slow aging, and prevent some cancers.

Amazingly, curcumin also increases levels of BDNF (brain-derived neurotrophic factor)—sometimes euphemistically referred to as Miracle Grow for the brain. This hormone stimulates the growth of new neurons and helps to prevent age-related degeneration of the brain.

Curcumin boosts brain neurotransmitters serotonin and dopamine, and surprisingly has been shown to be as effective as Prozac for improving symptoms of depression. Finally, studies show that curcumin is highly effective for reducing pain and swelling of arthritis.

The problem with this herb is that it is very difficult to absorb, so when you eat a curry dish or even take a curcumin supplement, only a vanishingly small amount of it makes it into the bloodstream, tissues and brain. Thus, to experience the full benefits, you need to find a curcumin supplement that is well absorbed. Studies increasingly find that curcumin, especially when in a bio-available form, may support joint and bone health, enhance cognitive functioning, boost cardiovascular health and strengthen immunity.

This is a hot area of research currently, but even now curcumin is stimulating a great deal of interest among scientists and individuals interested in being proactive about staying youthful and healthy. Highly absorbable forms of curcumin will be available in the near future. My scientific intuition tells me that curcumin may be a supplement with unprecedented effectiveness.



Pros and Cons of Drinking Alcohol

A new study from the British Medical Journal reported that even moderate amounts of alcohol might eventually damage one's brain and impair thinking. We have known for decades that heavy drinking is associated with higher risks of stroke and dementia, but many previous studies indicated that light or even moderate drinking might protect the brain in middle age and beyond.

Anya Topiwala and her colleagues at the University of Oxford studied the link between alcohol intake and brain structure on MRI scans in a group of 550 people who have been followed for three decades as part of the Whitehall Study.

They found that consuming more than 15 drinks per week was associated with a more shrunken hippocampus—a structure in the brain that's important for memory. Even drinking eight to 14 drinks per week had an adverse effect on the hippocampus size. They also noted that the white matter in the brain, which is like insulation around electrical wire, was of a poorer quality in individuals who were drinking more than 10 to 14 drinks per week.

This study has several limitations, including the fact that it's an observational study comprised of nearly all males, so it can give us hints but cannot prove that moderate alcohol consumption is bad for the brain.

Furthermore, we know that when asking people about their alcohol consumption, they tend to markedly underestimate how much they drink. In medical school we are taught to generally double the number of drinks a patient admits to consuming. In this study, the tendency to under-report alcohol consumption would make light to moderate drinking look more harmful to the brain than it actually is.

Even so, this study clearly contradicts the common notion that drinking moderately can protect brain function and preserve thinking skills over time.

At the very least, these studies should be a warning to be honest with yourself about your alcohol intake, and to heed the U.S. guidelines that advise not more than 14 drinks per week for men or more than seven drinks per week for women.

On the other hand, a new authoritative study published in the medical

journal *Diabetologia*, found that regular moderate drinkers have reduced risks of developing diabetes. Danish researchers followed 70,000 people and found that overall, men and women who drank between seven to 14 drinks per week had about one-third lower risk of developing diabetes. This squares nicely with many previous studies, which have consistently found that light or moderate drinking seems to reduce the risk of developing diabetes. Although wine and beer were linked with lower risks of developing diabetes, distilled spirits were not.

New national guidelines released in 2016 by the United Kingdom (UK) Health Department recommend that both men and women drink no more than seven alcoholic drinks per week. I believe we should follow the UK's stance on this issue. Both men and women should try to consume no more than a single drink daily, ideally before or with the evening meal.

Just to be clear, one drink equals:

- Wine 6 ounces
- Beer 12 ounces
- Distilled spirits (80 proof) 1.5 ounces.

Life-Saving Non-Surgical Valve Now Available for More Patients

At 85 years old, Fred Kipp is far more active than many men his age. He's up five days a week at 4:30 a.m., and on the job as a concrete contractor.

A former professional baseball player and left-handed pitcher, Fred also still enjoys the game. He even has the distinction of having played for both the Brooklyn and L.A. Dodgers, as well as the New York Yankees, and he's a member of the Emporia State Hall of Honors.

So when his family physician told him she suspected he had aortic stenosis about four years ago, Fred was surprised.

"I didn't have any symptoms," Fred said, "except that I did notice I didn't have the stamina I once did."

Normally, the aortic valve should be about the size of a quarter, and opens up into the aorta, which is about the diameter of a garden hose. Five to 10 quarts of blood pump through it every minute. But with severe aortic stenosis, the valve thickens, restricting the opening to about the size of a common drinking straw and limiting blood flow.

Aortic stenosis is typically seen in older adults. Symptoms often include shortness of breath, chest pain and fainting.

Initially, Fred thought heart valve replacement surgery might be in his future, but he wasn't too excited about the potential downtime from work and a lengthy recovery.



Lorraine and Fred Kipp at a Dodgers game. Fred is the last living Yankee Dodger. The book, "The Last Yankee Dodger" by Fred's son, Scott, will be published in 2018.

"I did put surgery off, but recently the condition progressed from moderate to severe aortic stenosis," he said. "That made me take action." Severe aortic stenosis is a lethal condition that is often fatal if it is not fixed.

As luck would have it, Fred's wait-and-see approach paid off.

A procedure called transcatheter aortic valve replacement (TAVR), which has been approved by the FDA for high-risk or inoperable patients, is now available to patients, like Fred, who are at intermediate risk.

TAVR uses a collapsible valve that can be introduced into the body through a catheter-based delivery system via one of two approaches: through a small incision in the groin, similar to coronary angioplasty or stenting, or with a small incision between the ribs on the left side of the chest. The valve replaces the patient's diseased "native" valve.

Fred's valve was replaced via the femoral artery on May 16, 2017.

After an overnight stay in the Mid America Heart Institute, he returned home and continues rehabilitation at Saint Luke's South.

"The procedure went very well," Fred said. "Probably better than I had expected. I feel like I have more energy than before."

Lorraine, who has been by his side throughout this process serving as his advocate, said Fred has longevity on his side, as well as a terrific team of cardiologists. "We have been pleased with Saint Luke's," she said. "The procedure went very smoothly."

Saint Luke's was the first hospital in the region to use TAVR and was one of only 20 U.S. centers that participated in the PARTNER trial.

A study from the Heart Institute published in *JAMA Cardiology* recently showed TAVR is a good alternative to surgery for patients at intermediate surgical risk, like Fred.

The research also found that patients recovered more quickly after TAVR than surgery.

Saint Luke's is now beginning a new clinical trial for patients at low risk for open heart surgery to see how well they do with TAVR.

The Saint Luke's Comprehensive Multidisciplinary Valve Center is a unique clinic where cardiologists and cardiac surgeons evaluate patients together to develop the best plan of care for each individual.

For more information about TAVR, contact the Valve Center at 816-932-8258 or email heartvalvecenter@saint-lukes.org.

The Ketogenic Diet: More Than a Fad?

By Lindsay Nelson, R.D.

The ketogenic diet is the latest diet craze and new buzz word in the nutrition world, but what's it all about? The ketogenic diet is a very low-carbohydrate, high-fat and moderate protein diet. Ketosis is a metabolic state in which ketones become a major source of fuel for the body.

Ketones are produced when the body switches from using its preferred source of energy, glucose (made from carbohydrates), to using fat for energy by drastically cutting back on carbohydrates, keeping protein intake modest and increasing fat in the diet. When the brain isn't getting energy from glucose, it can use ketones for energy. Ketone bodies are a super fuel that when burned, give off more energy and reduce inflammation.

Getting into ketosis requires markedly cutting down carb intake to about 20 to 50 grams of carbohydrates (or about 5 percent of calories). To put this into perspective, the average adult eating 2,000 calories and getting 50 percent of their calories from carbs is eating around 250 grams. Many other Americans who are eating a carb-heavy processed diet consume well over 300 grams of carbohydrates per day.

In order to cut carbs to 5 percent, you will need to avoid all sugar, grains, legumes, starchy vegetables and even most fruit. The ketogenic diet substitutes fats for the carb calories; and generally you will need to be eating at least 70 percent of calories in form of fat to get into ketosis.

If you follow this diet, it's key to use natural fats. It's equally important to avoid fats from junk food like chips,

snack foods, cakes, croissants, fried foods and processed meats which are toxic to your heart and brain.

It's okay to consume modest amounts of saturated fats like grass-fed butter, unsweetened yogurt, and animal fat, especially when you are not consuming it in the presence of a high-sugar, carb-heavy diet. However, you should be getting the vast majority of your fats from natural monounsaturated fats like those found in olive oil, olives, avocado oil, avocados, nuts, seeds; and omega-3 fats from oily fish (salmon, trout, sardines, sea bass) walnuts, chia seeds and flax seeds. All of these high-fat foods are extremely beneficial to the heart and overall health and will not raise your LDL cholesterol.

Many people picture the ketogenic diet as a diet full of hamburger patties wrapped in cheese and bacon. However, to eat the most nutrient-dense ketogenic diet, most of your food (half or more of your plate at each meal) will be coming from non-starchy vegetables with modest amounts of protein and a lot of healthy fat.

A Sample Day on the Ketogenic Diet:

- Breakfast: egg omelet with veggies, cheese and avocado slices.
- Lunch: grilled chicken breast with broccoli and cauliflower roasted in olive oil and seasonings.
- Dinner: grilled salmon with a large vegetable salad drizzled with extra-virgin olive oil and balsamic vinegar.
- Snacks: almonds, walnuts, cheese, cut-up veggies dipped in guacamole.



Lindsay preparing a healthy meal.

Pros of the Ketogenic Diet

Ketosis has been used in the medical world for almost 100 years for the treatment of epilepsy, which is a brain disorder characterized by seizures. It confers remarkable reductions in seizures and is in general very healthy for the brain.

The ketogenic diet will also dramatically improve blood sugar, A1C, triglycerides, blood pressure, belly fat, and lower insulin and inflammatory markers. Ketosis may also help to prevent Alzheimer's, Parkinson's and cancer. Some type 2 diabetics have been able to reduce or even stop diabetes medication. One study showed improved insulin sensitivity by up to 75 percent.

Fat is extremely satiating and digests very slowly, which naturally causes most people on a ketogenic diet to mindlessly reduce daily calorie intake. On the other hand, carbs digest

more quickly than fat and protein leaving people feeling famished just an hour or two after high-carb foods like pancakes, breakfast cereal, mashed potatoes or desserts.

Cons of the Ketogenic Diet

Starting out on the diet requires a lot of work and tracking your macronutrients (carbs, protein, fat). Even non-starchy vegetables and nuts will have some carbohydrates that will count toward your total carbohydrate count. This means you would have to track all of your food in a food tracking app for the first few weeks to make sure you keep your macronutrients in the correct range to stay in ketosis. Each person has a different carbohydrate tolerance level so it takes some experimenting and testing for ketones to figure out the correct balance of macronutrients.

The diet is very strict and difficult for many people to adhere to and maintain. To get the most benefits, you need to stay in ketosis for at least six weeks. This diet is not something you can do during the week and then eat whatever you want on the weekends. You need to be extremely motivated and dedicated to sticking to the diet.

Ketoacidosis is a dangerous condition that is often confused with ketosis. Ketoacidosis happens when ketones spike and blood sugars increase to alarming rates. This condition happens primarily in people with type 1 diabetes (due to their bodies not producing enough insulin to bring glucose into their cells) and less often in type 2 diabetics. People with a normal pancreas are not at risk for ketoacidosis since even a trace amount of insulin will keep ketones at a safe level. Pregnant women, type 1 diabetics and people with kidney disease should not try the ketogenic

diet unless under the care of a trained professional.

Bottom Line

As a dietitian, I believe that food should be enjoyable and not stressful. I'm not a fan of "diets," but instead like to teach people how to make lifestyle changes that they can sustain to optimize their health. Food is fuel for our bodies and should make us feel good and energized, not weighed down and sick. Choosing a way of eating that is enjoyable, sustainable and nourishes your body is extremely important. Nutrition is not one-size-fits-all. I make recommendations based on each individual's current health and lifestyle.

The majority of my patients are eating far too many carbs. Personally, I'm able to stay at a healthy weight and keep my triglycerides and A1C at a low level by eating around 100 grams of carbohydrates a day. This does not put me in a state of ketosis. When I was trying to lose weight following a pregnancy, I ate around 60 grams of carbohydrates a day and was able to get back to my pre-pregnancy weight within a few weeks. I switch up my foods constantly for lots of variety, but here is one example of what a day looks like for me on a lower carb (not ketogenic), whole foods diet:

Breakfast: 1 cup of veggies (kale, onions, peppers) and 2 omega-3 eggs sautéed in olive oil. Seasoned with Himalayan salt and fresh basil and chives. Topped with ½ an avocado.

Lunch : Mediterranean salad with 1 cup dark leafy greens, 1 mixed veggies (artichoke, cucumbers, red onion), natural tomato basil chicken meatballs, 2 tablespoons feta cheese, lemon juice, olive oil. 1 bottle of kombucha.

Dinner: 1 salmon pattie, homemade sauce (plain Greek yogurt, lemon juice, dill), 2 cups veggies (cauliflower and

beets) roasted with avocado oil.

Snacks: 1 cup blueberries, ¼ cup raw almonds, 1 piece of dark chocolate.

I generally will figure out a person's carbohydrate baseline, and then have them gradually decrease until weight, triglycerides, fasting glucose and A1C are within normal limits. Normally this range will be between 80-150 grams of carbohydrates. Often when our patients make these diet and lifestyle changes, we can cut down or even stop many of their blood pressure and diabetes medications.

Before jumping headfirst into the ketogenic diet, I would recommend starting with a lower carbohydrate diet that's high in healthy fats and filled with nutrient-dense foods that are found naturally on the earth. If you don't know how many carbohydrates you are eating, track your foods on a food tracking app like My Fitness Pal. A lower carbohydrate diet that's high in healthy fats and moderate protein, but does not put you in a state of ketosis, can still be very beneficial for most people.

A good candidate for the ketogenic diet would be someone who is not getting the results they desire after trying a lower carb whole foods diet as described here. This person must also be very motivated and disciplined to learn about how to do the diet correctly and stick to it.

I would recommend that this person do a lot of research on the diet to make sure that it is something that they will enjoy eating since food should be enjoyable and not something that you dread. If you are a good candidate for the ketogenic diet, consider meeting with a dietitian who is knowledgeable on the diet and also consider finding an online ketogenic support group as you transition into using ketones as fuel.

Imagine Yourself as a Car

By James H. O'Keefe, M.D.

Many of my patients are car buffs. They range from serious collectors to people who just love to drive. So after one of my patients had a heart attack and was in the Cath Lab, he told me he felt like he was in the shop for a "tune up."

He shared how he remembered hearing sounds familiar to him from his own garage as the interventional cardiologist and the Cath Lab team worked to open his blocked coronary artery. The difference was they used tiny tools designed for delicate work.

My male patients in particular seem to comprehend their heart issues when I use an automobile analogy. So if you were a car, your heart would be your engine. Your coronary arteries would be the fuel lines to your engine. Just like the gas line in your car, these important lines are not big. They're slightly smaller than a drinking straw, but they carry the fuel that runs your engine; so if they go down, you go down ... the car essentially sputters and dies.

As the decades go by, corrosion can build up in your fuel lines, or arteries, eventually clogging them with sludge. We cardiologists specialize in restoring blood flow in your fuel lines by using various tools that can unclog and reopen the coronaries.

You can help us keep your heart out of the shop and your arteries soft, supple and flowing freely by following a healthy diet and lifestyle, and perhaps using a few "additives" to help prevent or reverse corrosive build-up.

Heart failure is another common engine problem we see. This is what happens when the power output of your engine is diminished. It's as if your six-cylinder engine loses function



My patient, Dirk, taking care of the engine on his 1967 Camaro. We cleared one of Dirk's coronary "fuel lines" and his heart's been running smoothly ever since!

in one or two or three cylinders. This reduces the engine's ability to generate the energy needed to run the car at full speed. We have world-class experts in heart failure who have a wide array of "additives" and tools to get your engine firing on all cylinders again. They will usually have you back to full power in no time.

Another frequent problem relates to your engine's timing, causing missed beats or racing inappropriately at random. We have an outstanding group of cardiac electricians (EP doctors) who specialize in getting your engine back in synch, using digital-age techno-wizardry. To summarize, your heart is a machine, an amazing power plant that started working 22 days after you were conceived and will beat for 2 or 3 billion times without ever resting more than a second or two.

With 60 cardiologists in our group, we have a top expert for virtually any engine problem you might develop. Usually, we can fix the issue and get you back on the road and running smoothly again. In rare instances, we need to resort to our ace in the hole—replace the old engine with a new one. Indeed, Saint Luke's Mid America

Heart Institute just completed its 750th heart transplant this year. We have one of the most experienced and successful heart transplant programs in the nation. It's reassuring to know that even if all else fails, we often still have a solution to keep your motor running!

Importance of Preventive Maintenance

Warren Buffett says that when he was 16, he had just two things on his mind—girls and cars. According to him, he wasn't very good with girls, so he thought a lot about cars.

To make his point, he uses the analogy of a genie who magically appears to him at 16 and says, "Warren, I'm going to give you the car of your choice. It'll be here tomorrow morning with a big bow tied on it. Brand-new. And it's all yours. There's only one catch. This is the last car you're ever going to get in your life. So it's got to last a lifetime."

He says if you knew that car had to last a lifetime, you would read the manual five times and keep it garaged. If it got a scratch, you would have it fixed right away because you wouldn't want it rusting. You would baby it because you would want it to last a lifetime.

He compares that to your health. You just receive one mind and one body, which has to last a lifetime. He says it's easy to sit back and ignore them, but if you do, they'll be a wreck 40 years down the road, just like that car would be. He advises it's what you do today that will determine how your mind and body will function 10, 20 and 30 years from now, and he's right. Preventive maintenance is key to a well-maintained car, and body!

A New Era in Coronary Prevention

By Becky Captain, Doctorate of Nursing Practice

Two new cholesterol-busting drugs, evolocumab (Repatha) and alirocumab (Praluent), were approved by the FDA in 2015. Both of these are convertase subtilisin kexin Type 9 (PCSK9) inhibitors that are given once every two weeks by injection (only 4 mm under the skin). These medicines lower LDL cholesterol about 60 percent beyond the reductions noted with a statin. Both PCSK9 drugs have excellent safety profiles, and generally are very well tolerated by patients.

Earlier this year, the results of the FOURIER trial were released. This was a two-year outcome study of Evolocumab (Repatha) that included 27,500 patients. FOURIER demonstrated Evolocumab (Repatha) reduced heart attacks 27 percent, strokes by 21 percent, and need for stents or bypass surgery by 22 percent versus placebo group. Another recent study, the EBBINGHAUS trial, showed that Repatha compared to placebo did not adversely affect brain function.

A different PCSK9 Inhibitor, Bocicizumab, demonstrated a 21 percent reduction in heart attacks, and strokes. However, this drug did not make it to market because, unlike Repatha and Praluent, it was not a fully human monoclonal antibody and thus had more side effects.



Dr. Becky Captain and her dog, Bailey, enjoy taking a break outside as part of a healthy lifestyle. Becky and the team at the Cardio Wellness Center are experienced in using PCSK9 inhibitors.

Praluent is set to finish its outcomes trial, Odyssey, later this year.

These large placebo-controlled trials show that for people with high cholesterol and coronary disease, lowering LDL all the way down to 30 mg/dl reduces risk of heart attack and stroke. The PCSK9 drugs work best when used in combination with a statin and/or ezetimibe (Zetia).

We have a large and growing experience with patients on PCSK9 Inhibitors in our Duboc Cardio Wellness Center. Bruce is a 60-year-old patient who has known heart disease. He was taking a high dose of rosuvastatin, but was having side effects and his LDL was still not ideal. Once we started him on the PCSK9 Inhibitor we were

able to lower the dose of his statin and still get his LDL level down to 40; and he no longer has muscle complaints. This relieved him from his muscle cramping. "The results on this medication are the best results I have ever had," he said.

Another patient, Michael, is 66 years old and was still not at his LDL goal, despite a strong statin. Michael has a family history of very high cholesterol. He stated, "The efficacy of the PCSK9 Inhibitor in my case is phenomenal. It is a testament to the need and value of medical research." For the first time ever, Michael's LDL is now at goal.

This is the first data which shows such significant LDL reduction (beyond what statins are able to do) and thus is leading us into a new era of cardiovascular medicine. If you have heart disease and have LDL cholesterol greater than 70, you should ask your health care provider if a PCSK9 Inhibitor medication is right for you.

If you are having difficulty getting started with this medication, we can assist you in our Cardio Wellness Center. We have been using the PCSK9 inhibitors such as Evolocumab (Repatha) and Alirocumab (Praluent) for two years now. When we decide a patient needs a PCSK9, about 85 percent of the time we can get insurance to cover the cost of these expensive, but effective medications.

Great News for Your Heart from Cardiovascular Consultants!



Inside...

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- **Nature Rx: Go Outdoors!**
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