

# FROM THE HEART

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

## A New Day is Dawning for Type 2 Diabetes

By James H. O'Keefe, M.D., and Mikhail Kosiborod, M.D.

**B**ernie is a 68-year-old patient of ours who has type 2 diabetes and heart issues, including coronary disease and atrial fibrillation. Bernie recently told us, "Getting off insulin shots has vastly improved everything I do." His long-standing type 2 diabetes had primarily been treated with gradually escalating doses of injected insulin. A few months ago, Bernie complained



to us that he felt sluggish and was having a hard time losing weight; he was becoming increasingly discouraged about his health issues. We told him about some impressive research findings that might just make all the difference for him. We agreed to try one of the promising new medications—empagliflozin (Jardiance), and

tapered him off of his insulin, but left him on metformin.

Bernie says changing his medication regimen for his type 2 diabetes vastly improved his quality of life, "including my breathing capabilities, and my ability to walk better. It has improved everything about my life. I have even lost weight and I feel almost 100 percent better than when I was taking the insulin shots. It's been wonderful for me and I would recommend it for anyone. It might not have the exact same effect for them, but it has worked really well for me."

We have been treating diabetes with medications for about 100 years, and today we can choose from 12 different classes of diabetes drugs and hundreds of different specific medications.

Yet until very recently, not a single one of the countless drugs for lowering blood sugar had been proven to reduce the very high risk of cardiovascular (CV) complications in people with diabetes. This is really important because until now, about two out of every three people with type 2 diabetes have been destined to die from cardiovascular complications such as heart attack, stroke or heart failure. Thankfully, a new day has arrived for

people with type 2 diabetes—novel drugs are now available that in addition to lowering blood sugar, also have been proven to significantly reduce the risk of cardiovascular events, such as heart attack, stroke and cardiovascular death, and, in some cases, even improve overall survival.

Dr. Frederick Banting discovered insulin in 1920, for which he was awarded the Nobel Prize at age 32—the youngest ever Nobel laureate in medicine. Insulin was the first drug used to treat diabetes; and even today, for people with type 1 diabetes, insulin is a necessary and life-saving medication because their pancreas has become unable to make any of its own insulin.

Some patients with type 2 diabetes can also develop insulin deficiency, and may need insulin injections. However, many people with type 2 diabetes are on insulin therapy even though they have a pancreas that is still making plenty of insulin. Too much insulin causes weight gain, especially in the abdomen, and can cause hypoglycemia—spells of dangerously low blood sugar. In addition, injected insulin therapy in people with type 2 diabetes has never been shown

*continued on page 2*

# A New Day is Dawning for Type 2 Diabetes

*continued from page 1*

to improve cardiovascular health, and thus, we are suggesting to many of our patients and their physicians that they consider slowly reducing (and in some cases stopping) insulin when possible, and instead choose some of the other more heart-friendly diabetes medications.

As noted, today there are many options available for controlling blood sugar in patients with type 2 diabetes. Metformin is an inexpensive generic drug that reduces blood sugar and appears to be safe, and possibly even beneficial. In some studies, metformin has been associated with lower risk of CV events and tends to help with weight loss, unlike insulin, which causes weight gain.

In the EMPA-REG OUTCOME study, an SGLT-2 inhibitor named empagliflozin (a pill taken once daily) reduced risk of CV death by an impressive 38 percent, with significantly lower risk also noted for death from all causes (32 percent), hospitalization for heart failure (35 percent), and progression of kidney disease (39 percent). The U.S. Food and Drug Administration granted empagliflozin an indication for lowering the risk of CV death.

Curiously, empagliflozin improved long-term health and survival for these patients with type 2 diabetes independent of hemoglobin A1c reduction. In other words, the modest reduction in blood sugar caused by the drug didn't account for the significantly reduced risks of CV complications, death, progression of kidney disease and heart failure.

Mikhail Kosiborod, MD, a cardiologist and clinical researcher at Saint Luke's Mid America Heart Institute, recently published a study in the pres-



*Dr. Kosiborod*

tigious *Journal of the American College of Cardiology*, focused on 400,000 patients across six countries and showed that the initiation of any of the SGLT-2 inhibitors, when compared to other glucose-lowering drugs, was associated with significantly lower risks for death and hospitalization for heart failure, as well as other CV complications.

SGLT-2 inhibitors, which include canagliflozin (Invokana), dapagliflozin (Farxiga), and empagliflozin (Jardiance) also cause a modest weight loss (typically about 5 or 6 pounds), modest reduction in blood pressure, and mild diuresis (getting rid of excess fluid through the urine).

Liraglutide and semaglutide are GLP-1 receptor agonists, another class of novel agents for lowering blood sugar which have reduced the risk of life-threatening CV complications in large, well-designed clinical studies of individuals with type 2 diabetes. They are injected under the skin once daily or once weekly (respectively). There are other medications for type 2 diabetes that have been around for a long time, but now have more recent evidence for cardiovascular benefits. Pioglitazone is an older generic drug that has recently been proven to

significantly reduce the risk of stroke and/or heart attack. Pioglitazone has also been shown to help melt away coronary atherosclerosis when used in patients with type 2 diabetes. This drug is inexpensive, but it does tend to cause weight gain and some fluid retention at high doses, so it may not be as attractive (at least for some patients) as some of the other options mentioned previously.

It should be noted that all of the diabetes medications mentioned may have important side effects, which should be carefully reviewed and discussed with your doctor before changes to your diabetes regimen are made. SGLT-2 inhibitors may increase the risk of yeast infections (especially among women), although these are usually benign and easily treated. Any changes in diabetic medications, including insulin, should be done carefully and under close physician supervision.

## Take-Home Message

If you or a loved one has type 2 diabetes, ask your doctor if you may be a candidate for carefully (and gradually) tapering down your insulin doses and instead subbing one or more of these medications that not only lower blood sugar, but may also help to keep your heart, brain and kidneys healthy, and in some cases, improve life expectancy.

*Disclosure: Dr. O'Keefe received speaking honoraria from Boehringer Ingelheim. Dr. Kosiborod received research funding from AstraZeneca and Boehringer Ingelheim, and is a consultant for AstraZeneca, Boehringer Ingelheim, Janssen, Merck (Diabetes), Sanofi and Novo Nordisk.*

# The Subtle Art of Making Ancient Wisdom Cool Again

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

**M**ark Manson's runaway best seller *The Subtle Art of Not Giving a (Darn): A Counterintuitive Approach to Living a Good Life*, in my opinion is a phenomenal new book. I read it once the old-fashioned way, and then listened to it as an audiobook three times, including once during each of two road trips with my sons—one with Jimmy and one with Evan; from time to time pausing it to talk over the ideas presented. Mark has brilliantly disguised ancient wisdom and philosophy using a hipster lingo laced with occasional profanity as a way of tricking Millennials and other open-minded readers into investing time in a book about personal values.

Profanity aside, it's a highly entertaining, refreshingly candid and extremely clever personal approach to life. The core message of Manson's book is that each person needs to prioritize what's truly important to him or her and let go of everything else. He suggests limiting the time spent on social media, TV, video games, material things, and stop worrying about things that we can't control. Instead he suggests focusing on our relationships with the people central in our lives, along with our personal and professional passions.

Instead of hoping for and even expecting a stress-free life without suffering or worries, he says it's much more realistic and productive to ask yourself, "What are the problems I am willing to sacrifice and work for?" He says, "Life is essentially an endless series of problems." So, it's a losing battle to constantly try to run away from problems. Instead of asking, "How can

I get rid of my problems?" A better question is, "What are the problems that excite me?" To be happy we need something to solve.

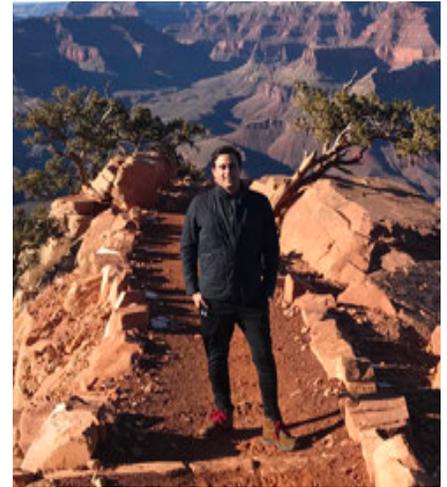
Manson writes, "This book doesn't give a (darn) about alleviating your problems or your pain. It turns out that adversity and failure are actually useful and even necessary for developing strong-minded and successful adults.

"We suffer for the simple reason that suffering is biologically useful. It is nature's preferred agent for inspiring change. We have evolved to always live with a certain degree of dissatisfaction and insecurity, because it's the mildly dissatisfied and insecure creature that's going to do the most work to innovate and survive."

I've always noticed that when something really good happens in my life, the happiness and sense of accomplishment fades quickly; and now I understand why. Complacency shuts down progress, so we are hard-wired to become restless and dissatisfied. This is simply a feature of human nature, and it's actually a good thing in many ways.

Notable quotes by Mark Manson:

- You cannot be a powerful and life-changing presence to some people without being a joke or an embarrassment to others.
- There is a simple realization from which all personal improvement and growth emerges. This is the realization that we, individually, are responsible for everything in our lives, no matter the external circumstances. We don't always control what happens to us. But we always control how we



*Jimmy in the Grand Canyon on our recent road trip.*

interpret what happens to us, as well as how we respond.

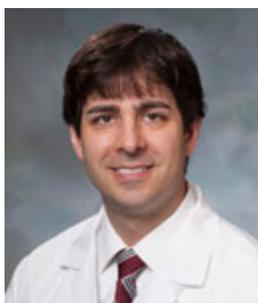
- Challenge yourself to find the good and beautiful thing inside of everyone. It's there. It's your job to find it. Not their job to show you.
- Who you are is defined by what you're willing to struggle for.
- The avoidance of suffering is a form of suffering. The avoidance of struggle is a struggle. The denial of failure is a failure. Hiding what is shameful is itself a form of shame. Pain is an inextricable thread in the fabric of life, and to tear it out is not only impossible, but destructive: attempting to tear it out unravels everything else with it. To try to avoid pain is to care too much about pain. In contrast, if you don't give a (darn) about the pain, you become unstoppable.

There is nothing new under the sun, and actually this book borrows heavily from central ideas of wisdom traditions thousands of years old. Still, Mark Manson can be ruthlessly honest and outrageously funny at the same time. It's a thought-provoking and hilarious survival guide for life in 2018 America.

# Two Cardiologists Join Practice

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

**Brett Sperry, M.D.**—A board-certified cardiologist, Dr. Sperry's clinical interests include advanced heart failure, nuclear cardiology, amyloidosis and sarcoidosis. He earned his medical degree from Georgetown University School of Medicine, Washington, D.C., where he also performed his residency in internal medicine. Dr. Sperry performed a fellowship in cardiovascular disease with the Cleveland Clinic, Cleveland, Ohio; and an additional fellowship in heart failure and cardiac transplant medicine, also at the Cleveland Clinic.



*Dr. Sperry*

**John Peterson, M.D.**—A board-certified cardiologist, Dr. Peterson is originally from Kansas City, and has practiced here his entire career. He received his bachelor's degree in pharmacy from the University of Kansas. He also graduated from the University of Kansas School of Medicine, and completed his internship, residency and fellowship in heart disease at the University of Kansas Medical Center.



*Dr. Peterson*



## Saint Luke's Cardiovascular Consultants

- |                            |                                  |
|----------------------------|----------------------------------|
| Suzanne V. Arnold, M.D.    | Anthony Magalski, M.D.           |
| Bethany A. Austin, M.D.    | Michael L. Main, M.D.            |
| Dimitri V. Baklonov, M.D.  | Justin R. McCrary, M.D.          |
| Suzanne J. Baron, M.D.     | A. Iain McGhie, M.D.             |
| Charles W. Barth, M.D.     | James H. O'Keefe, M.D.           |
| Timothy M. Bateman, M.D.   | Nicholas M. Orme, M.D.           |
| Matthew C. Bunte, M.D.     | John Peterson, M.D.              |
| Kevin A. Bybee, M.D.       | Robert M. Piotrowski, M.D.       |
| Paul S. Chan, M.D.         | Riaz R. Rabbani, M.D.            |
| Adnan Chhatrawalla, M.D.   | Valerie J. Rader, M.D.           |
| David J. Cohen, M.D.       | Brian M. Ramza, M.D., Ph.D.      |
| Mathew G. Deedy, M.D.      | Carlos Rivas-Gotz, M.D.          |
| Michelle L. Dew, M.D.      | Barry D. Rutherford, M.D.        |
| Jonathan R. Enriquez, M.D. | Ibrahim M. Saeed, M.D.           |
| Mark P. Everley, M.D.      | David M. Safley, M.D.            |
| Michael J. Giocondo, M.D.  | Adam C. Salisbury, M.D.          |
| Joseph A. Goeke, M.D.      | John T. Saxon, M.D.              |
| Thomas H. Good, M.D.       | Laura M. Schmidt, M.D.           |
| Garth N. Graham, M.D.      | James E. Sear, M.D.              |
| J. Aaron Grantham, M.D.    | David G. Skolnick, M.D.          |
| Sanjaya K. Gupta, M.D.     | Brett W. Sperry, M.D.            |
| Anthony J. Hart, M.D.      | Daniel A. Steinhaus, M.D.        |
| Kenneth C. Huber, M.D.     | Tracy L. Stevens, M.D.           |
| Andrew C. Kao, M.D.        | Robert E. Tanenbaum, M.D.        |
| Taiyeb M. Khumri, M.D.     | Randall C. Thompson, M.D.        |
| Mikhail Kosiborod, M.D.    | Deepa C. Upadhyaya, M.D.         |
| Steven B. Laster, M.D.     | Deepthi Vodnala, M.D.            |
| Stephanie L. Lawhorn, M.D. | Alan P. Wimmer, M.D.             |
| John K. Lee, M.D.          | Omar K. Yousuf, M.D.             |
| Jason B. Lindsey, M.D.     | Martin H. "Tony" Zink, III, M.D. |

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

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.



**James H. O'Keefe, M.D., Editor-in-Chief**  
saintlukeskc.org

© 2018, Saint Luke's Cardiovascular Consultants.  
All rights reserved.

**To be added or removed from this newsletter mailing list, email Lori Wilson at [ljwilson@saintlukeskc.org](mailto:ljwilson@saintlukeskc.org) or call 816-751-8480.**

# Better Beverage Options Than Smoothies

By James H. O'Keefe, M.D., with Joan O'Keefe, R.D.

**W**e are not big fans of smoothies. Sure, they're better for you than sweet drinks like colas, orange juice or apple juice, or Red Bull, but they are not the same as eating your fruits and vegetables. For starters, when you throw the yogurt, banana, peach and honey into a blender whirring at 20,000 RPM, the finished product qualifies as "processed" food. Why do you think they call it a food processor? Sharp steel blades spinning at unnaturally high speeds destroy the fiber and puree the produce into an easily digestible slurry with most of the calories in the form of sugar.

This spikes your blood glucose and deprives you of the valuable fiber in whole natural foods. Your body thrives best when you process your food the old-fashioned way—by simply chewing up the fresh berries, veggies, fruits, nuts and seeds before you swallow them. This strengthens your teeth and gums, and a whole-foods, mostly fresh produce diet is the single best way to get a sexy waistline, soft and supple arteries, a healthy heart, strong bones, beautiful skin and a sharp mind.

A better choice than a smoothie, one that won't spike your blood sugar but will help to make you healthy from the inside out, is low-sodium V8 juice, particularly if you mix in some matcha tea. Nearly every morning I pour about 8 ounces of low-sodium V8 juice into a glass and use a hand-held battery-powered mixer to mix into it a quarter of a teaspoon of matcha tea powder.

This is a drink that is loaded with antioxidants, vitamins and potassium,

and has a modest amount of caffeine naturally due to the fine green tea matcha powder that is mixed into the V8 juice.

I have come to enjoy the earthy, vegetable taste of the V8 with matcha tea, and it's an energizing drink that naturally lowers blood pressure and reduces anxiety. Another healthy option is whey protein mixed into milk. The whey protein will keep you feeling full longer and will prevent cravings for junk food, and the milk is a good source of calcium.

Other beverages that you should be consuming regularly include water, coffee, tea and sparkling water. The drinks you choose should contain very few calories—like water and unsweetened tea, which were virtually the only options available to our ancient ancestors out there in the wild.



Sports drinks, energy drinks, sweetened sodas and fruit juices tend to make you fat and/or diabetic—NOT healthy. Most of the diseases we are trying to avoid, including heart disease, stroke, Alzheimer's and diabetes are caused by chronic inflammation. Post-meal spikes in the blood levels of fats and sugar after eating processed foods and sweet drinks are the chief causes of inflammation in our bodies.

Avoid consuming virtually anything with more than 10 grams of sugar per serving. Also shun artificial sweeteners, except in very small doses, such as chewing gum. These non-caloric sweeteners fuel your sweet tooth, raise your insulin levels, distort the microbiome and change gene expression, all of which compel you to eat more sweets and junk food.





## Play with Your Friends ... Save Your Life!

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

**W**hile I was a child growing up in Grafton, North Dakota (a small town near the Canadian border), my mother Leatrice frequently told my five siblings and me to, “Go outside and play with your friends.” She said it to shoo us out from under foot and have some peace and quiet in the house, but it turns out to be the best advice EVER if your goal is to live a long, happy, healthy life. The single most important thing you can do for longevity and well-being is to cultivate close relationships with your family, friends, neighbors and co-workers; if you can get together regularly to play with them—well that’s the best.

When Bill comes in to see me, he always has a sparkle in his eye and is speaking quickly, as if he is excited—usually because he is. This time he was enthused because he was planning on playing in another table tennis tournament in a few days. When I asked him, “How long have you been playing

ping pong, Bill?” He abruptly corrected me, “The formal name for the sport is table tennis.” He should know, he has been playing racquet sports for almost nine decades, and he’s more passionate than ever about playing with his many, many friends, most of whom he has met on the courts.

Bill is 95 now, and is in remarkably good health. When you ask him his secret he says it’s racquet sports—everything from tennis to badminton to squash to table tennis and pickleball. He’s also been coaching people in tennis and badminton since coming home from France after serving three years in the European theater of World War II. Brand new research validates Bill’s intuition that his love of racquet sports might be contributing to his exceptional longevity.

Clearly, exercise is key if you would hope to be like Bill one day, who’s still having the time of his life as he closes in on the century mark. But the type of exercise you prefer seems to make

a big difference. If your usual workout is a slog on a treadmill or elliptical trainer, it may not make you live much longer—though it may seem longer because for most people it’s such an unpleasant way to get exercise. When people complain to me that time flies by too quickly, I suggest they take up indoor stationary cardio exercise—30 minutes can seem like an eternity. On the other hand, go play pickleball with your friends or shoot a round of golf with your pals and it won’t feel like work. Time flies when you’re having fun, whereas time slows to a grind when you’re suffering.

The Copenhagen City Heart Study (CCHS) enrolled about 20,000 Danish people 40 years ago and since then has been following them closely with questionnaires and check-ups. My close friend, cardiologist Peter Schnohr, M.D., is the CCHS study founder and director, and his special interest is exercise. So, the CCHS has focused most intently on physical

activity, including the amount of time his fellow Danes have spent exercising in different types of sports through the decades. Peter and I, with the help of Jacob Marrot, a brilliant young Danish biostatistician, recently asked the question: do the different types of exercise we do in our leisure time have differing effects on life expectancy? With 25 years of unique data about this question, we came up with some startling findings. After Jacob adjusted the data for confounding variables, we discovered that compared to a sedentary (very inactive) lifestyle, all of the various forms of exercise added years of life, but there was a surprising amount of variability depending upon the types of activities they did routinely. The people who played racquet sports such as tennis and badminton lived about six to 10 years longer than sedentary (inactive) people. The soccer players lived about five years longer; the cyclists, swimmers and runners lived about 3.5 years longer; and the people who went to gyms to work out lived only about 1.5 years longer.

So it appears that tennis players, badminton players, golfers, dancers and soccer players tend to have exceptional longevity. By far the smallest improvement in life expectancy was noted in people who predominantly did health club activities, such as working out on treadmill, elliptical, stair-climber, or stationary bikes, and weightlifting. The large differences in life expectancy gains in our study were not accounted for by the wide differences in duration and frequency of the various sports, as highlighted by the finding that the cohort of people who spent the most time exercising—health club activities group—was the one that showed the smallest improvement in longevity.



*Dr. Mark Allen enjoying the “best four hours of his Saturday” golfing with friends.*

I will formally present these findings in a TEDx Talk in England in June 2018, so I have been contemplating the implications of this data for months. My best guess about what was driving these striking findings is that the varying survival rates were due to the differing social aspects of the various sports studied. Notably, sports that require two or more individuals to play together and socially interact—tennis, badminton, and soccer for example—are the sports that appear to improve longevity the best; whereas the more solitary forms of exercise, such as jogging, swimming, bike riding, and walking on a treadmill or lifting weights, were associated with less impressive gains in life expectancy.

***“We do not stop playing because we grow old; we grow old because we stop playing.”***  
***Benjamin Franklin***

This is in line with previous studies consistently showing that social isolation is one of the strongest predictors of reduced life expectancy. The World Happiness Report—an international

survey of over 150 nations—ranks Denmark as the happiest country.

The high degree of social connectedness among the Danish population is one of the major factors contributing to their remarkably high levels of happiness and well-being. The Danes are famous for their love of getting together with neighbors, friends and family to do group activities. Sports such as golf, badminton, dancing, yoga, two-person kayaking, snow skiing, doubles tennis, softball, and croquet do not typically require strenuous exertion, but do entail a great deal of social interaction. Regular participation in highly interactive sports provides not only exercise, but also a social support group that plays together. Belonging to a group that meets regularly promotes a sense of support, trust and commonality, which has been shown to contribute to well-being and improved long-term health.

My buddy, Dr. Mark Allen, grandson of the legendary KU basketball coach Phog Allen, is an avid golfer. Mark

*continued on page 8*

# Play with Your Friends ... Save Your Life!

*continued from page 7*

told me that when people whine to him about golf taking too long to play a round, he replies, "That's the best thing about golf—it takes a long time, so you get to stroll around in a park-like setting, and have fun with friends. The best four hours of my Saturday are spent playing golf with my pals." Golf, like racquet sports, also provides moderate intensity physical activity and is associated with improved well-being and longevity. Virtually all age groups can enjoy golf. Playing an 18-hole course entails walking about six miles; even when riding in a golf cart most people will walk about three miles.

Observational studies report that regular golfers live an average of five to nine years longer than sedentary individuals, which is in the range of the life expectancy gains noted among the other social sports in our study.

Previously, Peter, Jacob and I analyzed the Copenhagen City Heart Study and found that jogging reduced risk of dying from any cause during follow up. Surprisingly, we found that the mortality was lowest among the joggers who ran at a slow pace, for not more 2.5 hours per week and not more than three runs per week. The runners who ran faster, longer and every day did not get as much of a boost in longevity. In other words, if you are exercising to improve your life expectancy, moderate exercise is ideal, and in fact chronic excessive strenuous physical activity may negate some of the longevity benefits of less extreme doses of exercise.

Although the sports such as tennis, badminton, golf, softball/baseball, basketball, handball, table tennis, pickleball, volleyball and soccer by nature



*Peter Schnohr and James O'Keefe out biking in Copenhagen.*

involve multiple people participating together, other more solitary forms of exercise, such as walking, jogging, cycling, swimming and health club activities, can be readily transformed into a social interaction by joining a group that exercises together on a regular basis. Exercising with at least one other friend or family member on a regular basis often improves the enjoyment and makes it easier to stick with a fitness regimen.

If you want to keep your heart healthy and your brain youthful, you might also consider dancing. To be clear, virtually all types of physical

activity including walking, jogging, riding a stationary bike, or using an elliptical trainer, or lifting weights are great for one's brain, in part by increasing brain-derived neurotrophic factor (BDNF), which acts like Miracle Grow for the brain. Yet, new research shows that dancing confers especially impressive anti-aging brain benefits. A recent study published in *Frontiers in Neuroscience* using MRI brain scans found that dancing dramatically reduced age-related degeneration in brain structure among a group of people with an average age of 68 who met regularly to learn and practice choreographed routines.



## Reflections from the Heart

"Friendship is born at the moment when one person says to another, "What! You too? I thought that no one but myself . . ."

**C.S. Lewis**

"Anybody can sympathize with the sufferings of a friend, but it requires a very fine nature to sympathize with a friend's success."

**Oscar Wilde**

"Thousands of candles can be lighted from a single candle, and the life of the candle will not be shortened. Happiness never decreases by being shared."

**Buddha**

"Don't let the noise of others' opinions drown out your own inner voice. And most important, have the courage to follow your heart and intuition."

**Steve Jobs**

"The floggings will continue until the morale improves."

**Captain Bligh (commander who was overthrown in the Mutiny on the Bounty)**

"I love those who can smile in trouble, who can gather strength from distress, and grow brave by reflection."

**Leonardo da Vinci**

"I've learned that people will forget what you said, people will forget what you did, but people will

never forget how you made them feel."

**Maya Angelou**

"I've heard the promises of heaven, and I've heard the threats of hell.

But maybe we're already living, within the stories that we tell."

**John Lucas**

"It's better to hang out with people better than you. Pick out associates whose behavior is better than yours and you'll drift in that direction."

**Warren Buffett**

"The fear of death follows from the fear of life. The person who lives fully is prepared to die at any time."

**Mark Twain**

"The opposite of love is not hate, it's indifference."

**Elie Wiesel**

Fred, an 88-year-old widower, informed his family that he met someone very special and was planning on remarrying. His family and friends were curious why he was so eager to make Eleanor his new bride. They asked him, "Does she have a sparkling personality?" He said, "No, not really." They queried, "Is she very affectionate with you?" He said, "Well, she's kind of friendly." When they asked if she was wealthy or pretty, he said, "No that's not it." They finally asked him, "Well what exactly do you see in her that is so endearing and compelling?" Fred replied, "Eleanor is very good at driving after dark."

"I beg you, to have patience with everything unresolved in your heart and to try to love the questions themselves. Perhaps then, someday far in the future, you will gradually, without even noticing it, live your way into the answers."

**Rainer Maria Rilke**

"In three words I can sum up everything I've learned about life: it goes on."

**Robert Frost**

"If you tell the truth, you don't have to remember anything."

**Mark Twain**

"Chains of habit are too light to be felt until they are too heavy to be broken."

**Warren Buffett**

"A friend is someone who knows all about you and still loves you."

**Elbert Hubbard**

My good friend, Dr. Mike Main, and I were discussing how we don't wear neckties anymore when we are seeing patients because studies show that ties often harbor dangerous bacteria like MRSA or C Diff. He laughed and said, "Yeah, for us wearing ties has gone out of style permanently. Wearing a necktie around here makes about as much sense as wearing a powdered wig."

# Why Women Outlive Men ... Everywhere but Sardinia

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

**W**omen across the globe tend to live an average of seven years longer than men, except on a mountainous island 200 miles west of Italy. In Sardinia exceptional health and longevity are common in both genders, and the likelihood of living to be 100 years old is about 10-fold higher than for us in America. What's the Sardinians' secret? Well, scientists have done DNA analysis of the people in Sardinia and found their genes don't account for their phenomenal health and longevity. Instead it was their lifestyle that held the secrets.

The Sardinians spend their days surrounded by neighbors, friends and family. They live immersed in a tight-knit community and stay close to each other, often socializing while tending gardens, olive trees, vineyards and herding their sheep. People frequently drop by to visit each other; nobody is left to live a solitary life. Men in particular have uncharacteristically rich social networks with their male cronies, prioritizing time to visit with their friends and family in the late afternoon while sipping a glass of red wine. This is unlike the rest of the developed world, where as George Burns said, "Happiness is having a large, loving, caring, close-knit family ... in another city." Furthermore, the Sardinian man tends to share his life stresses with his spouse, rather than



be the strong silent "lone wolf."

Sadly, social isolation may be the biggest health risk of our day. In some ways we are more connected than ever, through texting, email, Facebook, other internet sites, TV, etc. Yet, one-third of the population says they have two or fewer people that they could lean on in the event of a tragedy.

So why do women tend to outlive the men everywhere except Sardinia? Women instinctively tend to build and prioritize interpersonal relationships, and are more likely to invest time and energy into face-to-face real-life interactions. Fascinating new studies show that in-person friendships construct a biological force field that helps to protect us against illness and early death. And this friendship effect that shields us against disease isn't a phenomenon seen only in Homo sapiens, it's also apparent in our primate relatives. Female baboons who belong to a group of female friends have reduced stress as measured by cortisol levels, and they, too, tend to live longer and have more surviving offspring than the female baboons who were more socially isolated. Three face-to-face friendships is the magic number for baboons, and it might be a good target for us humans as well.

Many people are not surprised to hear that interpersonal relationships are the most important factor for preventing premature death. Do you have people who know and trust you well enough that you could ask to borrow money from them if an unex-

pected financial bind arose? Do you have family members or neighbors who would phone your doctor or drive you to the hospital if you suddenly felt ill? Or do you have friends you could talk to if you were in deep despair? My colleagues at the Mayo Clinic in Minnesota informally use what they call the Rochester Index: the higher the number of family and friends who are in the hospital room the better the likelihood that the patient will survive and do well; whereas hospitalized patients who are alone are at the highest risk of serious complications and death.

You don't need a lot of those kind of confidants, just a few—three at least. Having these kinds of family members or friends or neighbors is the single strongest predictor of longevity. Surprisingly, another kind of interpersonal support also is a strong predictor of life expectancy—and it's called social integration. This refers to how much you interact with people in your day-to-day life.

How many people do you greet or chat with as you move through your typical day? This encompasses both your close friends and superficial acquaintances. Do you thank your postman, or ask the lady who makes your coffee how her day is going? Do you visit with neighbors when you see them out in their yard, or smile and greet the lady who walks with her dog by your home regularly? Do you ask people who seem lost if they need directions? Do you play cards with a group, or attend a book club, or go to a religious service regularly? The cumulative effects of those seem-



ingly inconsequential and sometimes even superficial interactions are also turning out to be one of the strongest determinates of how long you will survive.

Like Sardinians we are all hard-wired from birth to want to feel like we belong. Traditionally, we lived in a small cohesive tribe, and we knew, “I am who I am because of who we all are.” Building in-person interaction into our day-to-day lives boosts our mood, strengthens the immune system, keeps the heart calm and healthy, and pumps feel-good hormones through our bloodstream, all of which helps us to live longer. Susan Pinker calls this “building your village” and this turns out to be our most important task—indeed it’s a matter of life and death.

My family and I will be living in a small village in Sardinia for a week this summer to experience their culture first hand. To be clear the Sardinians traditionally have done many things right when it comes to a longevity-promoting lifestyle. Besides their social connectedness, other factors in their remarkable health include:

### **A Good Diet**

They eat a lots of vegetables, nuts and fruits, along with plenty of beans, goat’s milk and bread made from unleavened durum wheat, often only

eating meat on special occasions (just once or twice per week). The Cannonau wine made from a local grape has three times higher levels of antioxidants compared to most other red wines.

### **Family Values**

The island of Sardinia has been conquered repeatedly through the centuries and thus they tend to rely on family and community values. Individuals who have strong family ties have reduced rates of stress, depression and suicide.

### **Laughter**

Sardinian men are notorious for gathering together in the streets every afternoon to visit with friends, trade stories and laugh often, which is very effective at relieving stress.

### **A Good Walk**

One more reason that Sardinian men live as long as the women, is that many of them are shepherds and often walk about five miles (10,000 steps) a day. Walking is a wonderful exercise for conferring longevity.

### **Share the Stress**

Tonino and Giovanna were married 51 years ago in Silanus, a village in the mountainous central region of Sar-

dinia where they still live today. While Tonino is out tending the garden and orchard, and caring for his sheep, Giovanna shoulders the burdens of being in charge of the household and managing the family finances. Sardinian couples traditionally have shared the stress of these responsibilities. For the men, a lighter stress burden reduces their risk of heart disease, which may explain why the ratio of female to male centenarians is about one-to-one in Sardinia, compared with a four-to-one ratio favoring women in the United States. “I do the work,” admits Tonino, “my ragazza (Italian for girl) does the worrying.”

Bottom line: The two most important predictors of longevity are both related to interpersonal connections. Having at least a few close relationships (high social support) and feeling like you belong in your neighborhood, work and community (social integration) are the two strongest predictors of longevity. Other factors such as not abusing tobacco or alcohol, staying physically active, maintaining a healthy weight and blood pressure are also important, but not as powerful in promoting longevity as having good social support.

# Wake Up to the Power of Sleep!

By Dr. Becky Captain, DNP

I have always been a “hard” sleeper—just ask my family or college roommates. In fact, my parents told my husband, Chris, they should have named me Dorothy because they’re convinced that I could sleep through a tornado. My college roommate, Renee, in an attempt to get me up on time for class resorted to throwing the volleyball at me while I snoozed under my covers. Over the years my parents bought me some of the loudest alarm clocks you could imagine. One particularly obnoxious clock had a gadget that flew off its top when the alarm went off; to turn off the alarm I had to frantically scramble around the room to find it and put it back on the clock to silence the blaring. Sure, I was a “hard” sleeper, but I imagined that I did not require a lot of sleep. I trained myself to get by on 6 hours of sleep. I always have so much to accomplish and so little time. My motto was: “I will have plenty of time to sleep when I’m dead.” So, I would work, play, read, create, plan, etc., until I crashed.

It wasn’t until the last 7 or 8 years that I have educated myself on the benefits of sleep and began to prioritize bedtime. There are more benefits to getting adequate shuteye than just feeling refreshed and avoiding having bags under your eyes. Sleep is when your body rejuvenates itself. During deep sleep stages cleansing watery fluid washes through your brain flushing out junk protein and other chemical debris that ac-

cumulates during the day. Sleep also rebalances our hormones, relaxes our cardiovascular system, and reboots our minds—getting rid of useless information and consolidating key memories and insights. Deep restful sleep also normalizes hormones that control our appetite, and thus, helps to maintain ideal weight.

Even knowing all this, it was hard for me to change a lifelong habit. A few years ago I started using a prototype of the Fitbit and I had Dr. O’Keefe look over my sleep history. He adamantly insisted that I needed to get more sleep. At the time, I was averaging 5 ½ to 6 hours of sleep a night, which I thought it was great. I told James, “I just wake up after 6 hours of sleep; that is really all I need.” His immediate reply was, “That is because you have trained yourself to wake up after 6 hours of sleep.” He told me the next time I wake up after 6 hours of sleep, that I should stay in bed and try to doze off again. Sure enough, I was back in dreamland for another hour of revitalizing sleep. Since then I have worked to get my average sleep time to at least 7 hours each night. I have to admit, I feel better too. I will never go back to thinking 6 hours of sleep is enough.

I have always preferred sleeping in an east-facing bedroom because I love to awaken naturally to the light of the rising sun. The problem is that we often have to be up BEFORE the sunrise. I had heard about clocks that awaken you using a light to simulate the sunrise. After doing some in-



*This is what getting a good night’s sleep, waking up on a Saturday morning and going for a walk in nature with my girl looks like.*

vestigating, I bought the Phillips Wake Up light two years ago and it was one of the best purchases I’ve ever made. You just set your desired wake-up time and about 45 minutes prior to that it begins to slowly light up the room, gradually increasing from a dim reddish orange to a bright sunlight color. It is such a natural and peaceful way to wake up and start your day. You can also set it so you can hear rain, or birds chirping, or other nature sounds if you need to also hear something to wake you up. To the astonishment of my family the sunlight simulator is all I need. Let me tell you, it’s much better than hearing a train horn going off, or searching for a missing piece to turn off the alarm clock, or being pelted by a volleyball. There is much to be said for starting your day off with a peaceful natural awakening.



Actually, getting 7 to 9 hours of quality sleep each night is one of the most important and under-rated steps you can take to optimize your health and well-being. If you snore most nights, wake up tired and unrefreshed, have daytime sleepiness and/or are unable to sit quietly (reading, watching TV, etc.) without falling asleep, you should see your health care provider to discuss your sleep.

These are signs of sleep apnea, a very common condition that occurs when the back of your throat collapses as you inhale, interrupting the airflow and causing your blood oxygen to drop repeatedly. The person with sleep apnea is generally unaware of the condition, although often they've been banished from their spouse's bedroom due to the snoring. Sleep apnea makes it impossible to maintain deep restorative sleep due to the frequent recurrent interruptions of breathing, which disturbs and partially reawakens the brain. We routinely order a simple home sleep study, which will reliably diagnose sleep apnea. Many patients with undiagnosed sleep apnea often say, "Oh, I sleep really good. I can sleep 10-plus hours every night if I let myself." They are "good sleepers" because they're always exhausted and are deficient in the deep healing stages of sleep.

Sleep apnea typically doesn't go away unless you lose a lot of excess weight. It often leads to atrial fibrillation (AFIB) and other abnormal heart rhythms, high blood pressure, memory loss, stroke, dementia, and heart failure. It can also lead to car accidents due to falling asleep while driving.

### Signs that you might have sleep apnea:

- You've been told you snore or stop breathing while sleeping.
- You have high blood pressure or AFIB.

- Your neck size is over 17 inches in diameter.
- You are sleepy or fatigued during the day.

If you are concerned you have a sleep-related disorder, talk to your health care provider because sleep is so vital to your health. Sometimes, we just need to make sleep a priority and realize the importance of sleep to all aspects of our health (your heart, your mind, your weight, and more). The Dalai Lama says, "Sleep is the best meditation." And I say that sleep is one of the best therapies for your overall health.

---

## Helpful Tips for Healthy Sleep

- Make sure you go to bed in time to allow yourself to get at least 7 hours or more of sleep each night; 8 hours is ideal.
- Finish eating and drinking at least 3 to 4 hours before bedtime.
- Stop drinking any caffeinated products by 2 p.m.
- Do some daily exercise, but best to not do strenuous exercise immediately before bedtime.
- Turn off all electronics and screens and keep them away from your bed starting at least 30 minutes prior to bedtime.
- Get in a routine of going to bed and waking up at the same time. Aim for a bedtime no later than 10 p.m. Our bodies love a routine.
- Read before bed if it helps you relax, but, don't read something that is going to get you riled up or make you feel compelled to stay up late to finish it.
- Say your prayers.

# Who Rescued Who? A Best Friend with Health Benefits!

By James H. O’Keefe, M.D.

**M**y wife, Joan, and I will send our youngest child, Caroline, off to college in August, yet our nest will not be empty. Joan really loves animals, so through the years we’ve adopted a multitude of pets—currently we have three dogs and three cats. I have learned from Joan that in order to reap the full benefits of owning pets, you need to be affectionate with them on a daily basis. She lovingly converses with the animals throughout the day, and they return her affection.

Among our menagerie of animals, I am closest with my dog Lady. We almost daily go on hikes together, and when we are around a lake in warm weather we swim together. When I leave the house to go to work, I lean over to scratch her head and she licks my face. I hug her before I go to bed each night. My ambition in life is to someday be as good of a person as Lady believes me to be. I don’t need scientific studies to know that Lady is good for my mental and physical health—I can feel it in my heart. We humans have shared our homes, our food and our lives with dogs for 40,000 years. We are designed by nature to be best friends.

## The “Cuddle Chemical”

Oxytocin, also known as the “cuddle chemical” or the “moral molecule,” plays a huge role in the mother-baby bond formation, as



*Evan and Kathleen with Lady, Brady and Francis (left to right).*

well as in monogamous pair bonding. Affectionate face-to-face interactions, especially when they include touch, hugs, and eye contact also increase oxytocin levels. Having higher oxytocin levels enhances trust and social connection, decreases anxiety and stress, and makes us more cooperative and generous. Similarly, when a person interacts affectionately with their dog—petting, hugging and praising their canine companion, both the person and the dog spike their oxytocin blood levels. However, when a dog and a stranger interact, neither the dog nor the human increases their oxytocin levels. Remarkably, the more time the dog and their owner spend

gazing into each other’s eyes, the higher the oxytocin rises in both the person and their pooch. This interspecies (canine+human) oxytocin-induced deep emotional bonding is unprecedented in nature.

An influential study that was recently published in the journal *Scientific Reports* found that living with a dog is linked to better longevity. So, now we have one more very good reason to be grateful for our tail-wagging best friends. This ground-breaking study involving millions of Swedes and their pets found that individuals who own a dog tend to be more active, both physically and socially, and have

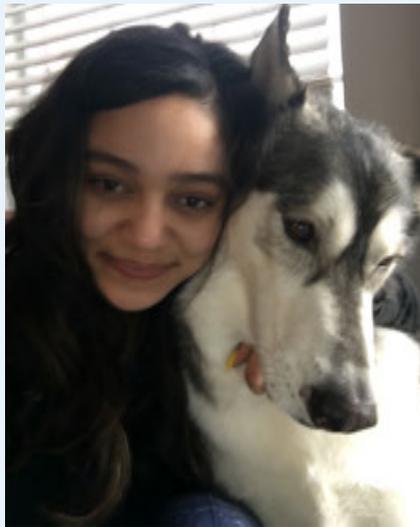
reduced risks of heart attacks and premature death compared to people without a pet.

Researchers at Uppsala University in Sweden studied the effect of dog ownership on life expectancy by focusing on Swedish national registry records of 3.4 million healthy middle-aged Swedes. This massive and comprehensive study was possible because in Sweden all dogs are required to be registered; and every time a person is admitted to a hospital all the pertinent details are recorded in the Swedish national health database. By combining 12 years of follow-up data in these Swedish national databases, the scientists found that the dogs seemed to confer a halo effect on their owners' health and survival. That was true even after adjusting for factors such as smoking, weight and socioeconomic status.

### A Pup Protects Your Heart

Other studies show that people who live alone are at increased risk for heart disease and early death. In this new study, compared to people who lived alone, people who lived alone with a dog had a 33 percent reduced risk of death, and a 36 percent reduced risk of cardiovascular disease.

A fascinating finding from this compelling new Swedish study was that the dogs who were originally bred for hunting and/or herding, such as retrievers, terriers, collies, pointers, setters, spaniels and scent hounds—were the breeds that were best for protecting people



Dr. O'Keefe's scheduler, Nikki, with her best friend, Wallace.

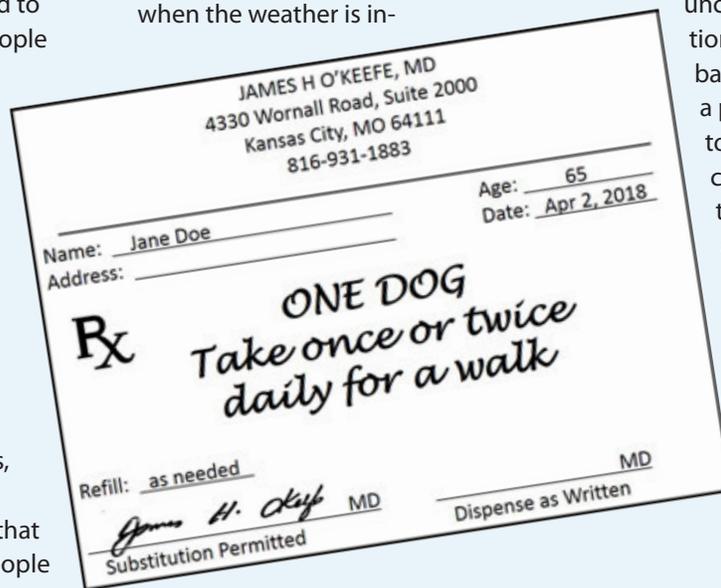
from heart disease and premature death. This is probably because they tend to be energetic dogs who love to be outdoors and generally need more activity than other breeds, and thus are typically good at encouraging their owners to take them outside for fresh air and exercise. Indeed, I've noticed that many of the people I see when I'm out walking my dogs, are out walking their dogs. Especially, when the weather is in-

clement it's generally only us dog-walkers you'll see out braving the elements. And despite being out there in miserable conditions, we are almost always happier and more relaxed by the time we get back home.

### Dig with Your Dog

Having pets in the household is also good for your microbiome—the collection of bacteria in your intestines that helps you a) digest food and b) is critical for maintaining a strong immune system. Studies show that children who grow up with a dog in the house have lower rates of asthma and allergies. Pets seem to provide immune-boosting benefits for adults too. Research also shows that having a dog will make a person less reactive to stress, and pets help to protect their owners from toxic effects of psychosocial distress, with less of a rise in blood pressure and a faster recovery following traumatic events.

A pet brings joy, companionship, unconditional love, emotional support and healthy bacteria into a home, so if a person has the capacity to take care of a dog or a cat, it's a wonderful way to improve one's health and well-being. In my opinion, people who don't adopt a dog and/or a cat are missing out on some of life's most emotionally enriching, and wellness-promoting relationships.



# When You Plant a Garden, Life Begins

By James H. O’Keefe, M.D.

*“The glory of gardening: hands in the dirt, head in the sun, heart with nature. To nurture a garden is to feed not just on the body, but the soul.”*

**Alfred Austin**

Spring is by far away my favorite season—a natural high. It’s nature’s way of saying “let’s party!” As the days lengthen and the sunlight starts to feel warm on the skin again, spring breathes new life into the world around us. This time of year especially I love to get outside to do some gardening; it instantly relaxes and refreshes me. I even enjoy the rainy days. I find the sounds of rain soothing—I can feel the plants flourishing as they bathe in the showers and drink up the revitalizing waters of life.

A recent meta-analysis on gardening and health published in Preventive Medicine Reports suggested that digging in the dirt is beneficial to the mind, body and soul—not just the soil. Studies show that gardening improves one’s life satisfaction, vigor, and sense of well-being. I saw a sign in a neighbor’s garden that read: “Feel free to talk to the plants; they understand.” In fact, the mental health benefits of gardening are so potent that scientists refer to it as “horticultural therapy.” What’s more, gardening is cheaper than therapy, and you get vegetables and flowers to show for your work. And whoever said money can’t buy happiness has clearly never been to a garden center nursery in spring.

*“My garden is my most beautiful masterpiece.”*

**Claude Monet**

Tending to plants in the dirt has also been shown to improve your sleep quality. In part, this is due to the outdoor exercise, which leaves you pleasantly bushed. Additionally, working in a garden melts stress away and reduces anxiety, all of which makes it easier to doze off and sleep more soundly.

Alice Sebold wrote, “I like gardening—it’s a place where I find myself when I need to lose myself.” One of every three Americans actively participates in gardening, making it one of our most popular forms of exercise. Gardening is a wonderful opportunity to get intimate with nature, even if you are an urban dweller. It has been said that the best time to plant a tree was 20 years ago; the second-best time is now. I’ve planted so many trees in our yard that now the only spot that is in full sun is the center of the front yard—and Joan won’t let me plant a vegetable garden there. So I mostly plant greenery, raspberries, kale and flowers.

A study published in the Journal of Alzheimer’s Disease estimated that lifelong avid gardening could cut the risk of Alzheimer’s disease by up to 50 percent. Gardening is also helpful for preventing heart disease, diabetes, and obesity. Of course, eating the nutritious homegrown plants is also therapeutic for your heart and brain, but the vegetables and fruits you grow yourself will improve your health and well-being even if they never make it to your kitchen table.

My dear friend, Linda, is passionate about her gardening and even has her



own greenhouse so she can grow plants when it’s freezing cold outside. She lives in a small coastal town in northern Massachusetts on the blustery shores of the Atlantic Ocean. She wrote to me in an email, “Gardening has become a central focus of my lifestyle: the miracle of nurturing the soil, germinating the seed, the creative expression of designing the gardens, the physical satisfaction of digging and maintaining, and ultimately growing and harvesting much of my own produce.” Linda continues, “My interest in the outdoors goes way beyond gardening—I make a conscious effort to be mindful in nature. My morning walk takes me past the beaches and the salt marsh, where I listen to the natural sounds, watch the wave patterns on the water, and study the flora and fauna around me.”

## Think Outside—No Box Required

Accumulating evidence indicates that spending more time outdoors is beneficial for one’s physical and mental health; reconnecting with nature reduces anxiety and depression, and improves sleep. This is especially true for children and adolescents, in whom this so called “nature-deficit disorder” is becoming very common. Gardening boosts mood, and is an opportunity to nurture life and express creativity. Kids in particular have a real sense of pride and accomplishment when they see their plants thriving and eventually get to harvest juicy red tomatoes and crisp orange carrots.

# Eat Well with a Busy Schedule

By Lindsay Nelson, R.D.

**W**hen I ask my patients, “What’s your biggest barrier to a healthy lifestyle?” the most common answer I receive is “time.” In this fast-paced society with our overbooked calendars, finding the time to cook and prepare healthful foods can be a big challenge, resulting in multiple days in a row of take-out and fast food. Even many of my retired patients say that although they now have the time to cook for themselves, they don’t anymore because they feel burned out from cooking for their families for decades and have just lost the desire to shop for and prepare their own meals at home.

So how is it possible to cook and eat meals at home and keep up with all of your other responsibilities? My solution – meal planning and prepping. In my opinion and personal experience, it’s almost impossible to eat well with a busy schedule without adopting these two habits. Here are a few tips:

- Set aside a few hours one day a week to focus on meal planning/grocery shopping/meal prepping. For some it may work out better to divide this up into two different days.
- Find a few good recipe sources like websites and/or cookbooks that you count on to supply tasty, healthful and practical suggestions for you and your family to experiment with and enjoy.
- Get a blank sheet of paper and start writing out what you can eat at each meal throughout the week working around your schedule. Know you’ll be getting home late on Wednesday evening? Plan to make enough leftovers on Tuesday evening to cover

Wednesday, or plan on making a freezer meal to use that night.

- Keep it simple. You don’t need to be a gourmet chef to make healthy meals. For example, a one-pan meal with chicken, veggies, avocado oil and herbs roasted in the oven is one easy idea. For a no-cook packed lunch, one option is an Epic bison bar with an apple, celery and a hummus to-go packet.

- As you fill out your meal plan, also make your shopping list and divide it into sections of the store to make grocery shopping a breeze.

- Do batch cooking. Embrace leftovers and plan on eating the same meal multiple times in one week and then switch it up again a few days later. This saves so much time. Make a veggie and egg breakfast casserole that you can eat on three to four days in a row, and then eat Greek yogurt parfaits the rest of the week.

- Once you get your groceries, prep as much as you can ahead of time. Maybe it’s making all of your dinners for the week and storing the dinners for later in the week in the freezer. Maybe it’s prepping your lunches for the next three days; or chopping up the veggies for the next two days. Do whatever you can now to save yourself time later in the week.

Meal planning and prepping will look a little different for each person depending on your tastes, lifestyle, schedule and organization style. I’ll tell you what works for me as a mom working part-time. Each week I work Tuesday, Wednesday and Thursday, so for me, doing my meal planning, grocery shopping and prepping fits in my schedule the best on Mondays. When



I get home from grocery shopping on Mondays and put my toddler down for a nap, I make our breakfasts and lunches for the next three days as well as that night’s dinner (with enough leftovers for the next night’s dinner).

When I do this, the only meal I have to cook during my work week is on Thursday night. On Friday I start over and make a new batch of meals. Lunches during the work week are typically salads I store in large canning jars. I switch the type of salad each week to keep it interesting.

For some of my patients with extremely busy schedules working 50-plus hour weeks on top of other responsibilities, using a meal prep service may be more realistic. There are a few local companies and restaurants that offer pre-made individual healthy meals that you can order ahead of time and pick up once a week. If someone is already eating nearly every meal out anyway, this solution ends up being around the same cost or even cheaper.

Make it a top priority to eat healthier. If you feel overwhelmed thinking about meal planning, start small, find your rhythm and over time you will figure out what works best for you.

# Curcumin Improves Memory and Rejuvenates Brain

By James H. O’Keefe, M.D.

**A** ground-breaking new study found that curcumin appears to improve memory and may protect against the amyloid protein buildup that is the hallmark of Alzheimer’s disease. Curcumin has potent anti-inflammatory and antioxidant effects, with suggestions it may also confer brain-protective benefits. Curcumin is the biologically active ingredient of turmeric—the yellow spice in curry powder that has been used in India for centuries as a traditional remedy for arthritis, cancer and heart disease. Observational studies report that Indian people who consume a significant amount of curry seem to have a lower prevalence of Alzheimer’s disease. Furthermore, some studies suggest that older adults who consume turmeric appear to have better cognitive performance, indicating that curcumin might protect the brain against age-related mental decline. Yet, turmeric and curcumin are very difficult to absorb, whether from food or supplements.

Gary Small, MD, renowned brain researcher from UCLA, recently performed an independently funded, double-blind, placebo-controlled trial testing a highly absorbable form of curcumin (Theracurmin®) dosed at 90 mg twice daily for improving brain structure and function. Forty adults (average age 63) without dementia took either Theracurmin or a look-alike placebo for 18 months. The Theracurmin significantly improved memory and attention/focus as assessed by validated neuropsychiatric questionnaires. (Figure 1)

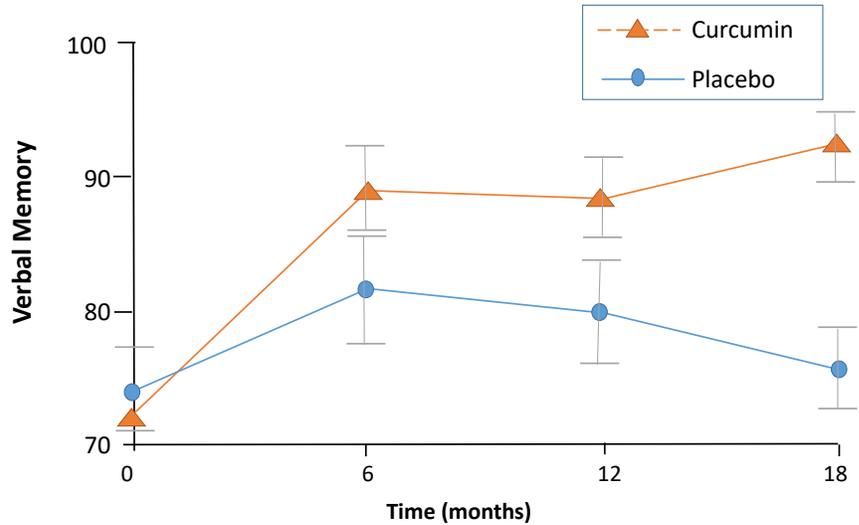


Figure 1: Curcumin significantly improved verbal memory compared to placebo.

Amazingly, in addition to improving behavior and mental sharpness, curcumin also decreased the signature of Alzheimer’s disease—plaques and tangles in the brain. PET scans of the brain performed at baseline and at the end of the 18-month study, showed that twice daily oral Theracurmin led to less accumulation of beta amyloid and tau protein debris in the amygdala and hypothalamus—the brain regions responsible for mood and memory. The authors attributed curcumin’s brain benefits to its anti-inflammatory and/or anti-amyloid effects.

In summary, daily use of Theracurmin improved memory and reduced amyloid and tau deposits in the critically important areas of the brain. This is a natural, safe, relatively inexpensive, over-the-counter supplement that appears to boost memory and may stave off age-related neurodegeneration. The hope is that it might eventually prove helpful in preventing Alzheimer’s disease.

This was a small trial, so we will need more studies to confirm these cognitive benefits; but for now Theracurmin at 90 mg twice daily appears to be a potentially game-changing therapy for maintaining a sharp mind and a youthful brain. Notably, I first read this study when my friend Dr. Richard Isaacson, Director of the Alzheimer’s Prevention Clinic, at Cornell in New York City, and a leading expert in preventing dementia, sent me an “In-Press” pre-release copy of this fascinating paper. Supplements available in the U.S. that contain Theracurmin® at the doses used in this recent study include Integrative Therapeutics, Bioceuticals Triple, and CardioTabs Curcumin. If your goal is to support memory and brain health, make sure you get capsules containing 90 mg of Theracurmin and take it twice daily with food.

**Disclosure:** Dr. O’Keefe is the Chief Medical Officer and Founder of CardioTabs, a nutraceutical company that sells a Theracurmin supplement.



# Omega-3s Do Protect Against Heart Disease: You Just Have to Have the Right Dose

By James J. DiNicolantonio, Pharm.D.

**H**eadlines hit the New York Times recently stating that “Omega-3 Supplements Don’t Protect Against Heart Disease.” The media frenzy began after a publication of the most recent meta-analysis of 10 randomized trials assessing the effects of omega-3 supplementation in high-risk individuals. The most obvious question to ask is are the headlines true? Well that depends. . .

The most important finding of the study was a borderline significant 7 percent reduction in the risk of people from dying of coronary heart disease. In other words, based on the study’s own findings, we can be 95 percent confident that omega-3 supplementation does reduce the risk of people dying from heart disease. That’s the exact opposite of what the New York Times article title claimed.

## So Why the Controversy?

The problem with meta-analyses (scientific analysis of several studies) is that they are only as good as the studies that are included in them. In

patients who have a history of heart disease, when they are given high doses (1.8 grams) of omega-3, even on top of statin therapy, there is a significant reduction in heart disease events. And if you can give omega-3s quick enough (less than three months) after a heart attack, there is a significant reduction in all-cause death and sudden death.

## Other Factors at Work

So why do some studies end up showing no benefit with fish oil? One reason is background risk. If a study population has a low risk of heart disease to begin with, then it will take a very long time to see any benefit from omega-3 supplementation. Another reason is background treatment with other medications, known as “optimized medical therapy.”

If the study’s subjects are already being treated with blood pressure medications, aspirin, statins and are also eating a large amount of fish, it’s hard for omega-3s to show any benefit when added on top of this. Another reason is omega-6. Omega-6 fats,

commonly found in high amounts in vegetable oils, compete with omega-3s in the body. Considering that our background intake of omega-6 is now so high (from the infusion of omega-6 fats into the diet), our omega-6/3 ratio has skyrocketed, going from about 1:1 during evolutionary times to about 16:1. In other words, adding a drop of omega-3s in a sea of omega-6 isn’t going to work. You need to lower the high background intake of omega-6 for omega-3s to have a fighting chance.

One way to get around this high omega-6 intake is to use higher doses of omega-3s. Indeed, it was shown almost 20 years ago that in order to halt and even reverse heart disease, you need to use 3-6 grams of omega-3s. Compare that to the typical dose of omega-3 used in most studies (only 1 gram), and you can see why some studies may find a lack of benefit.

So before you stop your omega-3 supplements, take these factors into consideration. They may just end up saving your life.

# Great News for Your Heart from Cardiovascular Consultants!

Inside...

- **A New Day is Dawning for Type 2 Diabetes**
- **Play with Your Friends ... Save Your Life!**
  - **Why Women Outlive Men**
  - **Wake Up to the Power of Sleep**
  - **Curcumin Improves Memory**

