Congratulations on deciding to take control of your life and investing in your most important asset, your health! We would like to thank you for allowing us to be a part of your quest of reclaiming your health. We promise that we will do everything in our control to make sure you are happy with your care. We will be sending you a series of emails containing educational points to aid you in understanding your health. These will explain what you are doing, and how to continue down this pathway for the rest of your life. *It is our most sincere and genuine mission not only to help you improve your current well-being, but also change the course of your health for the remainder of your life!*

In order to obtain health we must understand what health is. Most dictionaries define health as the state of being free from illness or injury. Is that all health really is, the absence of illness and injury? If you look good, feel good, and don’t have a physical injury or illness then you are healthy? Unfortunately, many people view health in this manner. They fail to realize many of today’s illnesses take many years to develop until they actually affect how you feel. You must take into consideration it can anywhere from 20 to even 30 years for your arteries to clog enough to lead to a heart attack. The cancerous cell that killed someone in their 50s could have been present in their 20s! I prefer the definition of health as stated by the World Health Organization, “A state of optimal physical, mental and social well-being and not merely the absence of disease or infirmity”. This definition makes it clear; health is not just simply “the absence of disease or infirmity”, but more importantly the “state of optimal physical, mental and social well-being”. Therefore health is not necessarily feeling good or being absent from disease and illness, but more importantly the optimal function of the body and mind. With the focus on optimal function, we now have a different measuring stick than symptoms, disease, illness, or injury to delineate if we are healthy or not.

If you want to truly be well, **you need to judge your health on more concrete evidence than how you are feeling.** Functional medicine testing allows us to measure how well you are actually functioning. You only know and you can only monitor what you measure. This is why we do lab testing, to help us really understand how your body is functioning and to determine the effectiveness of treatments. With our testing we can determine if there is a “lack of function” and track any changes occurring in the body that can eventually lead to disease.

Diseases and illnesses are never one singular process. It is woven from an individual’s entire life story- starting with their genetics shared from their mother and father, the health of their mother before and during pregnancy, early childhood influences, traumas, environment, medications, diet, lifestyle, behaviors, habits, and relationships. Our job is to discover how these causes are actually affecting your health and how they result in an imbalanced biology. Understanding how these causes affect the workings of your biology allows us to know where to start, which layer to peel away, or which knot needs to be untangled first. Once the cause of your body’s lack of function is identified, we can work together to correct the cause and develop changes to assure that these ailments never come about again.

In the practice of functional medicine, healing depends not only on doing the right things, but doing them in the right order. Doing the right thing in the wrong order often results in failure to recover, or worsening of the illness. More importantly, there are often numerous things to do, and it is difficult to choose which to do first. But, after 12 years of thinking, sorting, trying, failing, and succeeding, a few
things seem apparent. I would like to offer them humbly to those who wish to make sense of the infinitely variable threads of the human story.

Fortunately, though human biology is infinitely complex and beyond anyone’s capacity to fully grasp, there are some principles and well known paths to healing that are a little more straight forward. In fact, I believe, this map and methodology are our best hope. This is the map of Functional Medicine, or whole systems medicine.

**Before You Begin**

Our first task is to persistently seek the cause (or causes) of illness. Thankfully, there are only 6 root causes of lowered function and illness:

1. Infections
2. Allergens (including food sensitivities)
3. Toxins and chemicals
4. Stress (physical, emotional or biological)
5. Poor dietary habits
6. Genetics

That’s it! Only 6 things to think about! But, we must become experts in identifying and treating these underlying causes of disease. The second task is to identify the 7 essential ‘ingredients’ needed for optimal biologic function:

1. Real food and proper nutrition
2. A healthy environment (water, air, light)
3. Adequate amounts of good bacteria
4. Sleep
5. Movement/physical activity
6. Good physical structure
7. Love, community, meaning, and purpose

The presence of any of the 6 root causes of disease, and the absence of any of the 7 essential ingredients, creates imbalance in the basic biologic web like systems and processes of the body.

When faced with multiple causes of disease (toxins, infections, allergens, poor diet, genetics and stress which often occur together in varying patterns and degrees) the question is what to do first, and then what, and next and so on and so forth.

The trick lies in having a place to start, and understanding how to properly peel away the layers of dysfunction. Fortunately, the body actually knows how to heal itself, as long we remove the impediments and provide the proper conditions in the right order. This takes time, patience, and persistence.

What is the ‘Right Order’? The following steps are listed in order of priority for peeling the onion of biological imbalance. This is how we practice Functional Medicine, and what we have found leads to the most success in healing. Sometimes, we will do multiple things at once. For example, we may start with immediate dietary changes, hormone balancing, and treatments to heal the gut. Healing is a process, and is not always linear. It is more like tailoring – making adjustments at each step along the way until we get it just right. Therefore, to improve the health of the body we must understand how to employ the following seven steps to optimal health:

1. Create a Healthier State of Mind
2. Improve Nutritional Status and Hydration Levels
3. Improve Digestive Function
4. Reduce Exposure to Toxins
5. Enhance Detoxification Capacity
6. Balance Hormones and Neurotransmitters
7. Improve Physical Well-being

Create a healthier state of mind

Finding meaning and connection in the context of your health and how it relates to your life story, relationships and beliefs, is indeed, an essential pillar to obtaining optimal health. We support you and want to be able to develop the skills of self-care and stress management. These tools, including exercise, yoga, tai chi, meditation, as well as numerous other methods, have the ability to create a healthier mindset. Learning to relax deeply, let go of worry, sleep an adequate amount, build trust in life and the healing process, are all necessary ingredients for getting, and staying, well.

We highly recommend every patient take an objective review of their current lifestyle, create a clear vision of what they want their life to look like, and create specific action steps to achieve their ideal life (covered in first 11 pages of wellness journal). Developing a healthier prospective along with a supportive community is essential in this process.

It is extremely hard to get well, and stay well, if your social influences in life are individuals who have unhealthy beliefs and behaviors. Ultimately, we are dealing with a social epidemic of poor health, stinking thinking, and unhealthy belief systems. Our country will continue to get sicker and go into more debt until we adapt to a new health conscious. All of which you are going to learn about at our clinic. Share with your friends, family, coworkers, and neighbors these healthy concepts. Let them know of the journey you are embarking upon so they can be supportive and understanding. You could be the spark needed to ignite someone’s journey to healthier existence and a better way of life; a life absent of debilitating chronic disease and needless suffering.

We have written a form letter you can use to mail or email your social connections to make them aware of your new lifestyle and health journey. To raise the health consciousness of your social network, you can invite them to our ‘Survive..or Thrive?’ presentation and dinner seminar, where we will be discussing the 6 causes of disease and illness. This seminar is by invitation only, and it really is a great celebration for our patients and their guests.

Increase real food and water intake

Considering the fact that our bodies are 53% water, it is essential to have proper hydration levels to ensure proper biological function. Every cell and function of the body requires water to obtain optimal function. Think of a plant that hasn’t been watered, does it matter how much fertilizer you give it, how much light it has, the quality of the air, or if the environment is ideal? No. The same goes for the human body. The basic equation for determining how much water you need is to consume half of your body weight in ounces per day. So, if you weigh 200 pounds, you would ideally need 100 ounces of water per day. Besides water, food is the second most powerful clinical intervention in helping individuals achieve optimal health. As Michael Pollan states, “Eat food. Not too much. Mostly plants.” Below is a table outlining the benefits of a whole food, plant based diet:
Nutrient deficiencies affect up to 92% of Americans. Vitamins and minerals are necessary for every biochemical reaction in your body. Without adequate amounts your biochemistry gets stuck and you get sick. The most common deficiencies are magnesium (think anything that is tight, irritable or cramping muscles, bowels, lungs, moods), zinc (for immune function and hormone production), vitamin D, methylation nutrients (B6, folic acid, and B12, necessary for detoxification, cognitive function and DNA repair among hundreds of other essential biologic functions), and omega 3 fatty acids (EPA and DHA) the stuff of which we are (or are supposed to be) made of. Depending on testing, other deficiencies may be found and treated.

The end result of many nutritional and dietary insults (toxins, free radicals, acidity, sensitivities), is injury to the mitochondria (our body’s energy factories), the loss of energy, inflammation and ultimately cell death. This has led to epidemics of obesity, diabetes, fatigue, developmental and neurodegenerative disorders, and accelerated aging. We assess mitochondrial dysfunction using the nutreval and spectra cell, and support and protect mitochondrial function through the use of essential fatty acids, acetyl-L-carnitine, coenzyme Q10, D-ribose, magnesium, arginine, resveratrol, alpha lipoic acid, riboflavin, niacin, and/or n-acetyl-cysteine (NAC). This is often an extremely important step in supporting health and recovery from chronic illness.

Fix the Gut

Health starts in the gut. The digestive tract contains 60% of our immune system. We will assess your gut through history and appropriate diagnostic tests (for gluten sensitivities, inflammation in the gut, unwanted bugs like parasites or yeast). We will then aggressively treat the causes of gut dysfunction,
including leaky gut, food sensitivities, small intestinal bacterial overgrowth (SIBO), yeast overgrowth, parasites, and worms.

We may use herbs, anti-fungal, anti-parasitic, and anti-worm botanicals to eradicate the triggers of intestinal dysfunction. Repair and healing of the gut requires use of digestive enzymes, prebiotics, probiotics (healthy bacteria), and nutrients needed for repair of your gut lining including zinc, omega 3 fats, GLA, glutamine and anti-inflammatory botanicals such as quercetin and turmeric.

Delayed food sensitivities are among the most potent triggers for chronic symptoms, digestive system damage, and an inflamed immune system. A trial of a comprehensive elimination diet for four weeks, followed by food reintroduction is a powerful therapeutic and diagnostic tool. The closer you follow this elimination diet, the faster you will know how much food is playing a role in your illness.

After introducing a whole foods, low glycemic load (low sugar/flour), phytounutrient dense diet, you will learn that food elimination/reintroduction is the least expensive and most powerful therapeutic tool available. Gluten elimination is one of the most powerful treatment methods for chronic illness of many types. Improving digestive function will help improve the immune system, autoimmune conditions, hormonal system, hormone elimination, and production of neurotransmitters of the brain (especially serotonin).

Reduce Exposure to Toxins

Eighty thousand toxic chemicals have been released into our environment since the dawn of the industrial revolution, and very few have been tested for their long-term impact on human health. Humans and the food we eat are exposed to toxins via air, water, land, and food. Since the industrial revolution we are responsible for introducing many numerous toxins into the environment through industrial emissions, pesticides, herbicides, medications, fertilizers, oil spills, sewage, garbage, and even cosmetic products. Our environment is being polluted by 2.9 billion pounds of petrochemical toxins and 6 million pounds of mercury every year. This has obviously put a burden on our ecosystem and human body unlike any we have faced before. The cosmetic industry uses thousands of synthetic chemicals in its products, in everything from lipstick and lotion to shampoo and shaving cream. In the United States there are loop holes that allow the cosmetic industry to put thousands of synthetic chemicals into personal care products, even if those chemicals are linked to cancer, infertility, or birth defects.

It's also important not to forget about biological toxins like bacteria, viruses, protozoa and fungi. These foreign invaders create biological toxins inside of the body that negatively affect the immune system and also burden the detoxification pathways the same as an environmental toxin or chemical.

According to the nonprofit organization Environmental Working Group, the average newborn baby has 287 known toxins in his or her umbilical cord blood. If an unborn child has this type of toxin exposure, then what about you? How are these chemicals affecting you? Here is a small list of ailments that have been shown to be related to toxins: Parkinson’s disease, Alzheimer’s, dementia, autism, attention deficit disorder, depression and other mood disorders, insomnia, heart disease, chronic fatigue syndrome, fibromyalgia, cancer, arthritis, obesity, menstrual problems like heavy bleeding, PMS, allergies, sinus problems, and endocrine system disruption (thyroid problems, adrenal stress, etc.). You can decrease your exposure by:

- Stop eating canned food (even if it's organic!)
- Avoid plastic water bottles and plastic storage food containers
- Switch your cosmetics (deodorants, shampoos, lotions, etc.) to more natural products
- Use only natural household cleaners
- Find a biological dentist and get any silver-mercury fillings removed safely
- Stop eating toxic, non-organic, genetically modified and processed “dead” foods
✓ Eliminate the use of medications, recreational drugs, and alcohol (a few ounces of alcohol per week is okay)

For a more complete list and explanation of toxins to avoid refer to your wellness journal.

**Enhance Detoxification**

Detoxification is one of the most important and metabolically demanding functions of our physiology, and one that health professionals learn little about. With all of these new forms of toxins and chemicals being flooded into our bodies, we are encountering tremendous stress on our capacity for detoxification. Identifying heavy metals and toxicity is an important part of ensuring optimal health.

We do not usually treat detoxification until we are sure your digestive system and gut are healthy enough to endure the burden of the toxins leaving the body. In some cases we may have to wait months for the gut to heal before initiating the detoxification process. If not, some toxins will be eliminated into the colon allowing them to recycle back into blood stream causing an increase in toxic burden, leading to increased toxic symptoms. We support your body’s own detoxification enzymes through phytonutrients, amino acids, alkaline drink (greens/berries drink), vitamins and minerals.

**Balance Hormones and Neurotransmitters**

Hormonal and neurotransmitter (serotonin, dopamine, etc.) dysfunction is rampant due to dietary influences (sugar and refined flour) on hormones, endocrine disruptors or xenobiotics (petrochemicals and heavy metals), and chronic stress.

The delicate balance of hormones and neurotransmitters is essential for health and understanding the factors that cause disruption and restore balance of hormones is essential. Of the dozens of hormones, four categories are the most important for optimal health and avoidance of disease: 1) Insulin resistance 2) Stress response and adrenal insufficiency 3) Thyroid dysfunction 4) Sex hormone dysfunction.

Diet, exercise, stress management, natural hormone therapies, nutrient support and herbal therapies are among the most effective tools we use. We also recommend utilizing alternative therapies including acupuncture, massage therapy, and chiropractic care to help balance reduce stress and improve the balance of hormones and neurotransmitters.

**Improve Physical Well-being**

Being overweight by 25 pounds can double your likelihood of developing heart disease, suffering from a stroke or being afflicted by cancer. Physical activity of 30 minutes per day has been shown to prevent obesity, diabetes, arthritis, Alzheimer’s, depression, and dementia. Exercise provides a boost to your hormones and pumps your lymphatic systems to enhance detoxification. Good muscle tone ensures proper posture and can help ensure adequate respiration of oxygen which is essential to good health, cancer prevention and tissue repair. Good posture and movement ensure a healthy spine and proper function of the nervous system. Proper nervous system function is one of the most essential ingredients for optimal health. The nervous system is the master system of the entire body. Arthritic processes and misalignments of the spine can press upon the nerves causing decreased flow of the nervous system leading to lowered function of the cells, tissues, organs, glands and process controlled by that particular nerve. Decreased nerve function can lead to muscle spasms, decreased range of motion, chronic pain, lowered immunity, hormonal imbalances, digestive troubles, headaches, migraines, sleep issues, ADHD or ADD, as well as poor balance.
If we find you don’t respond fully to the treatment of the basic systems outlined so far, testing for hidden infections often identifies the unsuspected triggers: viruses, atypical bacteria, tick-borne illness, and dental infections (root canals). If there are no bugs inside, we must think mold in the home or workplace, particularly black mold or Stachybotrys.

Thank you for your trust in partnering with us on your quest for optimal health.

Yours in Optimal Health,

Josh Shields, D.C., C.F.M.P.