

The Functional Longevity Report:



Practical Strategies
to Make Your Next
50 Years **BETTER**
Than Your First!

Cody Sipe, PhD

Hi,

First of all, thank you for taking the time to read this book. I appreciate your desire to live the best life you can possibly live and to make the necessary changes to your lifestyle to achieve that goal. The fact that you have entrusted me with your time and effort will not go unrewarded. I respect your attention and promise to do my best to make this a worthwhile and enjoyable read.

By implementing the strategies outlined in this book you will:

- Dramatically improve your health and well-being
- Be able to move better and with less discomfort
- Increase your energy levels to be able to do all the things you enjoy
- Be able to combat the typical declines that come with age
- Live a long and functional life
- Be confident knowing that you will be able to continue doing the things you love to do for a very long time

I have spent my entire career (20 years) studying the aging process and researching the best ways to improve and maintain function with advancing age. With a PhD in exercise science I take an academic approach to the evidence by staying current on the latest research and studying recognized experts in the field. This is no small task. Aging research has exploded over the last 10-15 years due to the expected huge increase in the older population.

But I am not your typical academic. I am also a fitness professional and club owner who has been able to actually “experiment” and refine my strategies with thousands of older adults. This includes men and women of all ability levels ranging in age from 30-90 and with all sorts of chronic conditions such as arthritis, heart disease, fibromyalgia, diabetes, low-back pain and more.

This book is a blending of my academic expertise with my real-world practical experience. Although my primary content area is exercise I believe in a holistic approach to aging and so I have included all areas that I feel (and the research shows) can significantly contribute to functional longevity.

I hope you enjoy reading and following this program as much as I had writing it for you. Once you are done I would love to hear from you. Please continue to visit me on my blog at www.functionalfitnesssolution.com/blog.

Sincerely,

Cody L. Sipe, PhD

Co-Founder, Functional Aging Institute
Creator, Never Grow Old Fitness Program
Co-Owner, Miracles Fitness
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Functional Longevity: It's the real deal!

By following the steps and tips laid out in this book you will increase your energy levels, improve your health, strengthen your body and improve your mood. You will not only feel better but you will look better also. And you will know that you have laid the foundations for living a long, healthy and functional life. A life filled with meaning and purpose and enjoyment...no matter how long you end up living. Whether you live to 90, 100 or even 120 you will be prepared for the years to come.

There is a lot of attention being paid these days to population aging. Due to advances in medicine and technology people are obviously living longer than ever before. In fact, we are experiencing an unprecedented period of longevity. The chances are pretty good that you will live to be 90 and some of you will eventually look at your 100th birthday in the rear view mirror.



But who wants to live a longer life if those extra years are filled with medical problems, discomfort, dependence and mobility problems? What is the point of having 10-20 years of additional life if they are of low quality? I often ask audiences I speak to whether they would prefer a guarantee of function but no guarantee of long life or vice versa? Almost everyone chooses function over longevity.

But there is a third option. Why can't you have the best of both worlds? Why can't you have function and longevity? The great thing is that you don't have to choose between the two. You can have both...if you do what it takes to get it. If you take advantage of the amazing strategies in this book and put them to use in your life you will achieve functional longevity.

But what about genetics? Isn't a person's chance of living a long, healthy and functional life more a product of their gene pool than their lifestyle? We all hear stories of somebody's great uncle or grandmother or family friend who ate fried chicken and biscuits and gravy almost every day, drank a little too much and smoked since they were 12 and still lived to a "ripe old age". So if you are lucky enough to choose the right parents then you also could defy everything science tells us about living a healthy lifestyle and still live a long life right? No, not right. Those people are anomalies. Aberrations. Exceptions. They are not the norm.

A few years ago explorer and writer Dan Buettner published “The Blue Zones: Lessons for living longer from the people who’ve lived the longest”. This groundbreaking work documented small pockets of people all around the world who had managed to live very long (90 or 100+ years), healthy productive lives. These pockets he dubbed “Blue Zones”. He and his team traveled to four Blue Zones: Sardinia, Italy, Okinawa, Japan, Loma Linda, California and Hojancha, Costa Rica to research the factors that have contributed to their long lives and to share those insights with the rest of the world. He clearly showed that it was their lifestyle, not their genetics, which caused their functional longevity. You will find many of the same lifestyle behaviors and strategies infused into the advice within this book.

So yes genetics does play a role but not as much as most people think. As the director of the National Institutes of Health, Dr. Francis Collins, famously stated, “Genetics loads the gun and environment pulls the trigger”. Genetics can cause us to be predisposed to developing a certain disease or following a particular pattern of aging but it is our behavior that really determines our path.

This is great news for people like you that want to take charge of their life, make their own destiny and not sit by passively while aging (or genetics) determines our fate. You are in control and after you are armed with the information contained in this book you will be equipped to do battle with Father Time.

Now let me make one thing very clear. Aging is not really our enemy and it is innately neither bad nor evil.

In fact, there are many positive aspects of growing older and we want to embrace those because we will all get older no matter what. We cannot stop senescence (the natural aging process) and I don’t believe, like some scientists do, that we should be working to stop aging. I don’t believe in trying to stop aging any more than I believe in trying to stop natural conception. But I do believe that we should be diligently working to reduce or eliminate many of the age-related diseases and conditions that people develop such as arthritis, diabetes, osteoporosis and the like.

Did you know that most of these conditions which accompany getting older are not really due to the aging process itself but rather to the lifestyle choices we make day in and day out over those years? It is true. Research on astronauts highlights this point quite nicely. When the



early astronauts returned from space they quickly found that they had lost a significant amount of muscle mass, muscle strength and bone density. Even though they had only been in space for a few weeks their bodies were more like someone 20-30 years older. They had “aged” by decades.

Obviously this was not due to the aging process because they weren’t chronologically appreciably older. Rather, it was due to the lack of muscle, bone and metabolic activity from being in a weightless environment. This inactivity sped up, so to speak, the deteriorations that we commonly see associated with the aging process. However, within a few months of being back on planet earth they all recovered nicely and were their “young” selves again. In essence, the artificial aging process had been effectively reversed.



Nowadays, when astronauts go into space, they engage in a regimen of exercise designed to counteract the effects of weightlessness so they maintain their muscle mass, strength and bone density. Interesting. Exercise counteracts this “pseudo-aging” environment. Modern research on healthy aging reveals the same about the rest of us who will never set foot outside of this atmosphere. Exercise really is a proven “anti-aging” treatment.

As someone who has read a lot of textbooks on aging I am still very bothered by how we discuss the effects of the aging process on the human body. Experts really like to talk about “average” changes that occur in the human body. For example, you will typically find statements such as this one in a textbook, “The *average* person will *typically* lose about 30-40% of muscle mass from the age of 30-70.” (italics were added by me) Here is the problem with this kind of view of aging. There are very few people who are average. In reality there are HUGE differences in how people age. One person might lose 5% of their muscle mass over that time period while another person loses 50%. A 75 year old might have more muscle strength than most 55 year olds.

We call this interindividual (or “between-person”) variability. It just means that you really cannot assume much of anything about how someone has deteriorated over time simply based on their chronological age because people age very differently from one another. In a play on words a colleague of mine and recognized aging expert, Wojtek Chodzko-Zajko, PhD calls this “mean spirited generalization”. He claims, and I agree, that we have been mean (not nice) to

the older adult population by always focusing on mean changes (i.e. average changes). We have glossed over the richness of the aging experience which is actually very diverse. Plus, generalizing results leads to stereotyping and that, also, is mean (not nice).

So what will determine whether you are that “above average” 75 year old or the “below average” 55 year old? You will. Not your parents. Not random blind luck. You. The decisions you make on a daily basis will predominantly dictate how well or poorly you age. The foods you eat, the activities you engage in, the medications you are prescribed, the supplements you take, the environment you live in, the risky behaviors you choose...these will determine how productive, healthy and enjoyable your future years will be.

Now I also recognize that there are many things that are very much out of your control. You can't do anything about your past lifestyle choices for example. That is water under the bridge. You can't do anything about how much you weighed at birth or whether or not you were breast-fed. Whether you grew up in a smoking home or fell out of a tree when you were little and broke your leg. You can't just decide that someone won't drive through a stop sign and T-bone your car. It does no good to make up your mind that you won't be diagnosed with cancer because you might be anyway. Although all of these things impact your functional longevity they are out of your control so there is no use discussing them.

But there are obviously many things that are completely within your control. You have choices before you every day and it is up to you to decide to make the better choice. I cannot force you to make the right choice no matter how much I would like to. All I can do is provide you with information so that you have the necessary knowledge to make a well-informed decision and to try to motivate you to take action. Each positive choice that you make will lead you one baby-step further towards your goal of functional longevity.

I am going to boil down years of education, hundreds of research studies and thousands of hours of practical experience into a meaningful and practical “how to” guide that will get you on the path to fulfilling your dreams of enjoying a long, healthy and functional life. The approach is holistic, meaning that I am going to cover multiple aspects of life that have been found to be important to functional longevity. I refer to these as realms and they include the



Physical Realm, Social Realm, Emotional Realm, Mental Realm and Spiritual Realm. Although they are not listed in order of importance (which is open to fierce debate) I address the physical realm first because that is the one that I know the most about and have the most experience with. It's what I do every day. After reading the information you can make your own decision about which might be the most important for you to put into practice.

The Physical Realm

Move...a lot

The most basic key to achieve functional longevity is human movement. We were created to move and we should be moving naturally every day. Natural movements are those things we do in order to accomplish a task or to provide enjoyment. Lifting, bending, stooping, walking, running, carrying, pushing, pulling, jumping, skipping, hopping, squatting, throwing, catching, crawling, climbing, rolling, somersaulting...these are all natural movements that we have been doing since we were a little kid. Remember how much fun they were? Why can't they be fun again?



Blue Zones author Dan Buettner states that a common theme among “Blue Zoners” is that they engaged in low-intensity physical activity throughout most of every day, usually associated with their daily work such as shepherding or farming. They are just moving naturally every day for a good part of the day. Unfortunately most of us don't move very much during a typical day nor do we have the same opportunities to do so. Technology has robbed us of our natural inclination to move. Do you remember the days where there were no remote controls or cell phones? You actually had to get up to change the channel or answer the phone?? My kids probably don't even know what a rotary dial wall phone looks like.

So most of us have to purposefully build physical activity into our day. This can easily be accomplished if it is important to us. The best advice is to quit sitting so much. Whether it is watching TV, reading, napping or whatever. Only allow yourself to sit for a couple hours. If you have an office job or require a computer then you will need to get up and move as often as possible. Preferably every hour. I like to take a couple laps down the hall or around the building when I've been on my computer a while. I really like to walk when I am trying to be creative. I take a pen and notepad along and just move. It helps fire up my creative juices and makes me feel so much better with the sun on my face and wind in my hair. Find something that you can do to break up the sitting periods and then do it consistently.

Here are some ways you can accumulate more physical activity:

- Walk the dog

- Wash your car by hand
- Do your own yard work
- Play with kids (they keep you young)
- Garden
- Take lots of short walks
- Take the stairs whenever you can
- Park at the back of parking lots
- Ride a bike
- Play a sport
- Take a hike
- Make ice cream (with a hand crank)
- Dance
- Play a musical instrument

Functional Exercise

Exercise is really just a specific type of physical activity but it is one that yields many additional benefits beyond just being physically active especially for the majority of us who don't work with our hands (and backs and legs...) for a living. For those that follow a really healthy lifestyle and are really active they may not need to engage in formal exercise. In fact, most of the "Blue Zoners" did not formally exercise although they often hiked for miles every day, worked hard, and lifted heavy objects. But, again, most of us do not have that type of daily routine so we need to exercise.

Unfortunately, exercise is poorly understood by the typical adult, especially in the context of aging. Not all exercises are created equal. An exercise program designed for functional longevity looks VERY different than the kind of program the vast majority of people engage in. Most people follow programs that increase muscle size and strength which, on the surface, sounds good to combat aging since the aging process tends to reduce both. However, research has made it pretty clear that although these types of programs unequivocally improve muscle size and strength (even in 90 or 100 year olds) they do NOT necessarily improve physical function. After reviewing the best training studies available Latham and colleagues (2004) concluded that in older adults who exercise regularly strength gains do not equate to similar functional improvements and that those who become the strongest do not necessarily become the most functional.

The reason is because physical function is much more complicated than we realize and there are many other factors which contribute to it other than just how big and strong the muscles are. These factors include: motor control, coordination, muscle power, proprioception, sensory

integration, balance, stability, mobility, agility and more. An exercise program designed to improve physical function should challenge most or all of these factors...something the typical exercise program definitely does not do. In fact, most strength training programs **reduce** or **eliminate** many of these factors on purpose in order to focus almost exclusively on building muscle strength. This is like building a car with a really huge engine that can accelerate really quickly but doesn't steer. It's nice to have all that power under the hood but how useful is it when the car can't turn corners?

I've been researching, creating, using and advocating for functional exercise programs for a long time. In a way I was country when country wasn't cool. But I have to admit that I used to be a big believer in the traditional strength-only approach. However, by staying on top of the research and by actively training clients I soon realized that this approach was limited AND something didn't make sense. The strength-only approach just didn't match up with what I knew about how the human body functioned and aged. So I finally made the decision to design exercise programs with one primary result in mind: improved function. And I haven't looked back since.

Recently, I designed the **Never Grow Old Fitness Program** specifically to improve functional longevity and firmly believe (completely unbiased of course) that this is absolutely the most advanced and scientifically sound program you will find for this goal. The exercise movements included in this program in many ways mimic the natural movements I described earlier

(lifting, reaching, pulling, etc.). This approach trains the body to successfully accomplish daily tasks which rely on many muscle groups and many functional factors rather than trying to strengthen one particular muscle group.

It is based on my "7 Keys to Functional Training" which represents the philosophies and approaches that I have developed over many years. These 7 Keys grew out of a desire to teach other fitness professionals around the world how to do what I did – develop safe and effective exercise programs for functional longevity. I have been blessed to have been able to educate thousands of professionals around the globe how to make a difference in the lives of their clients. The 7 Keys are:



1. Train All Components of Function
2. Make Purposeful Decisions for Every Aspect of Training
3. Train in All 3 Planes
4. Functional Movements are the Bread and Isolation Movements are the Butter
5. Stand Up, Stay Up
6. Complicated First, Simple Last
7. Be Safe to Be Successful

Now I realize that you probably do not fully understand each of these keys or how to put them to use. Unfortunately, I do not have the time to explain it to you in more detail within this report. However, it is all explained in great detail in my book “The Never Grow Old Fitness Program” which you can get by [CLICKING HERE](#). The program includes follow-along exercise videos tailored to your abilities and uses minimal equipment so the program can literally be done anywhere.

However, I will share with you some examples of how to tweak some common exercises to make them more functional.

Example 1: Chest Press

Example 2: Seated Row

Example 3: Leg Extension

Functional Fuel

No way can we avoid talking about nutrition. It makes a huge contribution to functional longevity and, when combined with an active lifestyle that includes functional exercise, can be extremely powerful. Nutrition can be a very complicated topic for many people because most people really don't understand the difference between a macronutrient and micronutrient or even less what the different types of carbohydrates or fats are. So I will explain functional nutrition in four areas: 1) How much to eat; 2) What to eat; 3) What not to eat; and 4) Supplements.

- 1) How Much to Eat: Okinawan elders have a saying, inspired by Confucious, which they often repeat before a meal: hara hachi bu. This saying reminds them to stop eating when they are 80% full. Instead of eating until they are full, which is what the typical American and European would do, they stop eating when they no longer feel hungry. This prevents overeating and keeps their calories low. Centenarians in Blue Zones never dieted and were not obese. They ate mindfully, instead of emotionally, and kept calories low. Cutting calories by about 20% could be beneficial for many.

- 2) What To Eat: Unprocessed whole grains and fresh vegetables should constitute the majority of your diet. Whole grains such as wheat, oats, sweet potato and corn provide fiber, antioxidants cholesterol reducers (phytosterols) and essential minerals. Beans (legumes) are also an excellent choice providing fiber, flavonoids and protein. Tofu is obviously eaten regularly in the Okinawan diet and is low in calories, high in protein (excellent amino acid profile) and has no cholesterol. Nuts, especially almonds, peanuts, pecans and walnuts should also be featured in a longevity eating plan. They have been shown to lower risk of heart disease and are rich in Vitamin E.

You will also hear a lot about certain foods that may only be common in certain parts of the world that have been shown to contribute to health and longevity such as green tea, ginseng, blueberries, red wine (resveratrol), goji berries, chickpeas, red peppers, garlic, flaxseed, lychee, edamame, turmeric, kombucha (fermented tea), pomegranates, wheat germ, acai berry and noni juice just to name a few. The truth is that all of these foods have health properties to them and many of these can easily be worked into a functional longevity diet. However, it probably isn't wise to build an eating plan around bulk quantities of any one food or to spend large amounts of money on foods that are difficult to obtain. For example, I enjoy green tea but I am not going to drink 3-4 cups every single day like the Asian culture typically does. And as much as I would like to enjoy acai berries on a weekly basis they are too expensive and too difficult for me to obtain to make it worth it (in my opinion). For the rest of our lives we are going to be bombarded with a slew of "new" superfoods that are the current hot thing touted by the Dr. Oz's of the world. Instead of chasing the next new fad we need to have a solid functional longevity eating plan already well-established. Then we can try out some of these "new" foods at our discretion.

- 3) What Not To Eat: Three foods to avoid in your diet are red meat, processed food and sugar. None of the Blue Zone populations ate much meat at all either by circumstance or choice. You just really don't need as much meat as you think and it certainly shouldn't be the main food for a meal. When including meat make it more of a side dish, choose really lean cuts and (even better) make it fish, lamb or pork. Processed foods are typically high in sodium and full of preservatives so they are best avoided completely. Unfortunately, that is really difficult to do in this day and age but if you are filling your meals with the foods listed earlier it should be much easier. Sugar and sugary foods, such as sodas and cookies, are "fast agers". They spike insulin levels, wreak havoc with energy profiles and stimulate fat storage. Try to shift to natural

sugars such as fruit if you really need something sweet or nibble on some dark chocolate (my personal favorite) which is packed full of anti-oxidants.

As you already know “fast food” is typically rife with all three and sit down restaurants want to make the food taste as awesome as possible so even a very healthy food is typically prepared in very unhealthy ways. Therefore, it is easiest to eat at home more and eat out less. That way you have full control over what you eat and how it is prepared. If you aren’t much of a cook or are new to healthy cooking (and not sure how to do it) then my suggestion is to pick up a couple cookbooks with healthy recipes. There are so many good ones to choose from that I think you just need to go to the bookstore (or get on Amazon) and browse a little to see what really strikes your fancy. Then, pick out a couple weeks’ worth of recipes and go for it.

- 4) Supplements: The last area of nutrition that I feel needs to be addressed is the use of supplements. This is obviously a very hotly-debated area with many different perspectives some of which are far from unbiased. There are several difficulties with interpreting research on aging-related supplements. The first is that a lot of supplement research is performed in a lab on cells rather than on human subjects. It is very difficult to accurately extend cellular research to humans. What works on cells in petri dishes doesn’t always have the same effectiveness when consumed by humans in real life environments. Yet many supplement companies make very bold claims based solely on cellular studies and beefed up by dodgy customer testimonials.



Secondly, the only real way to assess the effectiveness of supplements would be to conduct a prospective randomized clinical trial on people and track them for 30-40 years. And there is really no feasible way that is ever going to happen. Since most of the data is either cross-sectional or retrospective we end up relying on associations between the intake of certain vitamins or minerals and health outcomes. Unfortunately an association between two factors does not mean that one thing causes another.

Lastly, there are so many new supplements flooding the market every year that is difficult to keep up. Instead of just basic vitamins, minerals and antioxidants there are now proprietary formulas for testosterone support, telomere support, joint health and more. Because of this much of the research is performed by the companies themselves and is not readily available to either professionals (like myself) or consumers.

I am not necessarily endorsing any of the supplements below but here is a short list of ones to consider:

- Omega 3 Fatty Acids
- Carnitine
- Conjugated Linoleic Acid (CLA)
- Coenzyme Q10 (CoQ10)
- Green Tea Extract
- Vitamin E
- Alpha-Lipoic Acid

Action Steps

- 1) Stop sitting so much and find more ways to be active every day.
- 2) Start a functional exercise plan like the Never Grow Old Fitness Program.
- 3) Clean out the kitchen, stock it with healthy foods and start eating better.
- 4) Start taking one or two supplements that best fit your physical needs.

The Social Realm

The value of relationships cannot be understated when it comes to living a long, healthy and enjoyable life. Study after study confirms that those who enjoy close relationships with others live longer, report a higher quality of life and have lower prevalence of diseases such as heart disease. Studies also indicate that elders who live with family members have a lower risk of disease, are less stressed, eat healthier and are mentally sharper. We can only speculate as to why this happens but many experts point to several key factors: physical assistance; sense of purpose; and love.

Close families take care of one another through good times and bad; through good health and sickness. They can put a smile on our face when we are feeling blue, provide sage advice when



faced with important decisions and celebrate with us when things go right. Our immediate and extended family should be our closest and most cherished support system.

Many modern societies, it seems, have lost touch with the importance of families. Many people appear to value their independence and mobility more so than maintaining close connections with those to moms and dads, brothers and sisters, aunts and uncles, children and grandchildren. They put their own individual ambitions and pursuits above the needs of the family. The trend within the core family is to fill life with so much busy activity (sports, band, camps, etc.) that family time, such as eating meals together, is becoming rare.

Family relationships need to be nurtured if they are to grow and be fruitful. This can mean a lot of hard work. Sometimes the heaviest weight in the world is holding your own tongue. We are definitely not going to agree with all of the choices family members make or appreciate what they say but all relationships are full of give and take. It is never going to be all unicorns and rainbows. But if we value family and nurture those relationships we will be rewarded with a strong, cohesive support system.

Families also provide a sense of purpose. I know that, as a father, I am blessed to have children and feel responsible for raising children that fear God, live upright lives and discover their purpose. This is hard work sometimes. If you've had teenagers then you know exactly what I'm talking about. But I also know that my purpose is not just to raise these kids. My choices, words and actions will have an impact for generations to come. Kids will get married and have

kids of their own. My purpose is also focused on the future spouses, grandchildren, in-laws and others who will be touched by our immediate family.

Blue Zone elders were found to make family a priority in their lives. They build their lives around family ritual, duty and togetherness. Generations spend time together almost daily and help one another regularly.

Love is an almost magical entity. I know that sounds hokey but if you really think about it I believe you will agree with me. Love is extremely powerful when expressed either as emotion or as action and without it we are incomplete human beings. We are designed to give and to receive love in many different forms. We want it. We need it.

Unfortunately today's society has confused many as to what love really is. We say we love our spouse, love our favorite sports team and love cheesecake yet obviously we don't mean the same thing even though we use the same word "love". The ancient Greeks actually had four words for love in order to better capture its many dimensions instead of just one. They were:

- Philia: brotherly love or friendship (such as Philadelphia, the city of brother love)
- Eros: romantic, physical or sexual love (hence the term erotic)
- Storge: affection (used primarily to describe family relationships)
- Agape: deep unconditional, selfless love (used in the Bible to express God's love for us)

It is really too bad that we only have one word for love because that obviously leaves room for misinterpretation. In a family environment it is important that all four types of love are expressed appropriately. Storge is the affectionate type of love (according to the Greeks) that family members typically have for one another but it can't stop there. For the husband and wife eros is another important kind of love. However, if I only have eros for my wife then that relationship is obviously going to be very superficial and fickle.

You may have noticed that the first three types of love are related to emotion but the fourth, agape, is independent of emotion. To me that is really the deepest and most difficult kind of love to cultivate within ourselves. Agape says "I love you" and then carries out that love with real action even when it doesn't feel that way. We can all think of hundreds, if not thousands, of times where we didn't 'feel' love for a family member. The question is did we still act in their best interests? Did we still perform acts of love to them? If so then we demonstrated agape.

But our relationships obviously don't end with family. Co-workers, neighbors, friends, parents of our kids' friends, church members, customers, civic workers...there are a lot of people we could include in our relational network. It is really up to us to build those relationships.

I am convinced that men need close relationships with other men and women need close relationships with other women because not only are their life experiences different so are their relational needs and communication styles. Of course, women tend to be much more adept at building relationships with other women than men are at building relationships with other men. We men tend to be a little more standoff-ish, egocentric and unwilling to share our feelings with others. But both genders can surround themselves with lots of people they know without ever developing deep, intimate relationships with any of them. They become alone in a crowd.

In my opinion working on building relationships is much more difficult than building a healthy physical body because there is so much we cannot control. It sometimes takes a lot more strength to lift our mask and share our feelings with others than it is to lift some weights. Obviously it is more difficult for some of us than for others. I am one of those people for whom it is more difficult.

It is important to put yourself in situations where it is possible to meet and build relationships with others such as at church and centers of worship, community centers, senior centers, civic groups or volunteer events. Then be open and receptive to meeting new people. Even reach out to others instead of sitting back and expecting or hoping they come to you.

These relationships can, and should, support the healthy lifestyle that you've chosen to adopt. Surrounding yourself with a group of people who share your same values regarding health and longevity is a powerful way to reinforce positive behaviors. Seventh-day Adventists are a great example of a group of individuals that share the same values and support one another. Not only do they worship together but they also follow a stringent healthy lifestyle that includes a vegetarian diet (recommended but not required), adherence to kosher laws, abstinence from alcohol and tobacco (and for some, even caffeine). The large Seventh-day Adventist community in Loma Linda, CA was the primary reason the region was declared a Blue Zone.

According to the National Wellness Institute the social dimension of wellness “emphasizes the interdependence between persons and encourages contributing to one’s environment and community”. Most people like to feel that they are a part of something bigger than they are. That is why we join groups, organizations and efforts that don’t necessarily benefit us directly.



It seems that one of the positive aspects of getting older is an increased appreciation for giving back to the community and helping others.

Generativity is the concern for establishing and guiding the next generation that, according to psychologist Erik Erikson, typifies the final stage of development for the mature adult. This is a way to perpetuate oneself by influencing those that follow. As John Kotre stated in his book *Outliving the Self*, it is “to invest one’s substance in forms of life and work that will outlive the self”. People who do not develop a generative spirit tend to become stagnant and even self-absorbed. One of the longest studies of aging in the world – the Study of Adult Development at Harvard University – found that generativity was the best predictor of an enduring and happy marriage and a key to successful aging.

Generativity can be expressed in many ways such as parenting and grandparenting, which are common at this stage of life, but also through coaching, mentoring, volunteering and teaching. The act of older adults giving back to younger generations can have a profound impact on creating a healthy society especially when the aging population is growing so rapidly. Imagine the amazing change in society that could be possible if this huge generation of mature adults committed themselves to shaping the hearts and minds of our youth. But the benefits run two ways – for the giver and the recipient – so that the older generation would benefit as well.

Action Steps

- 1) Commit to nurturing your family relationships and mending those that have been broken.
- 2) Learn to love in all its forms – philia, storge, eros and, most of all, agape
- 3) Grow the quality and quantity of your relationships with friends
- 4) Help shape the younger generation through mentoring, coaching and teaching

The Emotional Realm

Most of us these days lead very busy, hectic, stress-filled lives and this kind of lifestyle can have a negative impact on our health and longevity. I do not consider myself a high-stress person. Most people would probably say that I am pretty laid back and I would agree. However, the busyness of full-time work plus growing a business on the side, raising 7 kids and taking care of the daily stuff in life can still get to me. Usually I don't realize that my stress level has inched higher and higher until I go somewhere truly relaxing like on a hike or to the beach. After a few days it dawns on me how much better, more relaxed and happy I feel compared to before.

Stress is designed to be a good thing for our survival. The fight or flight response system prepares our body for potentially dangerous situations by releasing hormones such as



adrenaline and cortisol. However, the stress of a job or relationship can cause these hormones to be released at a higher amount chronically which can then lead to conditions such as high blood pressure, abdominal fat gain, sleep disorders and has even been linked to heart attacks. So the better we are at dealing with our stress the healthier we will be.

In "Secrets of Longevity: Dr. Mao's 8-Week Program" Dr. Mao Shing Ni recommends five strategies for reducing stress: 1) Eat all of your meals slowly and in a tranquil atmosphere where you can focus on the taste and texture of every bite; 2) Drink 1-2 cups of tea made from 1 teaspoon of dried Schisandra berries which can be found in most health food stores; 3) Wear bright colors, listen to uplifting music and surround yourself with colorful flowers to improve your mood; 4) Boost your "youth hormones" (DHEA and growth hormone)

by performing weight training exercises such as squats and leg press; and 5) Learn to set your boundaries so that you can say no to people and protect time for yourself to relax with a good book, a bath, meditation class or anything else just for you.

Sleep quality and quantity are two important aspects of reducing stress, improving mood and providing lots of energy. Lack of sleep and stress go hand in hand. It is somewhat of a chicken and egg situation. Sometimes lack of sleep can create stress by making you irritable and unable to mentally focus. Conversely, high levels of stress can make sleep difficult. It is a vicious cycle. Strive for 8-9 hours of sleep every day. But also seek deep, uninterrupted sleep.

Here are some great tips for achieving both.

1. Schedule your bed time and stick to it to make sure you get the quantity you need.
2. Avoid drinking any fluids after dinner if you typically have to go to the bathroom during the night.
3. Avoid any caffeine in the afternoon and evening.
4. Create your optimal sleep space: very low or no lighting, cool temperature, relaxing sounds, comfortable mattress and bedding.
5. Prepare for sleep by having a relaxation routine before turning in for the evening. This could include some light stretching or meditation.
6. Consider trying herbal teas such as Passionflower or valerian a little while before bedtime.
7. Avoid exercise late in the day. It revs up your metabolism and makes it more difficult to fall asleep.

The fact that the Okinawans have one word, *genki*, to mean both “happy” and “healthy” reveals their perspective that the two are intertwined. Modern day research supports this belief. Scientists have proven the connection that exists between “stress-resistant personalities” and longevity. In a nutshell, happier people tend to be healthier and live longer. Laughter improves immune function, releases healthy endorphins and gives your heart, diaphragm, abdominal muscles and facial muscles a workout.

In her book “50 Secrets of the World’s Longest Living People” author Sally Beare recounts the story of Norman Cousins who was the editor of the *Saturday Review* in the 1960’s. He was diagnosed with a disease called ankylosing spondylitis and was sent to a hospital, where he was given numerous painkillers, sleeping pills and codeine. He couldn’t sleep and was in constant pain. Unhappy with the hospital’s approach he discharged himself and decided to use laughter as his medicine. Every day Cousins watched funny movies and had his nurse read humorous books to him. Not too long after he was feeling good enough to return to work full-time. Maybe laughter is the best medicine after all.

If you are a Type A personality then this is probably the biggest challenge you will face. I don’t expect you to be able to change your personality just because you decide to but I do believe that you can learn to handle stress and anxiety a lot better than you do now no matter your personality type. If you are in a high stress environment, such as your job, then you need to find a way to get out of it because it is literally sucking years off of your life. Your health and longevity are too important to sacrifice for pleasing your boss or getting a raise so you can afford a better car. It is better to live a simpler life that gives you more joy and happiness than to constantly try to keep up with others around you.

Action Steps

- 1) Identify the major stressors in your life and make a plan for either removing them or dealing with them more effectively.
- 2) Choose 2 or 3 stress-relieving ideas from the information above to put into action.
- 3) Assess your sleep environment and routine. Make changes so that you get lots of high-quality sleep time.

The Mental Realm

Some of the most exciting aging research, in my opinion, that has come out in the last 10 years has been on brain plasticity. It has blown the lid off of what we know and how we think about the aging brain. There are several physical changes in the brain that occurs with aging such as a reduction in size and number of neurons. For a long time it was believed that these changes resulted in permanent changes in cognitive ability and now we know that just isn't true. This amazing brain of ours retains its ability to grow and learn new information as we get older.

One of my favorite books on this topic is *The Mature Mind* by Gene Cohen, PhD. In it he draws on the latest research to dispel commonly held myths and misconceptions about what happens to the brain (and mind) as it ages. For example, did you know that:

- The brain cannot grow new brain cells
- Older adults can't learn as well as young people
- Connections between neurons are relatively fixed throughout life
- Intelligence is a matter of how many neurons you have and how fast those neurons work

Well, **these "facts" are all wrong** which is good news indeed! The field of behavioral neuroscience has shown us that external stimulation improves brain structure and functioning. In essence the brain is like any other muscle. If you use it then it will grow stronger even in the second half of life. If you don't use it then it will grow weak. So, just like the rest of our bodies, a lot of the declines in brain function that we have traditionally blamed on aging can really be blamed on inactivity...in this case mental inactivity.

Human development is not just limited to the brief periods of childhood and young adulthood. Your mind should continue to develop with age. Developmental Intelligence is defined as "the maturing of cognition, emotional intelligence, judgment, social skills, life experience and consciousness and their integration and synergy". Each of these components continues to mature individually and collectively, if nurtured. That is why so many older adults continue to function at very high levels and often display that elusive trait of wisdom.

Studies on older workers demonstrate just how much their minds differ from those of younger workers. When given a task or project to complete the younger workers focused on the immediate completion of that particular task. The older workers however took a broader perspective and considered how the successful completion of the task affected the rest of the company. Did a "win" for their department negatively affect other departments? Were there other ways to complete the task that were better for the good of the whole company?

This type of complex thinking is a good example of how the mind can mature with age. Dr. Cohen recounts the situation in which his in-laws (then in their 70's) were on their way to his house for dinner. They came out of the subway into a snowstorm and couldn't get a cab to stop for them. His father-in-law spotted a pizza shop across the street so he went in and ordered a pizza for delivery. He gave them his son-in-law's address and, when it was ready, told the driver that he wanted to be delivered with the pizza. His solution shows not only the experience of years but also agility of thought.

In the groundbreaking classic "Successful Aging" by Rowe and Kahn maintaining high mental function is a critical component of aging successfully. Based on the Mac Arthur Foundation Study (which at the time was the most extensive and comprehensive study on aging in America) the authors make the case that while there are specific areas of mental function that experience decline more than others, on the whole the majority of people maintain relatively sharp function with aging. The study discovered that the following factors enable some people to retain their mental ability with age:

- Genetic Factors: Yes, genetics play a role but their influence is often overstated and out of a person's control anyway. The study showed that there is still substantial room for improvement from lifestyle factors such as those listed below.
- Education: This was the strongest single predictor of sustained mental function.
- Lung Function and Physical Fitness: Exercise is not only good for physical function but it is critical for mental function as well. In the MacArthur Study, men and women who engaged in regular strenuous physical activity were more likely to maintain high cognitive function.
- Self-Efficacy: This is a person's belief in their ability to handle various situations. People that believe that they can physically and intellectually succeed at any age tend to retain their mental abilities longer.
- Environmental Influences: Complex environments, such as the workplace, provide a variety of stimuli (self-direction, use of initiative, independent judgment, solving problems) which increase and sustain intellectual flexibility.

Pretty much the same adage that applies to your body applies to your mind: Use it or lose it! So what can you do to exercise your brain to keep it in top working condition as you get older in addition to the health-enhancing ideas above? Dr. Gene Cohen would stress the importance of creativity to the aging brain and to the whole person. The third age of life can open up realms of creativity never before experienced. He cites example after example of people who made their biggest contributions to their field of study or society very late in life. Creativity can be expressed in many forms. Typically we think of the arts – music, painting, etc. – but it can also be expressed through gardening, cooking and even in the activities of daily life. As Dr. Cohen

points out, anyone can be creative in their own ways, whether they are artists or assembly-line workers, pianists or plumbers.

Brain fitness programs are quite popular right now and some have been shown to be effective although some researchers question the validity of these findings. They are designed to improve specific aspects of cognitive function such as processing speed, working memory and attention. They are typically a pretty fun and entertaining way to “work out”. If you haven’t tried any then go online and give some a spin. Popular programs include Lumosity, Fit Brains and Posit Science. Of course Sudoku, crossword puzzles, chess (and other strategy games) and even math problems are all great ways to train your brain also.

Try something new. Get out of your typical routine and do things you have never done. New experiences and stimuli challenge different parts of the brain and stimulate the brain to develop new neural connections. You may not consider yourself musically talented at all so learn to play an instrument or read music. Immerse yourself in learning a new language. Take a course in something that interests you but you’ve never studied before. Pick up a new hobby or sport. It will add some excitement to your life, provide you with some amazing experiences and workout your brain all at the same time.

Action Steps

- 1) Follow a brain-healthy lifestyle that includes healthy food and regular exercise.
- 2) Stimulate your brain in different ways every day through games and puzzles.
- 3) Get creative! Pick up a new creative hobby or rekindle your passion for something you gave up a long time ago.

The Spiritual Realm

Having a religious faith and participating in religious activities improves a person's health. Studies have shown that it can reduce risk of death, increase life expectancy, and lower rates of cardiovascular disease, depression, stress and suicide. The bottom line is that people who value and nurture their spirituality are healthier and happier. Dan Buettner found that in every single Blue Zone he identified the healthy centenarians all had a strong faith whether it be Christian, Jewish, Buddhist, Hindu or something else. There may be any number of possible reasons as to why this happens. Maybe it is because, as some experts assert, people who attend church are less likely to smoke, drink or do drugs. Or maybe it is because they regularly self-reflect and meditate. Or maybe it is because belonging to a religious community can foster a larger and stronger social network. Whatever the reasons the bottom line is that it works.

Spirituality is a deeply personal topic so it is one that is somewhat difficult to discuss when it comes to health and longevity. As a baptized Christian ("born again" follower of Jesus Christ) I obviously have a very distinct perspective on spirituality that is not necessarily shared by all. My undergraduate degree was in Youth Ministry from a Christian University and I now teach at that same school. But regardless of specific differences in beliefs that may exist between us it is this experience that also allows me to be able to speak with some authority on the topic.

I consider myself to be a spiritual person. Not just in concept but also in practice. I believe very strongly in the God I serve while striving to think and act accordingly. My life revolves around these central beliefs and it permeates everything that I do. To me (and other scholars would agree) true spirituality must take over your life. It cannot be confined to a certain time or place but rather it becomes the compass for all that we are and desire to be.

So with these thoughts in mind I would like to recommend five areas that are important for spiritual, and therefore physical, health. They are:

1. Prayer
2. Scripture and Meditation
3. Corporate Worship



4. Personal Worship
5. Serving Others

Prayer

“We tend to use prayer as a last resort, but God wants it to be our first line of defense. We pray when there’s nothing else we can do, but God wants us to pray before we do anything at all. Most of us would prefer, however, to spend our time doing something that will get immediate results. We don’t want to wait for God to resolve matters in His good time because His idea of ‘good time’ is seldom in sync with ours.” – Oswald Chambers

Prayer is very powerful. It allows us a direct conversation with God and an opportunity to “unload” everything that is bothering us. Troubles, illnesses, mistakes, relationship issues, “sins”...what could be a better stress reliever than that? But obviously that is just the beginning. Prayer is an opportunity to thank God for all of the good that he brings to our lives. It gives us the chance to get re-centered and re-prioritize our lives. Plus it has numerous physiological benefits such as lowering breathing and heart rate, reducing blood pressure and lowering levels of stress hormones.

Scripture and Meditation

There is probably no one whose thoughts on scripture meditation have been more influential than German theologian Dietrich Bonhoeffer. Even though most of his works are now 70-80 years old they are still having an impact on the spiritual lives of many. He believed wholeheartedly in the power of reading God’s word and reflecting on its meaning. “The heart of God opens itself to us in God’s word” he wrote.

Bonhoeffer lived with an intimate relationship with scripture and he shared some of those deep meditations with the rest of us (such as his infamous “Meditation on Psalm 119”). For him spending time in the Word on a daily basis was not an option. It was a duty. And he believed that the reading of scripture led naturally to prayer. As Dietrich stated “The words which come from God will be the steps upon which we find our way to God”.

Corporate Worship

Worshipping with other believers is a special time to focus our mind both vertically (on God) and horizontally (on others). We are encouraged and inspired by those around us. And for those of you, like myself, who can’t carry a tune to save their life, it is also a great time to blend your voice with those around you. Being around others in worship is energizing and relaxing at the same time and it just might be the cornerstone for longevity. The most impressive

correlation out of the research between faith and good health is found for worshipping in a public place.

Personal Worship

It is difficult to separate prayer, scripture and meditation from periods of personal worship because in some ways it is all worship. However, in my mind, personal worship is a time where we focus solely on God without regard to our own personal situation or needs. We are not seeking guidance or advice or to have a need fulfilled. Neither are we trying to learn anything new. We are focused 100% on giving him praise.

Some of my most meaningful moments of individual worship have been in nature. I especially love to worship God on the peak of a mountain where I can see the beauty of creation spread out before me. It is such a direct reminder of God's goodness and power. Unfortunately I do not get out into the wild enough so, like many of you, I find myself worshipping as I drive to work or walk somewhere. Anywhere is a good time for private worship.

Serving Others

It is hotly debated as to whether service is more beneficial for the one who receives the service or the one who performs the service. There is no debate however that it benefits both. Helping others is really a way to help ourselves. It gives us an opportunity to look outside of ourselves and know that we have done something good for someone else.

Every major religion, despite their vast differences, have at least one thing in common...doing good to their fellow man. It is through our service to others that we get a chance to live out the morals and ethics that we profess. Otherwise we are just hypocrites. Whether it is something as simple as mowing a widow's lawn or something as grandiose as spending a couple weeks in another country on a medical relief mission service should be a regular part of our spiritual walk.

Action Steps

- 1) Read scripture and meditate a little every day.
- 2) Go to corporate worship services and actively participate at least once per week.
- 3) Find meaningful ways to serve others on a regular basis.

Now Take Action!

All of the knowledge in the world even when coupled with the best intentions doesn't help you get healthier and happier. You need to take action...now. Even if you only commit to doing one thing in this document it is better than doing nothing.

Most of us are pretty easily overwhelmed and try to change too many things at the same time. And sometimes people are ready to change in some areas but not in others.

Find the things that you are willing and able to change right now and then do them consistently!! As you master these new habits then you can start thinking about other items on the list.

For an effective, done-for-you functional exercise program get my Never Grow Old Fitness Program at www.functionalfitnesssolution.com. It can be performed anywhere with minimal equipment and only takes about 25 minutes three days per week. It is designed specifically with you and your needs in mind.

Thank you for your interest in living a long, healthy and functional life and allowing me to share this information with you.

For more great tips and strategies keep visiting my blog at www.functionalfitnesssolution.com/blog.

Sincerely,

Cody L. Sipe, PhD

For further reading on this topic I highly recommend the following books. Some of these are newer and some are older classics that are still worth reading. Some of them were referenced in this report and each of them has been valuable to me as I continue on my quest of helping people achieve functional longevity. I hope you enjoy them as much as I have.

Cody L Sipe, PhD

The Mature Mind: The Positive Power of the Aging Brain by Gene D. Cohen, MD, PhD (2005)

Successful Aging by John W. Rowe, MD and Robert L. Kahn, PhD (1998)

The Blue Zones: Lessons for Living Longer from the People Who've Lived the Longest by Dan Buettner (2008)

50 Secrets of the World's Longest Living People by Sally Beare (2006)

Aging Well by George E. Vaillant, MD (2002)

The Third Age: 6 Principles for Growth and Renewal After Forty by William A. Sadler, PhD (2000)