When was the last time you ran out of gas? If I had to guess, it has probably been quite a while. If you ever have though, you know that it is an unforgettable inconvenience and embarrassment that you probably don’t want to experience again. Luckily, most modern vehicles now have all kinds of bells and whistles to let you know when your fuel tank is getting low. You can watch your fuel gauge and respond to those warning signals by going and filling up your gas tank. Thus, you probably rarely run out of gas.

Our cars aren’t the only things that run out of gas. Unfortunately, our brain and body do not come with a simple instrument panel to alert us to an impending “empty fuel tank.” Instead, we get all these annoying emotional and physical signals that often don’t make any sense, other than we just “feel terrible.” When was the last time you overslept, or forgot where you left your cell phone, or missed an important meeting? Or maybe your mood tanked and irritability, depression, and anxiety started to creep in. What about that time you felt so tired that you didn’t even have enough energy to fall asleep effectively? Contrary to popular belief, these things aren’t just part of getting older. They are the bells, whistles, and lights on the dashboard, telling you that you are nearing brain drain!

You may be tempted to pop a vitamin pill or even a cookie into your mouth to try to feel better, but it’s rarely enough. The human brain is primed to seek sugar and sweets because most of our cellular energy comes from carbohydrates and fats. In a pinch, even protein can be converted to carbs. However, refined foods will not give our brain cells the energy they need to function optimally. Sadly, nearly 70% of food found in most supermarkets and fast food restaurants is processed and very poorly metabolized in our bodies.

Continued on page 2
Brain Cells Need Complex Nutrients

Even though our brain is only about 5% of our body weight, it uses 20% of our daily energy requirement. Our cellular engine must be primed, tuned, and fully supported by an important array of biochemical nutrients, including key vitamins, minerals, special omega fats, phytonutrients, and a host of diverse metabolic factors.

For example, brain power is primarily electrical. Our neurons can conduct signals along structures called axons and dendrites - the wiring system of all our peripheral nerves and brain centers. These wires are highly complex with fatty acid insulation sheathes that are dependent on the right omega oils in our diet.

Now, Back to Key Question...

What is The Most Important Brain Nutrient?

Dr. Hugh Riordan, a psychiatrist, used to ask this question at his lectures. Attendees guessed the common vitamins and nutrients, not knowing it was a bit of a trick question. The real answer, he would say is “It’s the one (or the ones) you are lowest in,” explaining that “Your team of nutrients is only as strong as your weakest player(s).”

This always led to another important question: how can we possibly know which brain nutrients are deficient? Which ones are our weakest players?

Measure-Measure-Measure

The Riordan Clinic was founded by Dr. Hugh and Olive W. Garvey under the original name “The Center for the Improvement of Human Functioning.” We are the original home of Functional Medicine, which, along with Integrative Medicine, is how we brand our kind of medical care. Functional medicine, in the simplest terms, is the measurement of key bodily functions that are needed to maintain and improve health. We base all of our recommendations on accurate, scientific measurements of key nutrients and other physiologic functions.

Should you wonder about your own reserve of key brain nutrients, consider looking into our Brain & Mental Health Profile. riordanclinic.org/lab_tests/brain-profile

Below are some of the key nutrients measured in the profile, and why they are important to your brain health.

VITAMIN A

Investigations into the influence of vitamin A on cognitive abilities have proven that older people with a vitamin A deficiency suffer memory and other thinking impairments. 10,000 units per day is enough.

VITAMIN D & K

A study of 320 cognitively healthy men and women between the ages of 70 and 85 found those with higher blood concentrations of K1 had better brain speed and verbal episodic memory. This is the ability to recall and mentally re-experience specific episodes from one’s personal past (like where you left your car keys).

VITAMIN E

When your vitamin E level drops, the liver has a tougher time sending vitamin E to the brain. That is where it is used to make the compound called DHA-PC – the form that goes into membrane construction. 90% of Americans are deficient in vitamin E

CHOLINE

Choline was only given essential nutrient status in 1998. It has important roles in cell membrane signaling, protecting the brain against free radicals, maintaining brain mass, supporting energy, and prolonging normal levels of acetylcholine and other key neurotransmitters.

Nutrition is one piece (a very important piece) of the brain health puzzle. Exercise, lifelong learning, and connecting with others are other valuable pieces to incorporate into your lifestyle to promote healthy brain function for many years to come.
The Latest Information and Top Experts in Functional and Integrative Medicine

**LATEST EPISODES**

**EPISODE 11**
**ORGANIC FOODS AND THE ANTI-CANCER BENEFITS OF SALVESTROLS**
Ron Hunnighake, MD

Leah Chischilly talks to Dr. Ron about the Anti-Cancer benefits of compounds called Salvestrols. They discuss how Salvestrols are found in larger quantities in organic produce and how you can get more of them into your diet.

**EPISODE 10 & 9**
**INTERVIEW WITH CHRIS WARK – PART ONE AND TWO**
Ron Hunnighake, MD

Dr. Ron interviews Chris Wark of Chris Beat Cancer. Chris was diagnosed with stage three colon cancer and after having surgery to remove the tumor he opted out of chemotherapy and used evidence-based nutrition and natural, non-toxic therapies to heal.

**EPISODE 8**
**INTERVIEW WITH DR. DEVIN VRANA**
Ron Hunnighake, MD

Dr. Ron talks with Dr. Devin Vrana about tapping into the body's innate ability to heal and how the practice of medicine is beginning to change.

**EPISODE 7**
**MUSCLE AS MEDICINE**
Dustin Moffitt, ND

This episode of the Real Health Podcast is a follow-up to an article published in the March 2021 Health Hunters

Dr. Dustin Moffit and Leah Chischilly talk about how building and maintaining muscle impacts overall health and why it is so important to stay physically active as we age.

Listen Now at RealHealthPodcast.org
My Journey with Tai Chi

It began in 1975. In exchange for teaching him songwriting and guitar, a Tai Chi instructor offered me lessons. He fell in love with guitar, and I fell in love with Tai Chi. His first lesson taught me how to walk slowly up a hill and be as rested at the top as I was at the bottom. This was my initiation into the unknown world of the slow-moving, dance-like martial art called Tai Chi.

Ten years later, my studies with Abraham Liu in San Diego restored my youth at age 35. He taught the short form to a large group of students. It took six months to learn the form, and we only knew it poorly, at best. Only 20 percent of the class made it to the end. The teacher said it was the highest percentage of finishers of his career.

For those that survived the gauntlet, the results were remarkable. A ninety-six-year-old woman with poor balance and limited range of motion now walked and moved with good balance, a restored range of motion, and improved posture. A quadriplegic, who could barely walk, did the same. For both, it was a long six months with slow improvements. A doctor, who specialized in promoting aerobics at malls, discovered that ten minutes of his Tai Chi promoted the same healthy signposts as twenty minutes of aerobic exercise. Personally, I lost my yearly bouts with bronchitis — they simply disappeared. In every way, Tai Chi personified health.

Cheng Man Ching created the short form as a solution for those who could not afford health care. The long form was simply too long for most people to learn. The short form, with only 37 moves, quickly gained popularity and spread throughout China before the advent of World War II.

Abraham Liu, who taught me the form, was a senior student of Cheng Man Ching. He trained and developed senior students across Southern California. I became one of his senior students and went on to study a trio of the internal kung fu arts from Mike Patterson, a teacher at the largest Kung Fu studio in Southern California. I studied to maintain great health and became one of Mike’s senior students.

My regular practice continued without interruption. The mix of martial art combinations varied from year to year until I found the right mix. It allowed me to practice daily without feeling the pain of working out.

The internal Kung Fu arts like Tai Chi are all extensions of Qi Gong and are considered moving meditation. Meditation brings focus, calmness, and awareness to the growing list of health benefits gained from Tai Chi.

The creator of the short form in the Yang style Tai Chi was Cheng Man Ching. He came to New York and established a following, catapulting the Yang short form to the most popular Tai Chi form on the planet. Cheng Man Ching took up Tai Chi as a child and worked on it when he got sick. It was his health care system. After contracting Tuberculosis, he practiced over 100 movements of the long form daily. In one month, the bleeding and coughing stopped, and in one year, the Tuberculosis disappeared.
Tai Chi gently warms up the joints, increases range of motion, improves balance, lowers blood pressure, flushes the entire lymph system, and has the same effect as twenty minutes of a cardio workout.

Out of thousands of students of Tai Chi, I rarely find one who does the form regularly because they simply cannot remember it. They do what they can. A Tai Chi master always asks the senior student to learn the reverse of the form. It is rare to find anyone who knows the form in reverse.

My desire was to share this gem with the world, and at age 65, the concept of teaching a complete Tai Chi form in one hour occurred to me. It took three years to solidify this idea, and it culminated in the creation of Mastering Tai Chi. Now, one can learn a ten-minute Tai Chi form in one hour and create a lifetime of good health through motion.

David Scott created the Movement Within site in February of 2005 to create holistic, educational, and musical works which serve to feed the inner spirit. The vision is to help discover and solve the root causes of health problems, and to manage education with joy so that the process of learning becomes easier. It is his life-long quest to find practical solutions to common health problems. He continues to acquire and refine his skills in a Holistic Health practice. movementwithin.com

In Loving Memory of Dang Nguyen

We are sad to share the passing of one of our long-time employees and friend, Dang Nguyen. For nearly two decades, his quiet but sincere devotion to maintaining our beautiful facility and extensive grounds was an inspiration to all our staff. Dang was a wonderful man who truly left an impact on both the physical campus, and the lives of everyone who passed through these domes over the last two decades. He will be dearly missed.
IV Vitamin C Tips from a Riordan Clinic Patient

You have probably noticed we are big fans of IVC around this newsletter! I’ve been a Riordan Clinic patient since the early days of my breast cancer diagnosis, and it didn’t take long for me to become a fan of high dose vitamin C, too. I have been getting my doctor prescribed IVC regularly for several years and if punch cards were a thing, mine would be full many times over (ha!).

You might be wondering why I would still be here doing IVCs and getting various treatments after all these years. I see it as one of the ways I intentionally support my entire body. With over 100 different types of cancer, there is no one-size-fits-all cure. I understand that IVC is not a stand-alone cure for my cancer, but it is a well-studied complementary therapy that I’m grateful to be able to include in my longer term treatment. It supports my wellness at a cellular level and helps me thrive in the midst of my healing journey.

Perhaps the answer to “when will you be done with treatment?” depends on how you define treatment. Personally, I’m aiming for a healthy quality of life beyond just getting past one pesky spot!

In my research and experience, I’ve discovered that IVC may help with cancer cell issues, reduce discomfort, support cellular detox, decrease inflammation, act as a co-factor to skin building collagen, interfere with cancer’s metabolic processing, and enhance quality of life. Those are some of reasons I decided to get regular infusions.

If you are considering IVC then I’d like to offer a few helpful tips to have the best experience during your drip.

1. **Hydrate before your appointment.** It’s much easier to have the IV catheter inserted when you’ve had plenty of water.

2. **Go to the restroom at the clinic right before you get seated for your IV.** It’s more comfortable to have an empty bladder than a full one during your infusion.

3. **If you don’t have a port, or if you have “shy veins” consider asking for a heating pad and a little bit of time to warm up your arm before getting your IV started.** The heat helps dilate your veins to make the poke easier.

4. **Bring some filtered water or your favorite healthy beverage to drink during your infusion and on your way home.** Ascorbic acid looks very similar to the glucose molecule and can cause some things like dry mouth during and directly after the IVC.

5. **Don’t be afraid to ask the nurses for a blanket if you are chilly, or to change the speed of your drip based on how you are feeling.** They are the pros who are trained to help you have a comfortable experience.

Jenny Bradley has been thriving with her cancer diagnosis since 2017. She equips others to confidently advocate for themselves and have more peace and less overwhelm on a cancer journey. Jenny has a Master of Arts in Intellectual Leadership and is a Certified Culinary Nutrition Expert who shares her cancer insights and tips at shrinkthemutantschool.com and @shrinkthemutant on Instagram. Jenny lives in Kansas with her husband Mike and their little dog Poppy.
Welcome Laura!
LAURA VASQUEZ, MSN, APRN, NP-C, OVERLAND PARK CAMPUS

Laura Vasquez is a nurse practitioner who will support Medical Director, Lucas Tims, ND, FABNO at the Overland Park location of the Riordan Clinic. Her focus will be on Integrative Oncology and other complex conditions. She will provide support to patients in all phases of their treatment.

Laura was born and raised in Kansas City, Missouri, and received her first bachelor's degree in Psychology from Missouri State University. She later received a Bachelor's degree in Nursing from William Jewell University. In 2017 Laura completed a Master's degree in Nursing from the University of Central Missouri and became a Certified Family Nurse Practitioner.

In her nursing years, Laura worked in the Cardiac Intensive Care Unit at Saint Luke's Health System managing critical care patients with multiple comorbidities and cardiac disease. As a nurse practitioner, Laura specialized in preventive cardiology focused on helping patients achieve metabolic wellness and reduce disease states such as obesity, diabetes and, vascular inflammation. Laura provided her patients with education, support, and specialized medical plans that included conventional and integrative protocols to reverse disease and prevent further damage.

When Laura was in her early 20’s, she developed an interest in integrative health modalities. She learned more about alternative health principles through continuing education courses, research, and by incorporating new healing techniques into her own life. Over the years, her passion for integrative health has continually grown as she sees the value of natural therapies in the changing landscape of modern medicine.

Laura pursued further training in functional medicine and incorporated the principles into her practice. Her experience includes helping patients with a variety of chronic diseases through in-depth lab testing and treatments such as bio-identical hormone replacement and IV nutrient therapy. She helps her patients heal from chronic disease by looking at underlying contributors like inflammation, infections and environmental toxins. Laura has vast experience with intermittent fasting, ketogenic diet plans, lifestyle education, accountability programs, and IV nutrients and antioxidants. In January, 2022 Laura will complete her certification in The Metabolic Approach to Cancer Program.

Laura is a member of the American Academy of Nurse Practitioners, The Institute for Functional Medicine, and The Society for Integrative Oncology. In 2014 she received Saint Luke’s Health System’s Clinical Excellence in Nursing Award. In her role as a cardiology nurse practitioner, Laura was recognized in 2019 as a member of the top 10% of providers nationwide for excellence in patient satisfaction by Press Ganey Associates.

Laura desires to provide patient-centered care aimed at bridging the best of both worlds of medicine, and to provide hope and healing for the patients who receive care at the Riordan Clinic.

While not pursuing her passions in medicine, Laura’s first love is spending time with her blended family of 6 children and her husband, Jorge. They enjoy cooking food, playing sports and having a home full of non-stop energy.
Immunity Panel – Bio Center Laboratory
Do you know if your immune system reserve is adequate to meet the current viral crisis? This lab panel also helps people assess their individual levels of the nutrients included in the Immunity Support Supplement Protocol.

Tests included:

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<th>Nutrient</th>
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<tr>
<td>Vitamin A</td>
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<td>Vitamin D</td>
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<td>Vitamin E</td>
<td>Selenium</td>
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<tr>
<td>Magnesium</td>
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There is no need to fast for any of these tests.

To schedule your lab draw, call 1-800-447-7276

Daily Supplementation Protocol to Help With Immunity Support and Function
VITAMIN C + VITAMIN D + VITAMIN A + SELENIUM + ZINC

VITAMIN C

1 packet (1,000 mg) of Lypo-Spheric Vitamin C, 2x/day

OR

2 capsules (1,000mg each) of Vitamin C-1000, 2x/day

OR

2 scoops (2,000 mg per scoop) of Sufficient C, 2x/day

OR

1 scoop (4,000 mg) of Vitality C, 2x/day

VITAMIN D

2 drops (1,000 IU per drop) of Vitamin D3/K2 Liquid, 2x/day

VITAMIN A

1 capsule (10,000 IU) of Vitamin A, 1x/day

OR

10 drops (1,000 IU per drop) of Micellized Vitamin A daily Cannot be sold online. Please call to order.

SELENIUM

1 capsule (200 mcg) of Selenium, 1x/day

ZINC

1 capsule (30 mg) of Zinc Picolinate, 2x/day

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