

7 Steps To **Optimal Health**

A Methylated Life



- Step 1: Genetics and Epigenetics
- Step 2: Dietary fitness
- Step 3: Emotional fitness
- Step 4: Metabolic fitness
- Step 5: Physical fitness
- Step 6: Sleep fitness
- Step 7: Brain fitness

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This report was written to give practitioners and patients a resource to better understand simple steps to living A Methylated Life™. Methylation is one of the most important processes that occurs in the body. The quality of our methylation determines the quality of our health and life.

The good news is that more doctors and patients are learning about the importance of methylation. Too often, however, patients and doctors are jumping in too quickly and supporting their methylation and genetic single nucleotide polymorphisms (SNPs) with supplements before addressing the underlying causes of compromised methylation.

While genetic polymorphisms play a role in our methylation capacity, epigenetics plays an even bigger role. Before we start supporting with supplements to treat or support SNPs, we must address epigenetics. Epigenetics are the lifestyle factors that influence how our genes express.

This report lays out a clear plan of action for what you can and should do to support optimal function, health, vitality, and methylation. Basically, how to live ... A Methylated Life™.

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7 Steps to Optimal Health: A Methylated Life™

There really are no secrets to achieving optimal health. It is something that is a constant work in progress. While there are no secrets, there are some basic concepts that, if followed regularly, can dramatically improve your health and quality of life.

One of the most fundamental and yet complicated processes that occurs in the body is something called methylation. Methylation is so critical to human life, and yet it is rarely talked about in functional medicine—and even less in allopathic medicine. Methylation is critical to our bodies' ability to function. We would cease to exist without methylation processes. Everyone with any level of sickness and disease has problems within their methylation pathways.

To improve our health, regardless of our current health status, we need to improve these methylation pathways. We need to live a life that improves, and not impedes, our methylation pathways. For optimal health and resilience, we need to live A Methylated Life™. I'll lay out the steps to living A Methylated Life™ in this report.

Let's start with a better understanding of what methylation is.

What is methylation and why does it matter?

In the larger scheme, methylation is the process of replacing a hydrogen atom with a “methyl group”—the details involve the addition of a carbon and three hydrogen molecules to another molecule. These methyl groups act like keys or switches that turn on and off hundreds of different reactions within our bodies.

Methylation reactions are critical to life and occur constantly and continuously within our bodies. Methylation reactions are involved in:

- Regulating our genes
- Processing chemicals within our bodies
- Building neurotransmitters
- Metabolizing neurotransmitters
- Processing hormones
- Building immune cells
- Synthesizing and repairing DNA
- Synthesizing histone
- Producing energy
- Producing myelin
- Building and maintaining cell walls and membranes
- Producing glutathione, the master antioxidant in the body
- Responding to and creating inflammation

The state of your methylation processes determines the state of your health. The healthier and more functional your methylation processes are, the healthier you are, and the slower you degenerate and decay. The vital metabolic reactions that occur billions of times per second in our body that allow us to be alive are the result of proper methylation. Said another way: nearly every medication taken is prescribed to reduce or manage the symptoms of faulty methylation.

What Hinders Methylation?

Methylation can be disturbed by various mechanisms. Changes to our genes that code for enzymes involved in methylation reactions can compromise our methylation. These changes in our gene codes are called or SNPs, as mentioned previously. The coding changes in the SNPs can have an impact on our methylation processes, causing enzymes to lose some of their functionality. To complicate matters, another factor—epigenetics changes caused by diet and lifestyle—have an even greater impact than SNPs.

Lifestyle Choices

Our diets play a major role in methylation. What we eat, how we eat, and when we eat can either supply resources or substrates that support or inhibit methylation reactions.

Our sleep quality, our emotions, our physical fitness, and our neurology all deeply impact our methylation. The medications and vitamins we consume, along with the toxicity of our environment, all impact our methylation processes. Since everything in our lives has an impact on our ability to methylate, and since the state of methylation processes largely determines the rate of degeneration, optimizing your methylation is critical to the improvement of your health and life.

The basic diet and lifestyle principles I present here form the foundation for optimal health and well-being—a way of life worth striving for: A Methylated Life™. We should do as much as we can to support and optimize our methylation processes.

Maximize methylation and optimize your health

Optimal health is synonymous with optimal methylation. More accurately: you can't have robust health without proper methylation. Fitness and resilience are good gauges of robust health.

Fitness is an organism's ability to survive and reproduce in a particular environment. It is a state of health. Fitness provides us the ability to undertake a given task. Our ability to do so (or not) then determines how well we thrive in our environment.

The sad reality nowadays is that the vast majority of people are not fit. They are neither healthy, nor are they capable of thriving in their environment. Many people *exist* with the help of drugs and pharmaceuticals. How robustly, though? What is their quality of life? Without drugs and pharmaceuticals, many people would not be able to reproduce ... nor would they be alive.

We have a health industry that provides false fitness. Under the current healthcare model, people take pills and medications to treat symptoms. When lab tests reflect a “desirable” outcome, they provide a false notion that this is a reliable gauge of health. But it’s not. It offers a false sense of security. What good is a number on a piece of paper that measures “normal” thyroid function when proper exercise and clean eating won’t budge the scale for a middle-aged woman? How dependable are those cholesterol numbers if you are keeping them “in range” by taking your meds, are still 80 pounds overweight, and can’t make it up the stairs without becoming breathless? The numbers say you’re okay, but you feel awful, enjoy your couch more than your dusty golf clubs, and the lifestyle limitations keep piling up. Is that thriving? These medications may help keep us alive, but they are not making us healthy and fit.

Unlike the false gauge of health that medications offer, resiliency is the body’s true meter of health.

Resilience is the ability to be challenged, pushed, strained, fatigued, and most importantly, to bounce back. It is essentially a mix of pliable toughness. When resiliency is tested, we learn of ours—the ability to be plastic or elastic. We are all, at times, challenged with many physical, chemical, and emotional stresses; our fitness and resilience levels determine how we bounce back from those situations. Optimally, we want—need—to be resilient to overcome and recover from demanding situations.

Often these situations break people who have impaired methylation pathways. They are unable to bounce back, unable to overcome the stress, which can have devastating consequences, including death. On the other hand, others who are fit and resilient are able to take on the challenge and stress. While they may weaken temporarily, they bounce back stronger, better, and more resilient.

I know that’s what I want out of my life. And I want it for you, too.

Methylation’s role in fitness and resiliency

Let’s talk about the key fitness factors associated with methylation in relation to your optimization.

Knowing now how important methylation reactions are to your overall health and well-being, the question is: what can you do daily to improve your methylation, improve your overall health,

energy, and vitality? What can you do to improve your fitness and resiliency? Essentially—and the million-dollar question—how can you get older without rapid degeneration?

That's it right there, isn't it? We can't stop the fact that we are all getting older. Years tick by whether we like it or not, so we can't fight that, we can't change it. What we can do, however, is either speed up or slow down the rate at which we age or degenerate.

We all get older at the same rate but we don't all age or degenerate at the same rate. Some people age very fast. I'm sure you've seen the before and after pictures of alcoholics and drug addicts. You see what drugs and alcohol do to speed up the degeneration process. The people look 30, 40, and 50 years older than their actual age.

While everyone can identify with this extreme example, there are more subtle examples we see every day. Go checkout your Facebook friends list. I'm sure you've already done this, but go look at all the people you graduated high school with. All of your classmates are your age, but as you look at the pictures, some look much older, some look much younger, some might look just like they did in those glory days. Why, if everyone is the same age in years, do some look older and some look younger? Why don't we all degenerate at the same rate? The speed at which we age is based on the quality of our methylation processes. The better we methylate, the better we age.

So what can you do to change the rate at which you degenerate? There are seven main factors you can address to age better, to degenerate less, to optimize you, regardless of your current age or current level of health. I call these seven elements your Methylated Life Fitness Factors™. These factors allow you to not only improve your health, but optimize it.

The Methylated Life Fitness Factors™ are:

- Genetics and Epigenetics
- Dietary Fitness
- Sleep Fitness
- Emotional Fitness
- Metabolic Fitness
- Physical Fitness
- Brain Fitness

When you are living A Methylated Life™, you are optimizing your health and function. You are optimizing your fitness and resiliency. You will get older, but degenerate much slower. So let's address these Methylated Life Fitness Factors™.

Genetics and Epigenetics

The first thing that most people need to understand is that your current state of health is not all caused by genes and genetics.

Yes, we have all inherited some genes from our parents that can compromise our health and we can surely blame others for our poor health, but it is really just a smoke screen, a cop-out, an excuse for the job we are (or aren't) doing. If you aren't as healthy as you want to be, and you want to change it, stop blaming your genes and start improving things in your life that you have control over.

Now, I'm not totally letting mom and dad off the hook. They've passed down genes that may have become altered, changed. When genes become altered, the term is called polymorphism, or a single nucleotide polymorphism—a SNP.

Every single one of us has these changes throughout our genome. Some of these SNPs are significant, some not, and many we don't even know about yet. But, if you are looking to optimize your health, you should have a grasp of the most relevant SNPs, whether or not you have them, and if they are impacting your health.

Most people don't have the time or the background to read and research everything they need to know about their genetic profile. But you can test your genome inexpensively through a company like 23andme.com. Once you have your raw genome (genetic profile) data, there are sites available that generate reports on your genetic profile.

Those reports can be extensive or minimal and they can vary in cost from a few hundred dollars to free. You get what you pay for.

But then ... what do you do with the information? This is where you need to be careful. There are quite a few people dispensing supplements just based on what your SNPs are. I am not supportive of that approach. I feel it is best to use the SNPs as a tool, not *the* tool when evaluating someone's health. The occurrence of a SNP does not necessarily indicate that it is causing a problem and requires supplemental support.

If you are going to optimize your function, health, and life, you want to work with someone who can evaluate your SNPs and determine the importance for you. My training and experience allow me to guide people through the complexities of the data and apply the information in a practical and effective approach to attain robust health.

One layer of complexity involves epigenetics, which we have already established as having even more of an impact than SNPs do on your genes and genome.

Without getting too complex, epigenetics is the study of how gene functions can be changed or modified by our diet and lifestyle. What you eat, what you do, what you say, what you think, who you hang around with, all affect your gene expression; therefore your function, your ability to heal, your ability to repair, recover—everything.

I know some advocates of allopathic medicine would dismiss those thoughts, but I'm not making this up. This is based on research, not fairy dust. Those who maintain that we have no control of the destiny of our health—that we are just victims of genetics—are blind to today's research. They are ignorant because they haven't advanced their education. The data and the details exists and support this.

Epigenetic changes don't alter our DNA, they alter the expression of our DNA. You may have "normal" genetic material, but because of your diet and lifestyle, those "normal" genes can't express correctly. This can have a mild, moderate, or severe effect on your function, health, and quality of life.

Oh, and by the way, it doesn't affect just your genetic expression. Your life experience prior to conceiving children can create epigenetics changes that affect your kids and generations to come.

That's crazy, right? It makes you think about not only what you've done to yourself in the past, but what your kids are doing to their genetic expression currently ... and the impact it will have on their kids and their kids' kids.

Dietary Fitness

I've condensed into six simple rules what you need to do to ensure dietary fitness. Each of the rules can be expanded into subcategories, but the key is to remember these six simple rules:

1. Eat real food and less toxins
2. Apply the 80/15/5 ratio
3. Eat slower
4. Chew more
5. Eat mindfully
6. Enjoy your food

If you just remember those six rules, you will do great. But let me spend some time being more specific on each one of the rules.

1. Eat real food and less toxins

Eat real food. Another way of saying this is eat foods that are as close to the way they came out of the ground, off the tree or vine, walked the earth, or swam in water. If it had to be processed, it's probably not as healthy for you.

Too often in the world of diets, people who originate the diet think they have the perfect diet for everyone. This just isn't the case; no one diet is perfect for everyone. Should you eat Paleo, Mediterranean, vegan, Atkins, South Beach? The benefits that almost all the diets share are derived from their avoidance or reduction of processed foods. As usual, when money is involved, everyone wants their piece of the pie. Instead of everyone promoting the benefits of a real food diet, most in the food industry and "diet" industry have a tendency to circle the wagons and shoot in. Instead of arguing over the proportion of carbs, fats, and proteins in a meal, it would make a ton more sense to focus on the real issue with our diets: we are sadly, dangerously overloaded with highly-processed Franken foods.

I'd like to see the vegans and the Paleos work together to say that both eating styles can work for different individuals (which is closer to the truth, as people tolerate foods differently—but that's another discussion entirely) and that the true issue isn't eating too much "real" food, the issue is eating too many processed foods. The collective power and impact those (and other) healthy eating communities could have would be immense. If all of these groups truly wanted to create a massive change in how we eat—positively influencing our health, fitness, and vitality—they would be more successful if they drew upon their commonalities rather than focusing on their differences. They need to unite, and agree that the optimal diet for an individual is not based on dogma. It is based on eating more real food and less processed food. It is based on multiple factors. The way to change the health and well-being of our families and our communities is to join together and promote a real-food diet and fight against those that are poisoning our foods. Fight against the overwhelming abundance of Franken foods that have no real benefit other than to rob us of our health.

Okay, I'm finished with my rant. Let's get back to it, shall we?

Here are some basics to follow:

- If you are eating something that has been processed to some degree, make an effort to consume processed foods with fewer than six ingredients.
- If you can't read and understand more than one ingredient, you probably shouldn't consume it.

- Follow a vegan/Mediterranean/Paleo-inspired diet. This means lots of vegetables, meat, fish, poultry, and ample amounts of good fats. Carbohydrates should come from your veggies, tubers, and berries. Snacks of nuts, seeds, and pitted fruits all can be part of a nutritious diet.
- What you shouldn't eat: gluten and pasteurized dairy, for sure. Minimize gluten-free grains and grasses as well.

2. Apply the 80/15/15 ratio

If you are relatively healthy, eat when you are hungry—not by a clock. Get to know your body. If you aren't hungry, don't eat because it is noon. Your body will tell you it is hungry.

Use this ratio as a guideline: eat 80/15/5. The 80 represents how you should eat 80% of the time. If you eat a grain-free, Paleo-inspired diet 80% of the time, you will likely have a dramatic improvement of your health and vitality. Your diet should be mostly vegetables, fruit, meats, fish, nuts, seeds, and healthy oils and fats 80% of the time. Depending on your specific needs, you may sway the percentage of how these foods fill your diet, but this should constitute your primary food sources. Dave Aspry did a great job creating a chart to support healthy food sources for his book, *The Bulletproof Diet*.

The 15% represents the consumption percentage of gluten-free grains and other grass-based starches. This number may need to be tweaked up or down for you, but should provide a guide. This allows you to splurge a bit and see how you feel. Remember, this isn't every day or every meal. This would be possibly a gluten-free roll on the weekend with your burger, or some rice pasta once per week. But, be aware of how you feel after eating these foods. If you feel gassy, tired, sore, or achy after eating these foods, you may want to consume them even less. A good approach, and one I share with my patients, is to switch out grains for greens. Want a burger? Wrap it in lettuce instead of putting it on a roll.

I am reluctant to even write about the last 5% of this equation. But this 5% is about helping you feel like you are not trapped, that you can eat anything you want if you choose. So, 5% of your weekly intake, eat what you want that does not fit into the first two categories. Just be fully aware that if you eat foods you are allergic or intolerant to, there will be consequences. You may feel awful as a result. I'm not telling you to eat foods you are intolerant to as much as I am saying to allow yourself to make bad choices. The worst thing you can do to yourself is to make a promise that you will never again eat something you are intolerant to, or you will never eat anything that is not totally healthy for you. It's a lie. It never feels good to lie, especially to yourself. The rare person is perfect, and contrary to what my wife might think, even I am not perfect.

If you allow yourself the option to eat something bad for you, even though you know you shouldn't, you won't feel as trapped or restricted. Again, I am not telling you that you should eat gluten if you are intolerant to it. I am telling you not to beat yourself up and feel guilty if you do.

Your body, however, may make the decision for you. I've had many patients who have been gluten-free and decided four or six months into the process that they wanted a hoagie or a piece of pizza. Most of them have told me it just isn't worth feeling that bad. The food they thought they wanted wasn't worth the symptoms that followed. (For people healing leaky gut conditions, the inflammation cycle that ensues from ingesting foods from their personal intolerance list can impede healing considerably. It is worth considering when staring down that buttery croissant or cheesy pizza pie.)

Will these people ever stray into that 5% again? Yes, probably. But, more than likely they will have less of a desire to dip into that really-bad-for-them 5% temptation.

3. Eat slower

There are two parts to the nervous system that run the body. The "fight or flight" system, called the sympathetic nervous system and the "rest and digest" system, called the parasympathetic nervous system. When one system is running hard, the other is not. When we eat, the body's nervous system needs to be in rest and digest mode. Our parasympathetic system needs to be dominant. We need this to happen so that the body can concentrate on making acids and enzymes that aid in the breakdown of our food, and then absorb the macro and micronutrients into the body and use them for healing, repairing, rebuilding, and restoring our body.

If we are eating on the run, while we are driving our cars, talking on the phone, or typing a report, our bodies are not in rest and digest mode, they are in fight or flight. When we are always on the go, in a rush, always doing, the body's parasympathetic system is turned down. We don't make digestive acids and enzymes as efficiently and we don't absorb food as well.

Poorly digested foods rot and putrefy in our guts, cause inflammation, bacteria and yeast overgrowth, and set the stage for any number of symptoms.

Think about it this way, if I am running from a tiger that wants to eat me, I'm under stress. I'm not going to stop to eat, drink, have sex, or sleep. Any food in my system may be evacuated so as not to slow me down. It might come out as vomit, pee, or poop, but in times of stress, "rest and digest" functions are put on hold, while survival comes to the forefront of importance.

In today's world of TV, email, Facebook, Twitter, multiple jobs, kids' activities, car pools, over spending, and underpayment, we live in constant stress. We are perpetually in fight or flight mode.

So when I say eat slower, I want you to take pause before you eat, get your body in the right frame of mind, and get your nervous system to flip the switch to rest and digest. How do you do it?

Sit to eat. Sit at a table, no TV, no iPad, phone, or computer. And “sit to eat” does not mean in your car as you drive from point A to point B. It also does not mean stand and eat while you do other activities. It means: sit and eat.

Take a moment to pause before you eat. Regardless of your religion, someone had a good idea when they decided to say grace before a meal. Not only are you showing gratitude, but you are also taking a few minutes to change your state. To change your nervous system from sympathetic to parasympathetic—from fight or flight to rest and digest.

To be clear, you don’t have to pray or give thanks to anyone. But, take those two to three minutes to sit and calm yourself. Take some long, slow, deep breaths. Use that time in whatever way helps calm and change your state.

4. Chew more

One of the ways to improve your dietary fitness is to chew more. When we are in a hurry, we chew so little that the digestion process never gets started appropriately. Sometimes we eat so fast that we’d be a contender in Nathan’s hotdog-eating contest. Slow down!

Digestion really starts in your mouth. As you chew, you start pulverizing the food, breaking it down so that the saliva in your mouth can combine with it and do its magic.

The chewing and saliva get food ready to enter the stomach. Chew too little and food drops into the stomach improperly prepared for the stomach acid to do its job. This can set the stage for all types of digestive symptoms.

Can chewing your food more really make a difference? Yes! Here are a few more points to ponder regarding chewing your food:

- The more you chew, the more nutrients you are able to extract from the food.
- The more you chew, the less food you eat, and the easier it is to maintain a healthy weight. It takes 20 minutes (approximately) for your stomach to signal your brain that you are full. When you eat slower and chew more, you are less likely to stuff yourself or overeat. There is a cascade of chemical and neurological events that occur to tell our brains we have consumed enough food. If we chew too little and eat too fast, we consume more food than we need before these reactions reach our brain. We then have to deal with

the consequences of the overeating: poor digestion, gas, bloating, pressure, discomfort, and excess calories that more frequently than not, wind up stored around our waist.

- Chewing your food longer actually strengthens your teeth and jaw musculature. It also helps increase the saliva that washes away bacteria and plaque, improving dental and gum health.

Multiple studies over the last few years indicate eating slower and chewing more has significant health benefits:

- Eating slower leads to improved satiety—*Journal of Clinical Endocrinology and Metabolism*, July 2, 2013
- Prolonged chewing helps prevent diabetes—*PLOS ONE*, June 5, 2013
- Prolonged chewing at lunch decreases later snack intake—*Appetite*, March 2013
- The more you chew, the more nutrients you absorb—*U.S. News & World Report, Health*, March 10, 2015
- Eating slower reduces food intake and increases satiety—*Journal of the American Dietetic Association*, July 2008
- Eating until full and eating quickly triples your risk of becoming overweight—*British Medical Journal*, October 21, 2008

So how many chews is enough? Well, that depends on what and how much you've just put in your mouth. I've seen suggestions of up to 100 chews per mouthful. I find that nearly impossible. Start by increasing your chewing by five chews per mouthful. Do this per meal and build up to between 20 and 40 chews.

If you aren't chewing that much now, it will take some work and practice. I was told once that if you are thirsty during your meal, you ate too fast. I use that as a rule for my eating. Here are a few more hints to help you slow down your eating:

- After taking a bite, put down your fork and don't hold it while you chew. Holding onto your fork encourages you to eat faster.
- Put smaller amounts of food in your mouth at one time.
- Don't drink with your food. If you are thirsty, drink after you've swallowed your food.

5. Eat Mindfully

Eat mindfully—what does that mean?

Mindful eating means, be aware of:

- What you are eating
- How much you are eating
- Why you are eating
- The effect that food (or drink) has on your body

Too often, in the hustle and bustle of our lives, we just eat. We spend very little time thinking about the quality of the food we eat or why we are eating. Let's start with why you eat: the timing of eating.

Why do you eat when you do? Is it because it's breakfast, lunch, or dinner time? Are you eating because you are hungry or are you eating because it's a certain time on the clock? We've all grown up with the notion that we should eat three meals per day. But why? There is very little evidence that says our body needs to eat three times per day. Matter of fact, there is plenty of argument against it. The argument ranges from one time per day to five to six times per day. But who is right? I think everybody and nobody.

Let me explain. You need to eat when your body is hungry. The frequency and volume depends on many factors. The simplest advice I can give is to eat when you're hungry. Let's be clear: I said hungry, not craving. There is a difference.

Hunger is a physical thing. Your belly may start to grumble and gurgle; you may get an empty feeling in your stomach. The rumbling in your stomach is physical. It's thought to be triggered by a few chemicals, but primarily by a hormone called ghrelin, that when released, causes the muscular contractions. Many times we initially miss or ignore the symptoms of hunger. When we do, the body alerts us with more significant symptoms like fatigue, light-headedness, shakiness, or headaches. When the body is truly hungry and in need of food, it will let you know. That will not go away.

Cravings, on the other hand, are emotional. If you ignore cravings, they will often go away. Cravings can be caused by anger, frustration, sadness, and happiness. Cravings can be caused by habits. You drink beer when you go out or bend to the all-powerful, "I always get a cheesesteak when I'm in Philly" syndrome. When we eat based on cravings, we often don't feel satisfied. We may actually feel the opposite, along with the uncomfortable side effects of overeating.

Part of mindful eating is being aware of what you are experiencing when you *think* you need to eat. Are you truly hungry or are you craving? Take a minute, two, or more. See if the desire is physical or emotional. If you have physical symptoms and the symptoms don't subside, then eat. If you believe it's emotional, go do something. If the sensation goes away, it was probably an emotional eating cue, not physical.

This is a pretty easy one: eat when you are hungry, not based on the clock. Make sure what you are experiencing is real hunger and not an emotional craving.

The next part of mindful eating is to be aware of what you are eating. Everything you put in your body has consequences. What is the quality of the food you are eating? Remember, I said the importance of methylation is that it is directly or indirectly involved in nearly every process in your body. The better you methylate, the healthier you are, and the slower you degenerate.

Everything you eat either helps that process or harms it. To have A Methylated Life™, you must consume foods that support your methylation pathways. Foods like raw, leafy greens, lots of veggies encompassing all different colors, healthy fats and oils, grass-fed and pasture-raised protein sources, fresh, cold-water fish, nuts, seeds, and tubers all support methylation processes. For those of you thinking, “Where’s the fun in that? Do I need to be perfect?” No, but your ability to methylate and function at a high level depends on your eating A Methylated Life™ diet 80% or more of the time.

So, when you sit to eat that next meal, ask yourself, “Does this support my goals, my health, and the lifestyle I want?” If no, don't eat it. If you really want it, consider it part of the 15 or 5% and enjoy it.

The next component of mindful eating is portion size. How much should you eat? I think you want to keep things simple here. If you are on a weight-loss journey, then you should work with your doctor to determine portion sizes. But, as a general rule, use the palm of your hands. For proteins, starchy carbs, fruits, and nuts, a serving is about the size of your palm. If you need to increase protein or carb volume, then increase them proportionately. As far as veggies, your body will usually limit you. It's a rare occurrence that someone will overdo it on greens and vegetables.

The next component involves the nutritional content of food. If you are eating real food, you have very little to worry about. If you are eating packaged food, then no more than five or six ingredients. If you can't read the words, don't eat the Franken food!

The last part of eating mindfully is to be aware of how the foods you eat make you feel—before during, and after eating them. Do you still have cravings? Do you feel addicted to certain

foods? When you eat, take time to enjoy the flavors and the taste. Do you enjoy the food you are eating? And after you eat, how do you feel in the time that follows? Do you feel enriched and energized? Or, do you feel tired, gassy, bloating, sleepy, or inflamed? Know how foods affect your body. Keep the ones that have a positive impact on your physical and emotional state and get rid of the foods that don't.

6. Enjoy food

The last piece of dietary fitness is to enjoy your food. Eat foods you like and ones that like you. Experiment with new and different foods. Every month, add a new recipe to your rotation. Most people eat the same three or four things for breakfast, the same five or six things for lunch, and the same eight to 10 things for dinner. Stretch your comfort zone. Find ways to add new nutritious foods to your diet.

Emotional Fitness

Emotional fitness, just like each of the other components of the A Methylated Life™ lifestyle, is critical. People often tell me they have no stress, and yet we barely have to peel the onion back one layer to find that their health and their life are a mess. They are in denial. I also have people tell me the opposite: they have so much stress, there is nothing they can do, and they feel trapped.

I understand both of those responses, but neither is clearly accurate. While their perceptions shape their respective realities, they belie the truth.

Let me explain with a quick story. A number of years ago while on a hiking weekend with some friends, we decided to go river boarding. (If you've never done it, it's a blast.) This trip took us to one area of the river so we could shoot off of a waterfall with our boogie boards. The water was moving fast. Our guide said to steer for the "rooster tail" in the waterfall and it would project us up into the air, plunging us into the water below.

We were instructed to quickly turn left once we popped up out of the water so the current would circle us back towards the waterfall, enabling us to hike up the trail and do it again. His instructions were very clearly stated to all of us: if we didn't quickly turn left, the main current of the river would pull us downstream.

This put everyone on edge a bit, but the fun was on! We did it a few times and it was a blast. The power of the river was intense, and our guide was right, if you quickly oriented yourself left when you came up from under the water, the eddy would pull you back to the base of the waterfall. On my last run, I was tired and missed my window to get left and get my ride back by the eddy. This time I was rapidly pulled down stream. I started to panic, not knowing what was

downstream, and not wanting to drown. I was able to stop by grabbing onto some roots. As I was catching my breath, the guide came to check on me and make sure I was okay.

I assured him I was, and as we were getting ready to swim upstream to the waterfall, one of my friends quickly floated past us. He, too, was tired and missed his window to catch the eddy. He was now moving downstream quickly and was in the middle of the river, not on the edge like I had been. With nothing to grab ahold of to slow him down, he climbed higher on his board and held on. He tried swimming against the current, but he was tired. Not only was he tired, he was also panicked.

I was certain he needed help. I told the guide to go get him. The guide assured me he was fine. He didn't look fine. He looked panicked. After some intense discussion, the guide finally headed after him. My friend looked really nervous. He was headed downstream backwards without any way of stopping. He was stressed; I was stressed. The rest of the group was now aware of what was happening and all eyes were on my friend and the guide. The rescue was on.

The only problem, as I perceived it, was the guide seemed to be relaxed and unconcerned. For some reason he was not as worried as I was that my friend would be washed down the river. As the guide tried to close the distance on my friend, my friend's stress level was rising. I think he knew at this point he was in trouble, and his fight to swim against the current had exhausted him. There was a no way the guide was going to catch him. The gap was too great and the current too fast. I could feel my heart pounding in my chest. Just as I started to think about other options of rescue and how dumb this river boarding idea was, the guide started yelling to my friend. The roar of the water was loud so it was hard to hear what he was saying.

My friend was now in full panic mode and you could see it on his face. With some effort, I was able to hone in on what the guide was yelling. It was the same thing repeated over and over: "Stand up!"

My friend looked at him the same as I would have. Stand up? He was in the fastest part of the deep river, why would he try to stand? He had used his strength to climb up on the board, now the guide wanted him to do the opposite.

But now, not only was the guide yelling for him to standup, so were the people along the river edge and those in whitewater rafts. And just as I thought he was going to be swept completely down river, he slide off the board and tried to stand. To my surprise and his, he was able to stand. The water level me to his knees. He wasn't stuck in a deep river, but the fast-moving shallows. The guide wasn't panicked because he knew that. My friend was, and I was, because we didn't know. Our reality was our perception of a situation—it was a real crisis to us, but it wasn't accurate. We talk about that trip every time we get together.

It really is a metaphor for life. Our perception of life is real—it's accurate in our mind—but most often, it isn't an accurate depiction of what is going on, or the totality of what is going on. Two people in the same situation can see two different realities, two different possibilities, two different outcomes. One person can see a bad situation as a terrible tragedy and another as an opportunity. It's all perception.

Tony Robbins often says the biggest thing that holds us back in life is fear. He says fear is “False Emotions Appearing Real.” While I am a huge fan of Tony, I don't agree with that statement. The emotions aren't false. The emotions are real. Whatever we feel that stops us from doing things: fear, worry, weakness ... the emotions are real. Our perceptions of a situation are real. At least to us. Our perceptions, our beliefs, are a distortion of truth based on our reality.

Our thoughts, feelings, and beliefs shape and color different situations in our life to fit into a context we can understand and support. People with different upbringings, different beliefs, and different circles of influence develop differing perceptions of any given situation based on their experiences.

The overarching point of this long diatribe is that to optimize our health to be our best, we need to be careful of what images and thoughts go into our minds. All thoughts and images shape our emotions. Is it often said we are the sum total of the five people we hang around the most.

Think about who those people are for you. Are they healthy, happy, physically fit, active, outgoing, and emotionally stable? Are they generous, grateful, loving, and optimistic? Or are they unhealthy, overweight, unfit, grumpy, miserable, sad, poor, introverted, angry, and depressed? Do you find those people make you laugh and smile or do they aggravate and irritate you?

Do you interact or speak with the five people you associate with the most? Or, as it may be for so many people today, are those points of contacts with the five people through electronic means? Increasingly, many people only communicate via Facebook or other social media. When we talk about relational and emotional health, it's no leap to understand why this is worrisome.

To have emotional fitness you need to take control of what goes into your head, what you hear, and what you see. The people you surround yourself with influence you. They influence you to degrees most of us never imagine.

If you want to improve your emotional fitness, your state of mind, start with your circle of influence. Evaluate the top five people you hang out with. Start to make changes, if necessary, to find people who inspire you, who lift your spirits, who make you happy, make you laugh, and see the positive things in life. And evaluate those in your circle who are negative, make you

grumpy, irritate, and aggravate you. Start reducing their influence in your life. Sometimes you need to pull the weeds!

If you are one of those people who is struggling with knowing that the five people you spend the most time with are on Facebook or another social media site, in my opinion, that's a huge problem. We were born to have social, physical contact. Just because you know the ins and outs of someone's life on Facebook doesn't mean you have a friendship or a real and nurturing relationship. It's common for people to whine and complain on Facebook or put distortions of reality on their Facebook page. Think about how often you are exposing yourself to someone else's distorted truth. If that is your reality, you can change it.

That's the beauty of life. You can change it. Nothing is forever. Everything can and will change. Nothing is totally how we perceive it—it's just our perceived reality. So, decide on what your reality of your life could, should, and will be, and start creating it.

Whatever you can conceive in your mind and believe, you can with time, work, passion, and consistency, achieve. But you need to be able to see it; you must have the vision of what you want. That is where most of us fail. We have no clear vision of what we want. Or do we?

Maybe your clear vision of who you are and who you can be is exactly where you are right now! The painful truth for some is that the reality of who you are is who and where you are right now. If you don't have a bigger vision of who you can be, who you want to be, then you are living up to your current expectations.

So get up, stand in front of a mirror, and look at what you see. Is this a reflection of the expectation of who you would be at this time in your life? Is this your vision of you? Don't just take in the physical you, look deeper. Is this the emotional you? Is this the financial you?

If you say, "Yes," that's awesome. If you say, "No, this person in the mirror is not the person I really thought I'd be,"—what went wrong? Somewhere you lost the clear vision of who you wanted to be, how you would look, the wealth, health, and happiness you'd have.

Without a clear vision of where we want to go, of who we want to be, how we want to be, we become who our surroundings mold us into. We become passengers in a life trip we really didn't want. We live a life that is the sum of expectations of those around us. If they are negative, angry, overweight, unhealthy, that is what we become. And scarier yet, it is who our children become.

Want to know why you are unfit? Look at the five people you spend the most time with. Want to know why you are sad, grumpy, negative? Look at the five people you hang around with. Your circle of influence matters. It ultimately defines you.

But it's all changeable—in an instant—if you want. How does someone go from poor, fat, and angry to wealthy, healthy, and happy? They change their circle of influence: they change their thoughts, actions, and behaviors. They surround themselves with better thoughts, ideas, emotions, people of influence, friends, and mentors. Simply put: they change what comes into their brain and mind, and that changes the output.

So how do we do that? How do we improve our emotional fitness? It starts with knowing what it is we want. In my days with a consulting group, the model or mantra was “be, do, have.” It was said over and over. I wasn't emotionally fit then. I would do the “be, do, have” exercise, but I never fully believed I deserved some of the things I said. But, now as I look in the mirror of my life, I realize that the baggage I was carrying for those who were in my circle of influence was weighing me down.

Those who know me and my story often wonder how I've gotten as far in life as I have. My brother, sister, and I were able to survive a toxic upbringing. While I've achieved quite a bit, the toxicity of the relationship of people who were so close to me really weighed me down. The messages, words, and the emotions created by those relationships left scars. Deep ones.

Every time I would do the “be, do, have” exercise, I could hear the voice telling me it was a lie, that I couldn't succeed, that I didn't deserve it. And even though I left those relationships behind, the voices were still there. I was living up to a standard that was programmed into me when I was young. I had a poverty and an inferiority complex. I thought I wasn't good enough, and when things didn't work out because of my “stinckin' thinkin',” I was able to feel comfort in this on some level. Crazy, right? But, now I know. I was subconsciously living up to these low expectations that had been programmed into my head. By not being more successful, happier, or healthier I was living up to someone else's perception of me. In some distorted way, I realized I was doing or becoming who *they* wanted me to be, to make them happy, and to make them feel good, so they could be right. So they could pat themselves on their backs and feel good, that in some way, they were successful at something: predicting my outcome. They could then feel good about being so smart. This silent agreement allowed them to support me in their world of negativity.

This was a powerful realization for me. I then wondered why these voices were so loud in my life. Why did I let them continue to influence me? What I realized was that until I replaced them with better thoughts, feelings, and emotions about myself, I was stuck with theirs. To free myself of their influence, of their vision for me and my life, I needed to create my own.

Not only did I need to create it, I needed to repeat it over and over until that new reality became engrained in my brain and overwrote the voices and emotions of the past. I realized that because my voice and my vision wasn't loud enough, I was still listening to the ghosts of the past.

I needed to break free. What follows are some of the tools I used—and continue to use—to drown out the voices of the past so they don't continue to haunt my future.

Be, Do, Have

This is a concept I learned from one of my mentors. I think this is a good place to start for everyone. Make a list of what is it you want to have. Be as crazy as you'd like when it comes to this list. The items or situations on this list are what you would want if nothing were in your way. If nothing were preventing you from having these things, feelings, emotions, or people in your life, what would those things be?

Look at the list and start with one, two, or three things you feel are the most important—the things you can throw yourself behind right now. Those three desires go on top of your vision board (we'll talk about this shortly). Everything else on this list goes on the vision board as well. These three items, however, must take prominence, be bigger images than everything else.

Once you have these top-three, look at the images of those three things and make a list of what you would have to *do* have those things. Let's say, for example, I want the happiest, most loving relationship possible with my spouse. What would you have to do? Your "do" list might be:

- Tell her I love her every day
- Listen more
- Make more quality time for her
- Help her more
- Leave her notes of gratitude

Once you have that list written out, you're ready for the next step. Look at each of your three big wants and the list of things to do to get each one of those wants, and write down who you would have to "be" to do those things.

If we used the example above, who would you need to be to have the best relationship? Your list might look like this:

- Be more caring

- Be less selfish
- Be more thoughtful
- Be more willing to listen
- Be more conscious
- Be more aware

Now that you have those things completed, this is your focus each day. Review your big three wants every day—first thing in the morning and last thing at night, at the very least.

Take action on one of your “to do” items of all three wants each day. Don’t end your day without completing at least one to do. Make sure you read your wants list and read your be list each day. These positive messages will help keep you on track.

Once you have a handle on the first three, pluck one more want off your list and start the same steps towards it. Don’t try to juggle too many things at one time. Sometimes when you try and juggle too many plates, a few break.

Vision Board

It took me a while to get this done. The biggest block that held me back was the clamor of those voices in my head saying I didn’t deserve “those” things. Whether you have thoughts like that or not, make the board. You need to have clear vision of what you want. Your dreams, goals, and desires must become real. You must see them every day. You must have clear pictures that become so engrained in your mind’s eye that it’s as if you already have them.

Here’s the task. Grab a cork board and mount it in a spot that you are sure to spend time near every single day. If you don’t have such a spot, make one. It’s that important. You need a spot. A spot where you can do your work—your life’s work—to create your life. That board goes in that spot. You’ll need to look at that board every day.

Once you have the spot and the board, start finding images and pictures of the things on your want list. The top-three that were most important should be the biggest three images. Cut them out of books and magazines, print them off of Google, but take the time to do it. Do it now; I’ll wait.

If you think you don’t have 20 to 30 minutes, or even an hour to do this, then you can now understand the number one thing that is holding you back in life—the cause of your reduced emotional fitness. You are so busy doing stuff that doesn’t really matter, stuff that is limiting you,

stuff that you are just doing, that you are too busy to decide what you want. You are living and doing for others.

Before you call me that name—think about it. I'm not saying that picking up your daughter from school or working on a project for work isn't important. They are. But are they helping you live your best life?

You just made a list of the biggest wants in your life. If you did that but aren't willing to carve out 20 to 60 minutes to make a board, a tool to help you get those things, were you really honest with yourself when you made the list? Are those things really important? If they are, the reason you don't have them yet is because they aren't a priority. They aren't top-of-mind awareness. You may have dreamt of those wants in the past, but you never got them because you didn't take steps to get them. You weren't who you needed to be, or you let the day-to-day activities and business of someone else's dreams and vision cloud your vision and clutter your path.

It's true. We've all been there. But let's not obscure the path this time. Let's make those "wants" realities. That starts with this step. It's time to "GIT-R-DONE!"

Create a Daily Routine (A Different One)

One of the best things you can do to improve your emotional fitness is create a new daily routine. I say new because you already have a daily routine. You have daily habits or a daily routine you follow each day, even if you think you don't, even if your day seems chaotic and disorganized, it's probably your routine. Maybe you get up every day later than you should, rush to get ready, get your kids up, try and push them along, make lunches, get them off to school, and then head off to work. You stop for a coffee on your way in because you didn't have time at home, and with all the rushing around, you just aren't hungry.

You're dragging at work because you didn't sleep well, so it's also hard to focus. Since you barely had time to get yourself and the kids out the door, you need to rush out and grab fast food lunch and a soda.

Once you are back at your desk, the caffeine buzz starts to die off as the sludge from lunch starts to cause you to feel groggy. You get up and grab one more coffee to finish the day's work.

You're tired and sleepy on your drive home. You realize you've forgotten to take something out for dinner and you're too exhausted to cook. You order take-out and have your spouse pick it up on his way home.

You're met at home with the chaos of the kids' school work and clutter. You eat in a hurry, throw in a load of laundry, and collapse on the couch. You doze off for a few minutes then struggle

upstairs to get a good night's sleep—or so you hoped. By the time you get yourself ready for bed, you are wide awake. You can't sleep or it takes a while before you drift off because your mind is racing with all the things you didn't get done and need to do and—oh, yeah—the effects of the cups of caffeine you had through the day are still lingering.

When you finally do fall asleep, you are awakened by your need to empty your bladder. You make it back to bed but your mind starts racing again. Before you know it, you've tapped the snooze button twice. And, once again, you're behind schedule. It's Groundhog Day and you're repeating the cycle perpetually.

Your day may not be exactly like that, but if you're honest, it's probably close. You say you have no time, no energy, and no daily routine. But you do have a routine. It's not a good one. It's the one that's causing you to be fatigued.

While it's not necessarily a planned routine, it's a daily routine, nonetheless. And just like I mentioned before, everything in life can be changed. But to change it, to have a different routine, you'll need to create one. You'll need to plan a new routine or you'll default to the old one.

So if you're going to create a new routine, you might as well create a routine that helps you achieve your wants, that helps you do and be the person you will have to be to take action to achieve your wants. So let's do it. Let's create the new routine to change your life.

Get up at same time every day

You should probably schedule that wake up time for 30 to 60 minutes earlier than you currently wake. I'm a 4 a.m. guy 90% of the time. People ask me why I get up that early. The answer is simple: I needed to create time to do the things I needed to do, to be the person I want to be. No one else is up at 4 a.m., so I have no distractions. I get a lot done before most people are out of bed.

Plan your morning routine

My morning routine involves activities I feel will keep me focused and on track towards my goals.

- Glass of water with juice of 1/2 lemon and 1 tablespoon of Bragg's apple cider vinegar
- Three Foundation Exercises (these take 10 minute to complete)
 - I perform three exercises, three times each, to improve and support healthy posture. To find examples of foundation exercises go to www.foundationtraining.com.

- Goals/action steps/affirmations/motivational quote/journal (this process takes 30 minutes)
 - I write out my top three wants (goals)
 - I then write one action step I'm going to take that day towards my three top goals
 - Next, I write affirmations that come from my be list
 - I look up and write out one motivational quote
 - I then spend 10 minutes journaling on what I'm grateful for and why
- I like to read for the remaining 30 minutes before heading for the shower
- Breakfast
- Drive into work—listen to informational podcast
- Work morning shift
 - I like to set my IRONMAN® timer to go off every 20 minutes. I call it the 20-Minute-Rule™. If I'm sitting, it alerts me that it is time to get up and do something physical. It might be 10 squats, 10 push-ups, lunges. You get the idea. But every 20 minutes, every day, I perform 10 to 20 or more of an activity to make sure I'm moving
 - Monday: push-ups
 - Tuesday: pull-ups
 - Wednesday: triceps dips
 - Thursday: squats
 - Friday: curls
 - Saturday: kettlebell swings
 - Sunday: lunges
 - This guarantees I'm getting some form of workout every day; I'm never sitting too long
- Lunch break

- I enjoy my lunch, then with the remaining time I handle phone consults, phone calls, emails, etc.
 - I pack my lunch most days. I do this for two reasons:
 - It is expensive to eat out every day
 - I can control my nutrition.
 - Sunday is my cooking day; I make my lunch for the week every Sunday
- Back to work
 - Drive home: I unwind with music, sports, or another podcast
 - Eat dinner
 - I work out: some form of cardio or strength training
 - Shower
 - Review vision board, “be, do, have,” and make sure I took some action towards my goals
 - In bed between 9 and 10 p.m.

This is a snapshot of my work day 90% of the time. It’s scheduled, it’s scripted. I have very productive days. Is it hard to get up? No, it’s habit. And by the way, when my head finally hits the pillow, sleep comes easily.

Remember, you already have a daily routine to some extent. It’s just not the one helping you to attain your goals and dreams. It’s time for a new script.

Metabolic Fitness

The next component of living A Methylated Life™ is having metabolic fitness. I’ve had many people scratch their heads and ask what that means.

Let’s start with the word metabolism. The word metabolism comes from the Greek word *metabole*, which means to change.

In this context, it speaks to the process by which our bodies convert what we eat and drink into energy, enzymes, chemicals, and tissues that allow our bodies to function, repair, restore, regenerate, and reproduce.

Essentially your metabolism is critical to function. You must have optimal metabolism to be optimally healthy. Optimal metabolism requires optimal methylation and optimal methylation requires optimal metabolism. As metabolism and methylation falter, our bodies degenerate.

The vastness of the body's metabolic processes are not fully understood. But, what we do know is there are key systems that must function well to optimize methylation and health.

Some of those systems include:

- GI tract function
- Hematologic function
- Blood sugar metabolism
- Fat metabolism
- Liver function
- Mitochondrial function
- Immune function
- Brain function
- Neurotransmitter function

All these systems and processes interweave and they create this mesh or web. They all interrelate; one system affects the other. They are all impacted directly or indirectly by methylation.

Understanding the complexities of how these systems all tie together is an entirely different discussion. What you do need to know for now is that the function and optimization of all your metabolic systems determines your overall level of health. None of these systems work in a vacuum. It's impossible for one system to breakdown and not affect the others. There is no way to treat one system without affecting the others. I know we all grew up in a health system of specialists who only focus on one system. If you have a cardiovascular problem, you see the cardiologist—for a GI problem, the gastroenterologist, etc. Neither specialist is concerned with the function of the other system, or the impact that dysfunction in one system may have on the other. However, research today shows how closely all the systems integrate. If your GI system isn't working optimally, none of your other systems can.

I know the American medical system would have you believe that if you have reflux, it's just affecting your stomach and esophagus, and a little purple pill will fix the problem. There is no pause or consideration for what the real impact of the reflux is, why it's happening in the first place, and the impact low stomach acid is having on brain function, cardiovascular function, potential anemia, poor digestion, and absorption of nutrients.

Nope, we simply diagnose the symptoms or damage we see, give a pill, and the assumption is the job is done. Most of us wouldn't treat our cars this badly. We assume because we went to see the stomach specialist we've received some magical answer and can solve the problem with a pill. But that's not the answer because the problem is not that we suffer from a deficiency of some medication.

In many cases, it's the opposite. Specialists generally have little understanding of how that specific system impacts and interacts with the rest of the human body. They have been trained that this "part" can be treated separate from the rest of the body, and that proper treatment consists of pills and/or surgery. Many believe the problem is solved if we make the symptom go away or alleviate it. Or, when the pill no longer works, we just cut out the diseased tissue or dysfunctional organ and all is good.

It's a disgrace, to put it mildly.

I'm not saying there is not benefit from modern medicine, surgery, or an acute-care medical model. I'm not saying doctors are uneducated, mean people. I'm not saying doctors are trying to harm people or just blindly prescribing drugs. I believe most physicians—and this applies across the board of all professionals—have the best intentions to help patients. But we have a medical system that is failing us in this country.

We have the most advanced technology, some of the brightest minds, and the best acute-care/crisis-care system in the world. But therein lies the rub. Our medical system revolves around acute-care/crisis principles to try to restore health. We use tests that measure pathology and disease to determine health. If the test is normal, if there is no disease, the patient is considered normal; they just have some chronic symptoms they need to persevere through.

The "establishment" then considers treatment of those symptoms to be the best form of care. And it is done with medications until pathology does develop, at which time the disorder or disease is treated with more drugs or surgery.

Take cancer: are we really doing anything to prevent cancer? Science is full of studies that show epigenetics, methylation defects/dysfunction, and micronutrient deficiencies are the cause of cancer. This means that functional problems and micronutrient deficiencies develop first. The micronutrient deficiencies, inflammatory processes, and poor blood sugar regulation occur first. These changes alter function. Altered function leads to malfunction, malfunction leads to *disease*, and eventually disease.

Diseases like cancer, cardiovascular disease, Parkinson's, and Alzheimer's don't start when we see the obvious signs of pathology. A person doesn't develop a cavity the day a tooth hurts or

develop mental illness the day he or she commits suicide. Diseases and disorders start with the loss of optimal function. If that's the case, any physician worth anything would find that impossible to argue. Why then, aren't we testing function of the body? Why aren't we more concerned about the real cause of symptoms than we are trying to hide and suppress them?

The answer is simple. What's causing our health and function to decline is twofold: our diet and lifestyle. The combination of the food we eat and the way we live is making us dysfunctional, unhealthy, and diseased. To live A Methylated Life™, to strive for optimal function and slow your degeneration, you need to optimize your metabolism. The best way to do this is to work with a functional or integrative medicine practitioner to evaluate the function of your body and provide you with guidance to improve and maintain health and function.

Does this mean you will never get sick or develop disease? No. But what it will help you do is maximize the function of your metabolism to give you the best chance to live an optimized life.

Physical Fitness

Very few physicians of any background would argue that one of the best things you can do to improve your health is to improve and maintain your physical fitness. You don't need to run marathons or engage in grueling strength-training feats. But you do need to constantly be focused on addressing key areas of your physical fitness if your goal is to optimize your health.

Four key aspects are important:

- Good movement patterns
- Posture
- Flexibility
- Muscle strength

If you address these key areas of your physical fitness, you can dramatically improve function in other areas. There also needs to be some balance. The person who looks physically fit, who is constantly engaging in strenuous or endurance activities, may be as sick and inflamed as the person who barely engages in any type of physical fitness. I've seen plenty of CrossFitters and endurance athletes who aren't well. They work so hard at their chosen activity that they become blind to the damage they are doing by pushing themselves so hard. They are taxing their methylation processes like energy production, anti-oxidant protection, detoxification, and cell repair and reproduction.

Let's discuss these points in order.

A Methylated Life™

Good Movement Patterns

Good movement patterns are important to health. Joints are designed to allow us to move certain ways. The mobility of our joints is an intricate task that requires muscles, ligaments, and joints to work in specific ways. If any of these pieces fail or function improperly, we compensate for that dysfunction by adapting how the joint moves. If the joint moves differently than designed, it can accelerate the wear and tear on the joint and surrounding tissues, triggering inflammation and pain.

So many people I see have chronic pain as a result of poor mobility patterns. They have become so accustomed to walking or squatting a certain way, they don't even realize the impact poor movement patterns have on their health. It's amazing how much you can tell about people just by the way they walk, squat, or raise their arms over their head.

Assessing movement patterns is something that initially should be evaluated by a physician trained in body movement. It could be a chiropractor, physical therapist, or orthopedist. Your practitioner should be able to tell you if you have a bad knee and a torn meniscus—and also explain why through observing you walk and squat. If you come into my office because your knees hurt, diagnosing your knee pain as a sprain or a meniscal tear only tells you part of the story. I've told you the obvious. What I need to do (or any practitioner should do), is tell you why your knee hurts or why your meniscus is wearing down.

Aside from traumatic injury, most joint or muscle pain is the result of poor movement patterns. The joint has moved improperly for an extended period of time and it breaks down. Abnormal movement patterns can be caused by muscle weakness or muscle fatigue. Muscle weakness can be caused by poor movement patterns, metabolic factors like reduced micronutrients, poor energy production, lack of oxygen, and inflammation.

So how do you address movement patterns? Get a good assessment. Listen to what the doctor is telling you. Start making changes daily to improve movement patterns. Usually those changes start with awareness, then shift to working on flexibility, stretching, strengthening, and joint mobility treatments like chiropractic and physical therapy.

The important point here is: how we move matters. When we move well, muscles and joints don't wear out and deteriorate. Osteoarthritis is not caused by old age. It's caused by poor function, poor movement patterns, and immune and inflammatory disorders. Your ability to maintain optimal health and function requires good movement patterns.

Posture

Often, part of assessing movement patterns involves looking at and addressing posture. Weak posture is a sign of imbalanced muscle function and poor movement patterns. We've been designed to be upright beings. Our spines have been developed to provide a structure that can be kept in an upright position with minimal excessive work of the large muscles of our body. Small muscles and nerves are constantly working to make little shifts and changes to allow us to be upright with the least amount of stress and work.

Unfortunately, many factors in our lives are constantly challenging this supportive postural system. When the postural system starts to weaken and fail, other muscles that aren't designed to manage our posture become activated to take over this role. This creates multiple problems.

Some of these muscles are big and broad. When they become activated, they tighten up multiple joints. Postural muscles, especially those of the spine, are tiny and connect joint-to-joint versus connecting many joints. When the postural muscles of the lower back fatigue, the bigger muscles of the lower back like the quadratus lumborum activate. This can reduce motion, mobility, and flexibility. This causes stress and strain on joints and chronic muscle tightness, consuming a lot of fuel and energy. Chronic activation creates inflammation and it also causes muscles to weaken over time. Try contracting and holding your bicep as long as you can, what happens to it?

As the muscle weakens, the muscle actually gets tighter. This pattern can continue until all out failure of the tissue occurs. You may have pain, muscle spasms, strain or tear of muscle, or damage to the joints surrounding the muscles.

Posture and movement patterns are a window to your structural health. One of the worse things you can do is start an aggressive strength or running program on a body with weak posture and poor movement patterns. It's quite often a recipe for disaster.

So before moving too aggressively into a strength and fitness program, get your posture and movement patterns evaluated and addressed. A good physician will not only tell you how to address problems in-office with therapy, but what to look for and how to address these issues on your own—with very little cost.

Once you've addressed posture and movement patterns with your health specialist, there are many ways to address posture and movement through exercise. Exercises like yoga, Pilates, tai chi, and others all have posture and proper movement as foundational principles. I've found Dr. Eric Goodman's Foundation Training to work well for me and it has become a staple in my daily routine.

Even CrossFit, which many think is too aggressive, possibly damaging to the joints, can be wonderful for building strength and fitness—if you have good posture and move well. Kelly Starrett’s main focus in the CrossFit world is to get people to move better.

Flexibility

I’ve put flexibility in here for a different reason than you may think. I am not a big believer in static stretching like we learned in youth sports. I don’t believe that stretching by itself fixes problems. When muscles are chronically short and tight, my option is that they are that way because of a posture or mobility problem. Short, tight muscles are compensation. If your hamstrings are chronically tight, stretching them won’t necessarily save you from straining them 15 minutes later on your run, or while lifting. If you actually understand mechanics of the muscle, aggressively stretching a muscle just before you want to use it may actually weaken it and make you more vulnerable to injury.

My thoughts on flexibility and “stretching” are if you focus on good movement, strong posture, and balanced muscle-strengthening programs, flexibility becomes the by-product of all of those.

Every time you contract a muscle, you are essentially stretching or lengthening its opposing muscle. So, if your hamstrings are always tight and inflexible, even with all your stretching, you have to ask yourself why. What is the mechanism that isn’t working the way it should that’s causing the hamstrings to be tight? This is where a person trained in biomechanics and movement can help you address the real issue, instead of futile hours spent stretching.

I’m not saying you should get up from your desk after sitting for eight hours and jump cold into a full-court basketball game. But I don’t think bending at the waist and pulling your arms across your chest is going to help you much.

Warming up is what has been shown to be most effective. Start slowly taking your body through motions it’s going to encounter during your activity. Slow at first, then building up intensity. Get blood and oxygen flowing to the muscles. Start with a light jog, squats, lunges, starburst jumps. Increase the intensity slowly or five to 10 minutes. In the process of doing this, you’ve warmed up and “stretched” your muscles without weakening them.

If there is an optimal time to stretch, it’s after your workout. Stretch for 20 to 30 minutes following your activity—it’s the best time to gently stretch and lengthen your muscles.

Strength Training

If there were only one thing you could do to increase your methylation, your health, your energy, your quality of life, strength training would probably be it.

Some people have so compromised their health that strength training may not be possible in their current state of health. For everyone but the sickest of the sick, some form of strength training is possible.

Strength training does so many things for us if done appropriately. It can improve blood sugar regulation, improve fat burning, improve sleep, burn more calories, improve blood flow, improve hormone regulation, the list goes on and on. You would be hard pressed to find a physician of any value telling you strength training is bad at any age.

Yes, you read that right, at any age—and especially when we get older. The older we get, the more important it becomes. Strength training will create the sleep pressure you need to have a solid night's sleep, stimulate brain function, and maintain muscle and bone health.

Studies show that those who engage in active strengthening programs live healthier, live longer, and have lower rates of diabetes, heart disease, and dementia. Strength training is critical to having optimized methylation and health.

So, everyone needs to strength train. Period. What's the best type of strength training? The type you will do!

No activity or exercise, including strength training, will do you any good if you don't do it regularly. That being said, you can do yoga, body weight exercises, bands, free weights, and weight machines.

The biggest key is to use good form or good movement patterns and train muscles to failure. It's when you train muscles to failure that you grow muscles. Going to the gym and pushing weights around that don't challenge you, don't push you to failure, will not provide real strength training. You must train to failure. You must also allow muscles to recover. Don't train the same muscles to failure every day. It's essential to you allow muscles to recover between workouts.

How often should you strength train? It depends on the style of workout you are doing, how fast or slow your reps are, what your goals are. "Slow training" methods (*Body by Science*, written by Dr. Doug McGuff and John Little) recommend seven to 10 days between lifts. Faster training may require more frequent workouts. The easiest way to determine how often you should train each muscle group in a week can be gauged by your strength. You should be stronger on each successive workout or your muscles didn't fully recover.

My best recommendation is to get a good functional exam performed prior to starting a workout program. Your doctor should evaluate muscle strength, movement patterns, posture, and nervous system function. Based on your findings and your goals, a strength training program can be

designed for you. This way you reduce risk of injury and maximize potential for optimized function.

Sleep Fitness

A key ability to be healthy, to be well, to be optimized is our ability to get quality sleep on a regular basis. Lack of sleep, poor quality sleep, or both greatly hinder the body's ability to repair, replenish, recover, and re-energize. But, sleep also allows our brain and our mind to take all we heard, saw, and felt, and store it in our memory file boxes. Without quality of sleep, learning and memory are severely compromised.

Lack of sleep is associated with any number of symptoms, disorders, and diseases. There are people who study every aspect of sleep, sleep cycles, rhythms, hormones, neurotransmitters, etc. We could spend days, even months, explaining the complexity of things that cause disrupted sleep and the outcome of disrupted sleep.

But there is no need to do that here and now. The important things to understand are:

- Reduced sleep and compromised quality of sleep reduce your health, affecting your methylation, resulting in reactions that can cause any symptoms or any disease.
- You must improve your sleep quality if you want to improve your methylation, health, and quality of life.
- Many people struggle with sleep. Some people have significant metabolic challenges that disrupt their sleep; they need a functional medicine practitioner to help them understand the underlying factors that are causing their sleep challenges.
- Most sleep problems are caused by diet and lifestyle choices.
- Making simple changes to diet and lifestyle can significantly improve your quality of sleep.
- Try all of the suggestions I've included before looking for a pharmaceutical solution. Try all the recommendations before consulting a physician.

Your sleep-wake cycle is driven or controlled by two primary mechanisms: the circadian clock and sleep-wake homeostasis (aka sleep pressure).

Your circadian clock is the body's internal timer that regulates not only your body's sleep patterns, but feeding patterns, hormone patterns, body temperature, cell regeneration, brain wave physiology, and so much more. Your circadian clock is influenced by light and dark, or day and

night. Light triggers specific rhythms in the body, just as dark does. The clock works on a 24-hour cycle. Light exposure at the wrong time of day, say late into the evening, can trigger alertness, opposite of what you want if you are trying to sleep.

Many of the following suggestions are simple recommendations that increase your exposure to natural light during the day, increasing alertness, and suggestions for promoting darkness to produce the best chance of working with your circadian clock, and not against it.

The other major factor that drives quality of sleep is sleep-wake homeostasis or sleep pressure. Sleep-wake homeostasis is a biochemical see-saw in your body. Essentially we have chemicals we produce that promote sleep and chemicals that promote alertness.

Things we do during the day can cause a buildup of those chemicals that promote tiredness and sleep. One of those chemicals is adenosine. Adenosine is the byproduct of the use of our primary energy molecule, adenosine triphosphate (ATP). When we exercise or workout hard, we use lots of ATP, and as the ATP is used, adenosine is released. The adenosine elevation promotes sleep by reducing chemicals that promote alertness and wakefulness. A few of those chemicals are norepinephrine, serotonin, and acetylcholine.

This is one of the reasons why strength training and physical work make us tired. Think about the times when you really had your best sleep: it's typically the days when you've really worked hard physically. Maybe it was the day you raked leaves and did yard work all day, ran a race, went hiking, or shoveled lots of snow. You didn't sleep really well that night by chance! No, you created lots of sleep pressure. You tilted the chemical see-saw towards sleep promotion.

You should be doing things throughout the day to increase your sleep pressure. The problem in today's world is that one of the primary drivers of sleep pressure is physical activity—and we just don't do enough. People go hours, days, weeks, months, and years with minimal intense physical activity. And no, getting up to walk to the fridge for a beer and grab the remote control doesn't count.

It's the combination of sleep pressure built up through the day and the proper regulation of the circadian clock that allows for a proper night's rest. Anything that disrupts these two factors will disrupt your sleep. There are many external influences that can affect these two sleep regulators; temperature, noise, and light can all cause disruptions.

What we eat, when we eat, what we think, exercise, medications, supplements, what we drink, when we drink, all can affect our sleep regulation mechanisms. It's one of the reasons why living A Methylated Life™ is so important. By living A Methylated Life™ you are actively (literally!) supporting sleep mechanisms.

One of the most perplexing situations in our society is the blatant disregard the food industry has for how foods affect our sleep mechanisms. Take breakfast foods, for example. Cereals, breads, waffles, and pancakes are all high-carbohydrate foods. They are foods promoted on TV as being the components of a healthy breakfast. Yet these are all foods that promote drowsiness and sleep. So not only are they not nutritious and loaded with sugar and other anti-nutrients, but they promote drowsiness and sleep. And don't forget the milk and banana you had to complete that breakfast, both of which are high in tryptophan, which also promotes drowsiness and sleep. We wonder why our kids are tired and drowsy in school. As soon as the sugar high wears off, the coma-inducing chemicals kick in just about the time they are trying to pay attention in science class.

So what can you do to naturally improve your sleep? Try these tips. If you don't see improvement, seek out a functional medicine practitioner to help guide you to better sleep.

- Create and stick to a sleep schedule
 - Get into the habit of getting up and going to bed at the same time every day. This will help you regulate your body clock. You might need an alarm to help you wake as you get used to your new sleep cycle, but in time, you will find your body wakes you without it.
- Engage in some form of physical activity or exercise daily
 - By engaging in physical, strenuous activity, you increase the use of ATP and increase the levels of adenosine. Remember, adenosine builds sleep pressure.
- Avoid napping during the day
 - While a nap during the day when you are drowsy may seem like just the thing to do, it may affect your sleep quality at night.
 - I find that most people who are tired during the day usually are tired as a result of a crash from sugar/carb-heavy breakfast, caffeine, or neurologic fatigue from staring at a computer screen.
 - Instead of napping, try this simple tip. I call it the 20-Minute Rule™. Any time I need to sit and read, write, or research, I set a timer for 20 minutes. At the 20-minute mark, I get up and do something physical. I've even organized it by day:
 - Monday: push-ups
 - Tuesday: pull-ups

- Wednesday: triceps dips
- Thursday: squats
- Friday: curls
- Saturday: kettlebell swings or planks
- Sunday: lunges
 - This addresses the three things at one time: I'm getting in some strength training, I'm increasing sleep pressure, and I'm waking myself up. You don't have to use my exercises, pick your own. But if you start using the 20-Minute Rule™, you'll notice a big difference in your energy level.
- Avoid caffeine in the afternoon. Listen, I love a cup of coffee as much as the next person, and there are some benefits to caffeine, but caffeine can definitely have an impact on your ability to get to sleep and enjoy quality sleep. I've had patients tell me that coffee before bed doesn't keep them awake. It may not. But it sure doesn't help you maximize quality sleep. So avoid any caffeine a minimum of within four hours of sleep time; nothing after 12 p.m. is preferable.
- Create an optimal sleep environment
 - Make your bedroom as dark as possible. Room-darkening shades, no night lights, no lights from electronic devices, clocks, or alarms. Remove all electronic devices if possible—especially get them away from your body.
 - Turn your night time temperature down so your room is cold.
 - Put socks on your feet to keep your toes warm.
 - Use a fan or white noise machine.
 - If your pillow and mattress aren't comfortable, replace them with something that is.
- Light management
 - Get as much exposure to natural light as you can during the day. As the day progresses, turn down the intensity of the lights in your home, and on your

electronic devices. Try to avoid computer, phone, tablet, and TV use an hour before bed, even longer if you are struggling with sleep problems.

- Wind down
 - Deep breathing, meditative breathing, meditation, journaling, reviewing your goals, and reading can all have a calming and quieting effect on the body.

There are many tips and tweaks to your routine you can implement, but this list will get you started.

Brain Fitness

Your brain is the hub of who you are. The brain plays a critical role in every thought, feeling, action, and movement that occurs within you and around you. So much of what the brain controls is subconscious, you don't even know what it is doing and that it is doing it.

There is much of brain function and physiology that is still a mystery. What we do know, however, is that the health of our brain and nervous system has a significant impact on our level of physical, metabolic, emotional, and neurologic function.

As I've said many times, we all get older, but the rate at which we degenerate is determined to a large degree, by our diet and lifestyle. The health of our brain and the sharpness of our wit and memory is not driven by how old we are. Just because someone is 80 doesn't mean her or she can't be as sharp, intelligent, and lucid as someone much younger.

Research shows that regardless of our age, diet and lifestyle can impact the health and fitness of our brains. The six primary fitness factors I've already discussed are paramount to optimizing brain health and function.

The final piece of this puzzle is maintaining brain fitness. Everything we've talked about so far impacts brain fitness. But brain or mental stimulation throughout life makes the brain and all its neuronal connections strong.

The brain is just like the muscles of your body, it needs exercise and stimulation: constant engagement of interaction with others, performing challenging activities, reading, crossword puzzles, and memory challenges. There are lots of ways to stimulate your brain and keep it strong for life. There are video games, apps for your iPod, and other programs designed to stimulate your mind and keep it healthy and strong.

What won't keep it strong and healthy for a lifetime is poor diet, lack of activity, and reduced social engagement. These things are recipes for what is now becoming the leading chronic

conditions in the United States: neurodegenerative disorders. Diseases like Parkinson's, Alzheimer's, and dementia don't have to be your fate. They don't have to be your legacy.

These disorders are rampant because of the diet and lifestyle we as a society have adopted over the last 30 to 50 years. The good news is if diet and lifestyle have created these disorders, diet and lifestyle can change and restore health as well.

Science and research are now proving this. Until recently, the medical community thought that brain degeneration was inevitable; diseases like Parkinson's, Alzheimer's, and dementia were incurable. Functional medicine practitioners have been arguing against this paradigm for years.

A recent research study created shock in the medical community when a 2014 research paper was published stating that when patients with Alzheimer's and other forms of cognitive impairment made improvements to diet and lifestyle, all similar to the principles I've outlined for A Methylated Life™, they improved. Not only did they show short-term improvement, but sustained improvement. Changes and improvements in diet and lifestyle were able to do what medications could not: slow, stop, and reverse brain degeneration.

There is no need to wait for your brain to decline to take action. Follow the other six principles for A Methylated Life™ and add some of these activities to your daily routine to further strengthen and exercise your brain.

Things you can do to exercise your brain:

- Meditate
- Play chess
- Read
- Learn and play a musical instrument
- Solve puzzles
- Learn a foreign language
- Entrain brainwaves/neurofeedback therapy
- Train memory and attention (Luminosity, Brain HQ)
- Write by hand

What will improving your brain fitness do for you?

- Increase your speed of thinking and processing
- Improve memory
- Improve ability to focus and get more things done
- Improve ability to find the right words
- Improve listening skills
- Improve vision
- Improve reaction times
- Improve driving
- Improve self confidence
- Improve mood

Well, that's it! Those are the seven basic principles of A Methylated Life™. If you would like to explore more details on any one of these topics, we'd love to talk with you. Please contact my office for information (610) 558-8920 or pre-register for FREE for my upcoming training program below.

Dr. Eric Balcavage

The Methylation Doctor™

If you enjoyed **7 Steps To Optimal Health: A Methylated Life**, then I know you will enjoy my coaching program.

You can sign up for the next round of training by clicking below.

www.amethylatedlife.com/signup/