



SELF-DEFENSE

A Primer for People with or at Risk for
Chronic Diseases, and Those Who Love Them

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Doctors must help patients to optimize their lifestyles in order to prevent or treat chronic diseases

BY DAVID SCHWARTZMAN, MD | Monday, June 6, 2016, 9:00 p.m.

It saddens me that many Americans appear to be comfortable with the notion that chronic disease is a rite of passage through middle age and beyond.

At present, most people over age 45 suffer from one or more of high blood pressure, high blood cholesterol, diabetes, arthritis, heart attack, angina, heart failure, stroke, atrial fibrillation, cancer, kidney insufficiency, lung insufficiency or dementia. Diseases such as these impart a heavy burden, but also are a harbinger of a more sinister problem — an accelerated path to frailty, defined by a declining ability to enjoy the things that make life worth living.

While those of us who survive long enough will eventually become frail, there is nothing innate to our biology that would predict it before the 10th decade of life. Yet frailty is typically observed at much earlier ages, and modern medicine allows most people in frail condition to live on for years.

It is increasingly clear that our “lifestyle” — behaviors regarding food, physical activity, sleep and peace of mind — exerts a powerful influence on the likelihood of chronic disease and the rate of progression to frailty.

Food is paramount, and today's eating and drinking habits are driving an epidemic of overweight, which facilitates chronic disease. In my opinion, present evidence points to a whole food, plant-based diet comprised of unadulterated fruits, vegetables, tubers, legumes, whole grains, nuts and seeds as most effective in warding off chronic disease while promoting a healthy body weight. Also crucial is a personal culture of physical activity, to include regular exercise as well as standing in lieu of sitting and walking in lieu of riding. Adequate and restful sleep is essential for health, given its role in bodily repair and replenishment. Peace of mind may be the greatest lifestyle challenge, given its multi-faceted nature which is unique to each person, and ways to achieve it may include addressing problems at work or with relationships, pursuing causes, or experimenting with faith, hobbies, behavioral counseling, medications, meditation and yoga, among others.

Despite a compelling body of evidence which correlates optimal lifestyle with disease — resistant aging and delayed frailty, it is rarely practiced by people who have yet to be diagnosed with a chronic disease. This is regrettable, as preventing disease is far easier than reversing it. Shockingly though, the situation is similar among people who do have one or more chronic diseases, even though lifestyle optimization can do as much or more to ameliorate disease as medicines or surgery.

In my experience, few physicians adequately inform their affected patients of the imperative for lifestyle optimization as the bedrock of any chronic disease management strategy. Most have never received training in lifestyle medicine, and remain unaware or unconvinced as to its feasibility, efficacy or sustainability. Even among believers, time, resources and incentives are inadequate in current practice

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settings to teach these skills to patients, and to facilitate long-term adherence. The infrastructure required to do this well is substantial, and largely unsupported by insurance. Neither are patients at present adequately incentivized to defend themselves, an onerous fact in our current culture which strongly promotes chronic diseases.

Nonetheless, we physicians must endeavor to integrate lifestyle optimization into chronic disease care. We must empower patients by emphasizing that their choices will strongly influence how they will fare, and is essential to minimizing and optimizing responses to medicines or surgeries which we might recommend. We must agitate for care delivery models that effectively teach and incentivize lifestyle optimization. We must walk the talk by adopting the lifestyles we are espousing, and communicate that fact to our patients. We must make it clear that we anticipate their compliance in the spirit of partnership, and keep it front and center in our conversations. We must take every opportunity to define and promote a culture of optimal lifestyle in our communities.

Although the present era is witnessing an erosion of trust in authority figures, physicians still occupy a bully pulpit. If we do not utilize this privilege, we are risking our stewardship of the health of our communities.

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<http://triblive.com/news/healthnow/perspectives/10499606-74/disease-chronic-lifestyle>

WHAT IS IT ALL ABOUT?

For thousands of years, it was thought that Earth was the center of the universe, with everything rotating around it – the Sun, moon, planets, and stars. It was not until the 16th century that this concept was challenged, and over the ensuing decades tossed into the dustbin of history. Unfortunately, American medicine, which suffers from the same illusion, has yet to be challenged. The current concept of the average doctor is that “health” may be defined as the absence of a definable disease. However, the absence of disease is but one aspect of health, which should more appropriately be termed “wellness.” After Milton Seligman, wellness may be thought of as the sum of a number of different aspects of the human experience:

- Emotions: whether positive (eg. joy, optimism, contentment) or negative (eg. anxiety, anger, sadness), emotions are a crucial determinant of the human experience. Wellness is correlated with maximizing the positive while minimizing the negative.

- Engagement: being absorbed, interested, and involved in an activity and/or in the world itself. The term “flow” refers to being so completely absorbed in an activity that you lose track of time. Assuming the activity brings no harm to others, flow is a good thing.

- Relationships: refers to feeling loved, supported, and valued by others. Having positive relationships with others is an important part of life feeling good and going well. Other people matter! Involvement in one’s life of meaningful and supportive human (family, friends, faith groups, clubs, etc) and non-human (pets) connections. More is better.

- Meaning: refers to having a sense of purpose in life, a direction where life is going, feeling that life is valuable and worth living, or connecting to something greater than ourselves, such as religious faith, a charity or a personally meaningful goal. Meaning provides a sense that life matters.

- Accomplishment: this involves working toward and reaching goals, achieving mastery, feeling able to complete tasks and daily responsibilities.

- Health: although we doctors like to believe that we understand what health (never mind wellness) is, in truth we all carry diseases of which we are unaware. Although some of these diseases are worth becoming aware of and treating, many are not. Part of the problem with our current “health care” system is the ability of technology to bring to light things that are not worth knowing, which then deflect attention from things that are. Given that the more important things are often not within the expertise/interest/time envelope of the average doctor, they are not addressed. In this way, “health care” may actually be harmful. In my mind, health is best defined by a sense of vitality coupled with the ability to move physically in the world as to achieve one’s goals, and the role of the doctor should be to assist his/her patient in defending these.

Taken together, how one navigates these various aspects of the human experience will determine how long it will be until you become frail. As will be discussed below, we are all on the road to frailty, and your focus should be on delaying it. As you can see from the above, the role of the doctor in this effort is limited. Please keep this in mind as you read on.

A. INTRODUCTION

The workings of the body are far more complicated than any physician can know, and we are not provided with crystal balls when we graduate from medical school. I have come to understand that the patients who do the best understand that they are the ones who know their bodies best – far more than any physician. They see the role of the physician as a person who has knowhow which can extend their own via education, advice and, when reasonable, tools and techniques within their expertise to achieve the ultimate goal of “health care,” which is prevention of frailty.

If you are reading this, then you or someone you love has been diagnosed with a “chronic” disease. Such diseases are so named because they are commonly thought to be incurable, thus requiring lifelong treatment (this is not necessarily true – read on!). Examples of chronic diseases include high blood pressure, diabetes, high cholesterol, atrial fibrillation, coronary artery disease, angina, heart attack, stroke, dementia, sleep apnea, gout, arthritis, kidney insufficiency, lung insufficiency, erectile dysfunction, and cancer. This “manual” is written with the hope that it will empower you. In my experience, it is all too common that patients, particularly those with more than one chronic disease, are disempowered by the fact that they are poorly educated as to why they developed the disease(s), what the implications of the disease is, and what they can do to treat/reverse/prevent such disease. Truth be told, empowering you will make my life a lot easier while making me look better, so please pay attention!

For most people, chronic diseases are caused or worsened by deficiencies in one or more elements of “lifestyle.” This term refers to personal behaviors or habits, which for the purposes of this manual I will separate into seven areas:

1. The Easy Stuff
2. Food and Drink Quality
3. Fitness
4. Sleep
5. Peace of Mind
6. Tobacco or Nicotine
7. Alcohol

Addressing each of these “SIMPLE 7” areas creates a foundation upon which a strategy for addressing any chronic disease must be based. Just as a house built on a poor foundation may collapse, so too may the outcomes of the tools and techniques which any physician may offer. Again, these are personal behaviors and habits, not medicines, procedures or surgeries. Thus the title of this primer: self-defense.

Note that, where appropriate, your BHS Electrophysiology care providers will provide materials in addition to this, which are “deeper dives” into the various topics touched on in this primer.

B. UNDERSTANDING CHRONIC DISEASE

Any chronic disease has three stories to tell:

1. Why do I have a chronic disease?

Many people believe that chronic disease is inevitable as they grow older, but this is not true. Another common belief is that it is “in my genes.” While this is true, to varying degrees among different people, genes do not guarantee that a disease will occur. Rather, it is the interaction of genes with lifestyle that make disease happen (“genes may load the gun, but it is lifestyle that pulls the trigger”). Just as a loaded gun will not fire by itself, disease is not inevitable regardless of your genes. This is great news, because you cannot alter your genes (but you can alter your lifestyle).

It is not an exaggeration to say that most chronic diseases are caused solely or partly by deficiencies in one or more of the SIMPLE 7. Therefore, if you are interested in not developing a chronic disease, lifestyle optimization is crucial. This is important, because avoiding chronic disease is far easier than reversing or treating one.

2. What does my having a chronic disease imply?

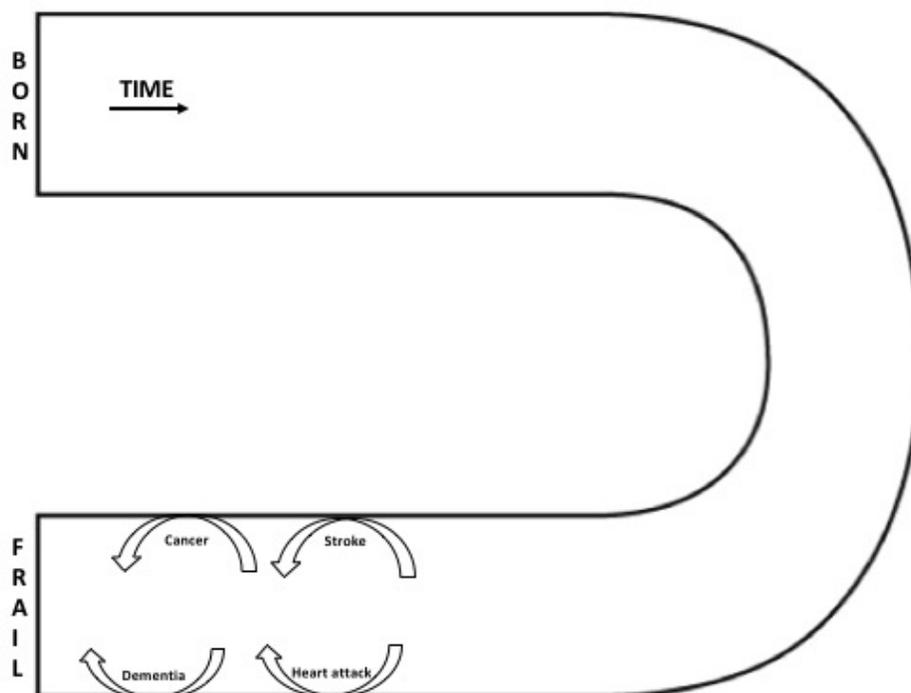
From the day we are born, we are all on a “road” which ends in frailty:



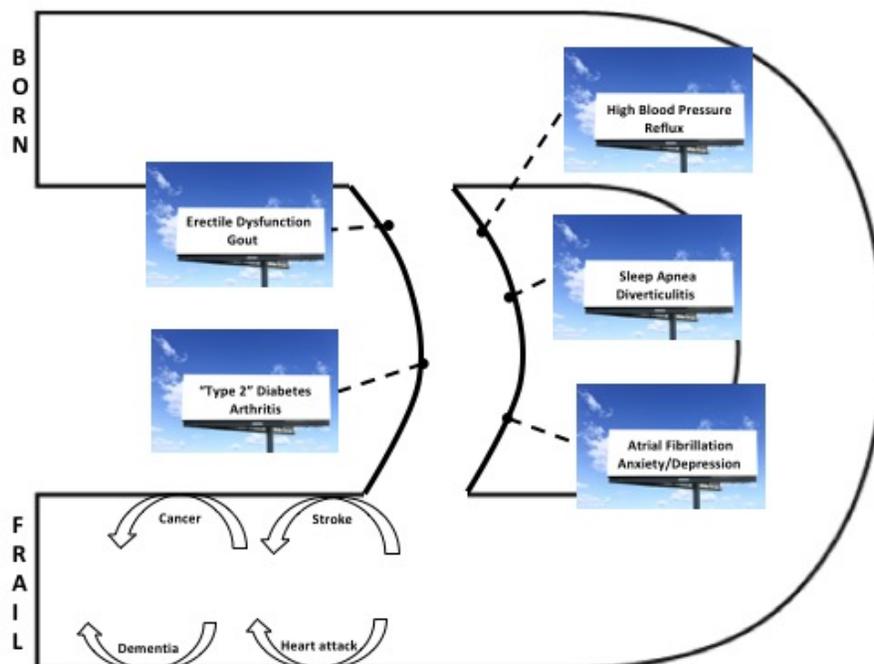
Although the definition of frailty is hard to define in words, we each know it when we see it. We all know or see people about whom we think to ourselves “gee, their life cannot be very much fun.” For the sake of conversation, I like to define frailty as the inability to enjoy the things that make life worth living. Why all humans progress to frailty is as yet unknown, but if it makes you feel any better it is a phenomenon which takes place across the animal kingdom. It is important to understand that, with rare exception, frailty is terminal – that is, once you reach frailty, you will typically be frail until you die.

From my professional and personal perspectives, among the worst things that can happen to a person is to become frail well before you die. Modern medicine is all too capable at making this happen. By delaying frailty, addressing each of the SIMPLE 7 is the only way known to shorten the period of time between the onset of frailty and death.

Regarding the *implication* of chronic diseases, the following figure demonstrating the “road” between birth and frailty on which we all travel, in which life-altering (potentially, but not typically, ending) diseases may occur in the latter years of life:



Chronic diseases can be considered “billboards” that are often seen on a *shortcut* in this road, as follows:



More often than not, the development of chronic disease, particularly before the age of 70 years, implies that the affected person is “taking the shortcut,” that is, shortening their time to frailty. Note that these billboards are not the shortcut road itself, rather indicators that the affected person is on that road. This is a crucial concept, because it means that even if you knock down the billboard, such as may be achieved with medicines, procedures, or surgeries, it does not mean that you are off the road. As the figure implies, and just as you would typically expect to have opportunity to look at more than one billboard as you are driving down a highway, you can typically expect to develop more than one chronic disease if you stay on the shortcut road. Based on what is currently known to medical science, the way to stay off/get off the shortcut road is to do your best with the SIMPLE 7. The closer you get to “perfect,” the better chance you will have to stay off this road.

3. How can I treat or cure my chronic disease?

To understand the best way to address a chronic disease, think of it as you would your house, as follows:



If your foundation is poor, then you are in trouble:



Just as a poor foundation of your home predicts future issues and costs, such as plumbing, electrical, and structural, poor lifestyle predicts additional diseases, more doctor visits, more hospitalizations, more medicines and surgeries, higher out of pocket costs, and diminished life quality.

There is good news and bad news to this fact. The good news is that you have a major, even dominant, role to play in the treatment of any chronic disease (as apart to passively allowing your doctor(s) to go about his/her business). This should empower you, and help to prevent the feelings of loss of control or helplessness that many patients with chronic diseases have. The truth is that chronic disease treatment should be viewed as a collaboration between yourself and your health care provider(s). The bad news is that you may have to make changes in your lifestyle, which can be difficult to say the least! However, any collaboration will fail if one of the parties does not participate in good faith and to the best of their ability. If there is a “silver lining” to chronic disease, it is as a motivator to get you to optimize the SIMPLE 7.

C. ABOUT “SELF-MONITORING”

It is important to monitor yourself, in particular once you are older than 50 years, as nobody can or will do a better job. Here are the measurements I would recommend you perform, write down (with dates), and review with your health care providers at each visit. It is best to keep all of these in a single place, for simplicity as well as to provide clues as to how different issues may be interacting (examples include blood pressure rising as body weight rises, and body weight rising in the months after starting a new medicine):

1. Weight: weigh yourself on your home scale, naked. Do this weekly. If this measurement is rising continuously over time, it is almost always undesirable.
2. Waist circumference: use a tape measure. Start the top of your hip bone, then bring the tape measure all the way around, level with your belly button. Make sure the tape measure is straight and not tight. Do not hold your breath while doing this. Do this monthly. If this measurement is over 35 (women) or 40 (men) inches, this is not a good thing. If this number is rising over time, this is also not a good thing.
3. Blood pressure: you may do this with a system which you can purchase for the home, or at a department store or pharmacy. Measure when you are at rest. Less important than any one measurement is the pattern of measurements over time. As a generality, less than 135 on the high number (“systolic pressure”) and less than 85 on the low number (“diastolic pressure”) should be the goal. However, due to personal variations, age, gender, and medical conditions, certain people will be better served by different goals. It is important to discuss your specific goal with your physician. Measure your blood pressure monthly, unless instructed otherwise.
4. Medicines: keep a record of every pill, liquid, inhaler or potion (apart from food or drink) that you use. This includes things you need a prescription to get, as well as things that you don’t. Get into the habit of bringing the packages (eg. pill bottles, powder bags) with you when you come to your health care provider office, a “medi-quick,” an emergency room, or a hospital.
5. Surgeries or tests: keep a record of the dates and sites of any surgeries or tests (eg. stress test, colonoscopy, etc). Bring these with you when you come to see any health care provider.
6. Diagnoses: keep a list of diagnoses which you have been given by any health care provider. Also, keep a list of the names of each of the providers you are (have) working with.

D. ABOUT BODY WEIGHT

Body weight is a very sensitive issue, in no small part given that our popular culture promotes an unrealistic expectation of body weight and proportions (especially for girls and younger women), while at the same time our food culture promotes ready access to poor quality food. That said, being overweight is very common in our country, and this condition appears to promote the development of many chronic diseases. The body weight that an individual person

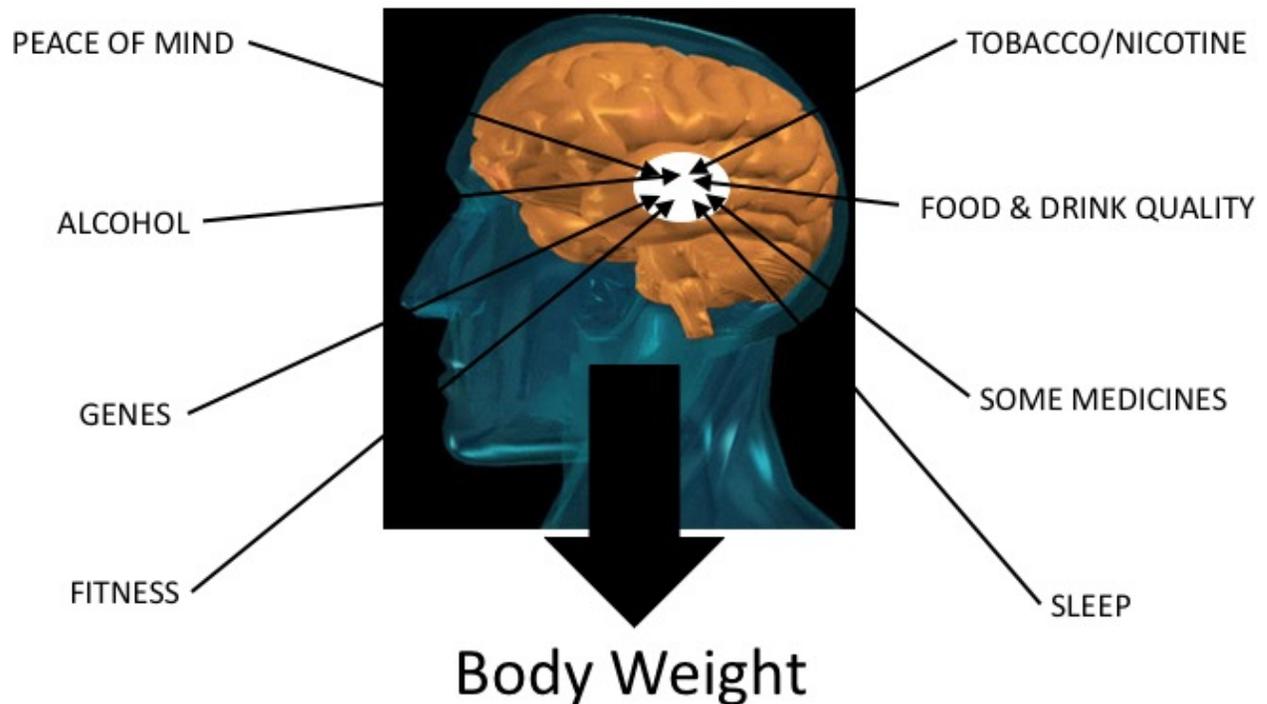
maintains is complex, and if high is typically not the result of “gluttony or sloth,” as is commonly thought. Body weight changes over time are primarily due to alterations in the amount of fat which is stored under the skin (mainly legs and buttocks), within the abdomen, or in/around many body organs. Sites where a given body prefers to store fat are mostly determined genetically. Note that, with regard to chronic disease, some areas of fat storage are worse than others. For some reason, a particularly “bad” storage site is within the abdomen, which is why weight alone does not provide adequate information to determine weight-related risk of disease. It is for this reason that I also recommend self-monitoring of waist circumference, which provides a measurement of abdominal fat which is independent of body weight. It is also why those who are able to significantly decrease their waist circumference experience a health benefit even when they do not lose much weight.

Health care providers who promote the simplistic notions of “calories in, calories out,” and “eat less, exercise more” do patients a disservice. This notion sets the stage for weight cycling, also called “yoyo-ing,” in which weight loss is followed by eventual re-gain to the previous, or even higher, weight. This sequence is well known to many who have tried to lose weight, and is due to a basic misunderstanding of how body weight is determined (below). It is also a serious problem, due to the fact that weight cycling is actually less healthy than remaining at a stable unhealthy high weight. For example, among women who cycle (even if they spend a great deal of time at the lower weight), their incidence of heart attack or death is higher than those who never tried to lose weight. Why this is is not clear, but it demands that an individual’s strategy for weight loss be one in which cycling does not occur – also known as sustainable (below).

Truth be told, most health care providers have received minimal education in the science of body weight. To better understand the complexities of weight regulation, it is useful to start with a thought experiment: even though the average person takes in a widely varying number of calories on a day to day basis, his/her weight remains approximately the same over long periods of time. How can this be? Here is how: in the brain are regions (bunches of nerves which work together) which “decide” where the body weight needs to be. By “need” I mean the weight that the brain feels is safe for that person at that time. Note that this is true whether the person is rail thin or obese. The brain is not aware that it is physically burdening the person who must carry the weight, nor that it is potentially putting the body at risk for damage due to development of chronic disease. It is simply doing what it believes to be safe given the data that it is receiving. It will go to great lengths to defend against the body falling below this “set” weight, and it has many tools in its arsenal to do so, including making you hungry, decreasing your desire to move, decreasing your involuntary movements (example: fidgeting), altering your body temperature regulation (example: making you feel cold all the time), and making you more efficient (example: an activity which previously required 10 calories now requires only 1 calorie). Unfortunately, and for reasons not yet well understood, the body is much more permissive in allowing the set weight to drift upwards, which is why it is typical in this country (although not

natural, pre-destined, nor healthy), for body weight to rise steadily with age. This is also why the typical experience of those who try to sustainably lose weight (which is a key if avoidance or reversal of chronic disease is the goal) by following “eat less, exercise more” is failure. In addition to causing frustration and disempowerment, the non-sustained weight loss provides no medical benefit, or possibly harm. Note that this does not deter the various for-profit companies selling the “3 P’s” (pills, potions, or paradigms), though these companies are well aware that sustainability is rarely achieved.

The figure below provides a framework for you to understand the various inputs your brain uses to determine body set weight:



These inputs are independent of one another, and all are important. The reason (more likely reasons) for the importance of each are not yet clear. Only one of them, your genes, cannot be altered directly. Using this framework, you can see how you might design your own strategy to convince your brain to become comfortable with a lower set weight. The more you optimize the inputs, the more weight you will likely lose, without feeling miserable, and that loss should be sustainable as long as you sustain the inputs. Note that nowhere here do you see “calories in, calories out,” or “eat more, exercise less.” An overview of how to optimize each of the inputs will be presented below.

Although you have the power to lower your set weight, it is important not to have unrealistic expectations, lest you be disappointed. If you are overweight, your weight will come down significantly, and you will feel better as a result. However, it will not likely be as much as

you had hoped. The brain is tenacious at holding onto weight it previously thought safe, even if you do change the inputs. This is why it is much easier not to gain weight than to lose it. I worry less about the weight than about the inputs though, for two reasons. First, the fat that is lost comes mostly from the “bad” areas, so even a small amount of weight loss can produce a large impact on preventing/reversing/treating chronic disease. Second, with inputs optimized, people who remain overweight have chronic disease prevention/reversal/treatment outcomes similar to those who are not overweight.

Note that for a small segment of those who are severely overweight, even input optimization will be insufficient to resolve the burden of “bad” fat, and surgery to achieve weight loss, called bariatric surgery, will need to be considered. There are actually several different kinds of bariatric surgery, and the details of these are beyond the discussion of this primer. However, even for those who do undergo bariatric surgery, input optimization is also critical or the surgery will not achieve sustained results.

If you want to learn more about the science of body weight, two excellent books to start with are ALWAYS HUNGRY?, by David Ludwig, and “WHY DIETS MAKE US FAT,” by Sandra Aamodt.

E. SOME NOTES ON LEGACY

That which you leave behind may also provide motivation for you. First, whether we are talking about children or grandchildren, you are being watched. Just like any other species, human children model their behaviors based on what they see those who they consider authority figures (and heroes) doing. This is why advertising to children is so effective. Your actions are thus crucial in this regard, and this very much pertains to lifestyle. Once ingrained, learned behaviors are hard to unlearn. Second, most potentially life-altering or life-ending diseases have a “gestation” period, which means that they take time, typically tens of years, to manifest. Therefore, the processes which result in heart attack, cancer, stroke and dementia typically begin during young adulthood or even childhood, and progress silently for many years. This is why our common conception that the young are immune to the effects of poor lifestyle is so wrong. As a matter of fact, and similar to investing, the earlier lifestyle optimization is achieved, the greater the disease-resistance dividends. Third, although our children inherit our genes, and genes have an important role to play in determining susceptibility to various diseases, this role is malleable. We are only beginning to understand this phenomenon, an area of life science called “epigenetics.” For example, when a woman whose lifestyle is poor becomes pregnant, the uterine environment in which the fetus develops causes it to alter the *functions* of its genes without changing their *structure*. These functional alterations are permanent, and predispose the child to the development of diseases during his/her lifetime which the structure of his/her genes would not have predicted. If female, this child will in turn pass this predisposition to her offspring. As you can see, such a phenomenon could cause the incidence of disease to grow rapidly within families and communities in just a few generations. This is what is likely driving the epidemic of

overweight/obesity being observed in this country.

So, in many ways, big and small, your lifestyle choices impact the health and wellness of family members who will outlive you, possibly for many generations.

F. THE SIMPLE 7

1. The Easy Stuff

Best to start slow! These items can be placed under the heading “if you are stupid, then you will suffer:”

- **Seat belts:** motor vehicle accidents harm a large number of people each year, and those with chronic diseases are at particular risk because they have a decreased capacity to heal. Seat belts have been shown to protect.
- **Vaccinations:** these are gifts from heaven, and you’ll be placing yourself at unnecessary risk, particularly if you have chronic disease, if you miss them without a good reason. Vaccinations are available for flu, tetanus/diphtheria/pertussis, varicella, zoster (shingles), measles/mumps/rubella (if born after 1957), pneumococcus, and hepatitis. Query your primary care physician as to your status, and make sure you stay up to date.
- **Use of cell phone while driving:** we are all aware of the perils of texting or emailing while driving, but it is clear that any use of a mobile phone while operating a vehicle places you at risk for accident due to the limited ability of your brain to multitask. “Multitasking” of this sort also places considerable stress on your brain, which in turn does harm to other organs.
- **Cancer screening:** there are several types of cancer which, depending on your age, gender and family history, may be worth detecting. It is important that you discuss the pros and cons of any screening test with your primary care physician.
- **Medicines management:** all too commonly, people harm themselves due to mistakes they make with their pills and potions. Follow these rules:
 - Keep with you an accurate recording of ALL pills and potions you are taking, and be sure that the record kept by each of your health care providers is also accurate. Review it at each visit.
 - Know why you are taking a given medication, how to take it, and its common side effects.
 - Take a prescribed drug in the way it is prescribed.
 - Understand that an over the counter item (“supplement”) may interact with a prescription item. Check with the prescribing provider before starting anything new.
 - If a provider other than your PCP adds a new prescription, run it past your PCPs office before filling it.
 - As noted above, certain medications can impact your brain as to push it to increase your set weight. If you detect weight gain in the months after starting a new medication, review this issue with the prescribing physician. New information such as this could change the risk versus

benefit calculation of using the medication, or there may be a substitute which does not have this effect.

2. Food and Drink Quality

This section assumes that you have no special medical issues which will make some of the following suggestions impossible, or even dangerous. If you decide change your lifestyle as to incorporate these suggestions, please check with your primary care provider before you do. This will ensure that such a change is safe and allow s/he to anticipate changes in your care which may become necessary (like fewer medicines and/or lower doses!).

In addition to being fuel, food is medicine, plain and simple. Your gut is by far the largest “portal” between your body and the outside world – ten times larger than your skin! The quality of your food with thus have a large influence on the inner working of your organs, blood vessels, nerves, etc. In addition, and as touched on in the previous section, it is becoming clear to us that specific food/drink choices influence the brain to either burn fuel or save fuel – regardless, to some degree – of the number of calories in the fuel. Based on what I have learned, these are the guidelines to use if you are interested in optimizing food/drink:

- Eat only “whole” foods, defined as food as grown or in their natural state. This means minimizing processed foods. Food processing is the art of turning whole food into something less nutritious, possibly better looking, and certainly more expensive. Large corporations and armies of very smart food chemists toil to make their products tasty, and their marketing people try to convince you that the products are delicious and nutritious. Your health be damned (not their problem). Processed foods are easy to locate in the super market, using the following rules:

- You don’t recognize them as having come directly from the ground or off a bush/tree/etc.

- They are often in a box/bag, and can be kept in a closet/refrigerator for long periods of time.

- The label has three or more ingredients, and you often can’t easily pronounce at least one of them.

This means that the vast majority of the food choices in your super market are processed. Welcome to capitalism.

- Eat mostly plants: this group includes whole fruit, whole vegetables, whole grains, nuts and seeds. This is a vast world of food choices, but unfortunately ones which food processors can/will use in their products to the exclusion of more evil substances.

- Minimize (optimally eliminate) meat, including those derived from cow, pig, sheep, goat, chicken, turkey, or fish.

- Minimize (optimally eliminate) dairy, including cow milk, eggs, and cheese.

- Minimize food/drink with added sugar (and don’t add it yourself). A common source of

confusion here is that many foods, in particular fruits, naturally contain sugar. In such foods, the “package” that the sugar is contained in neutralizes its harm. This is not true of food/drink to which sugar is added. As with the devil, sugar goes by many names. The chart below provides an incomplete list of names to look for when you are reading food labels, which you should do (assuming the food you are interested needs a label – whole foods often do not).

Agave nectar	Erythritol	Lactose
Barley malt	Ethyl maltol	Malt
Beet Sugar	Fructose	Malt syrup
Brown sugar	Fruit juice	Maltitol
Buttered syrup	Fruit juice concentrate	Maltodextrin
Cane juice	Galactose	Maltose
Cane juice crystals	Glucose	Mannitol
Cane sugar	Glucose solids	Maple syrup
Caramel	Golden sugar	Molasses
Carob	Golden syrup	Raw sugar
Carob syrup	Granulated sugar	Refiner’s syrup
Confectioner’s sugar	Grape sugar	Sorbitol
Corn syrup	High fructose corn syrup (HFCS)	Sorghum
Corn syrup solids	Honey	Sorghum syrup
Date sugar	Hydrogenated starch hydrolysate	Sucrose
Dextran	Invert sugar	Turbinado sugar
Dextrose	Isomalt	Xylitol
Diatase	Lactitol	Yellow sugar
Diastatic malt	Lactose	

You will find these chemicals very commonly on the labels of many processed foods. Among other reasons, food chemists have come to understand that humans love sweetness, and sweetness makes that “heart healthy” cereal go down more easily. This brings up an important point, which is how your taste buds work. Taste buds are located in and about your tongue and nose, and sense chemicals in food/drink. They send signals to the brain, which the brain interprets along a spectrum ranging from “awesome” to “awful.” This sensing system is not written in stone – rather, it can be changed. In the typical American diet, the awesome/awful sensing system has become used to substances packed full of sugar and salt, so that whole foods will initially taste bland. This is where patience and faith come in, as they do for breaking any addiction. Over the course of several weeks, the awesome/awful system will alter itself in a direction which will begin to sense to the many wonderful flavors contained in a whole food, plant-based diet. So much so that, if you were to go back to typical American food, it would taste harsh.

If you want to learn more, including practical plans for moving in the direction of optimizing food/drink, two excellent books are *THE FORKS OVER KNIVES PLAN*, by Alona Pulde and Matthew Lederman, and *THE 21-DAY WEIGHT LOSS KICKSTART*, by Neal Barnard. If you want to understand how and why added sugar is toxic, an excellent book is *THE CASE AGAINST SUGAR*, by Gary Taubes.

3. Fitness

This section assumes that you have no special medical issues which will make some of the following suggestions impossible, or even dangerous. If you decide to change your lifestyle as to incorporate these suggestions, please check with your primary provider before you do.

There is something magical about physical fitness, which medical science is only beginning to understand. For whatever reason, and very much like food, fitness has a beneficial impact on the inner working of your organs, blood vessels, nerves, etc. Fitness is achieved through physical exercise, which I define as any activity during which you are moving constantly. Examples include walking (outdoors or treadmill), elliptical machine, bicycle, swimming, and rowing. I aim for a daily regimen, not necessarily the same thing every day, in which the activity lasts for at least 30 minutes. Duration matters more than intensity. There should never be pain, do not exercise in environments at temperature extremes or which expose you to injury (for example, icy/wet pavement).

If you want to learn more, an excellent place to start is THE EXERCISE CURE, by Jordan Metzl and Andrew Heffernan.

4. Sleep

When an activity is conserved across the animal kingdom, as sleep is, you know it is important. Sleep occupies a large period of our lives. During sleep, your brain conducts what can be thought of as “self-cleaning,” which is needed to allow it to work efficiently during awake periods. When sleep is out of whack, self-cleaning is incomplete, and the brain gets upset. You do not want your brain to be upset. As for creating mischief if you challenge your set weight (above), the brain has a vast arsenal for expressing its unhappiness. Many things in this arsenal can do damage to your organs, blood vessels, nerves, etc. – especially if the sleep problem is chronic.

If you want to learn more, an excellent place to start is SLEEP FOR SUCCESS, by James Maas.

5. Peace of Mind

As when sleep is out of whack, when your mind is not at peace, at least for parts of each day, your brain gets upset (and you know what that means). In my own experience, peace of mind has been by far the most challenging of the SIMPLE 7. The term conjurs up different things for each of us, and in my practice I do not try to define it. What I do do is introduce items which, in combination, may be of importance in solving the “puzzle” of peace of mind. This is certainly not an exhaustive list, but the solved puzzle will likely include some of the following:

- Quality of relationships (family, friends, coworkers)
- Purpose, including job or cause engagement and satisfaction
- Faith

- Sex
- Hobbies
- Physical fitness
- Meditation
- Behavioral counseling
- Yoga, tai chi, quigong, massage
- Medication
- Massage therapy
- Travel
- Chiropractic
- Acupuncture

Note that the puzzle is dynamic – that is, it will change as you age and your circumstances change. Therefore, there is need for constant vigilance.

If you want to learn more about thinking about and achieving peace, two excellent places to start are *FULL CATASTROPHE LIVING*, by Jon Kabat-Zinn, and *ITS EASIER THAN YOU THINK*, by Sylvia Boorstein.

6. Tobacco and nicotine

Whether it be smoked (including “vaping”) or chewed, tobacco and nicotine do direct damage to organs, blood vessels, and nerves. Therefore, it is crucial that you get away from this, as fast as you can. Given that it is an addiction, no different than heroin, it is typically very difficult to get off. The act of getting off will act to destabilize the other 6 of the SIMPLE 7, so you will have to be prepared. As for peace of mind, getting rid of tobacco and nicotine is a puzzle to be solved by each individual, which may include one or more of the following:

- Behavioral counseling
- Medication
- Meditation
- Hypnosis
- Support of family/friends/congregation

You should not attempt to do this alone or without educating yourself first. Butler Health System and your health insurance company have resources to help. Your primary care provider will be well aware of these. In addition, the state provides a resource called The Pennsylvania Free Quitline (phone number 1-

800-QUITNOW), where counselors are available any time, day or night, and can assist with connecting you with resources near to your home.

7. Alcohol

There is some information that certain alcoholic beverages, such as red wine, may be beneficial when consumed in moderation. However, the benefit is modest at best, and of minimal importance relative to the other 6 of the SIMPLE 7. It should not surprise you that spirit manufacturers have taken this small benefit and run with it in their advertising campaigns.

As a generality, consumption of alcoholic beverages should be looked at as guilty pleasure, and thus done as infrequently as possible. Best to avoid high-proof spirits and not exceed two glasses of wine/beer per day.

G. FREQUENTLY ASKED QUESTIONS

1. What about caffeine?

Caffeine is a drug which we consider a stimulant. It is commonly found in coffee, tea, and soft drinks, but elsewhere as well (check the label). As a generality, it is not considered a danger.

2. What about sex?

As noted before, sexual activity is an important element of life quality for many people, and if so should be encouraged. If you are exercising regularly, it is rare that sexual activity would be inadvisable. Men or women may experience problems when it comes to sexual activity, including lack of desire, inability to perform, or pain. It is important to recognize that these are not normal, and may be associated with foundational elements, disease processes, or prescription medications. You should not be shy about discussing your situation with your care providers.

3. What about “supplements”?

These include vitamins, minerals, herbs, probiotics, oils, powders and other assorted potions, all of which you can purchase without a prescription. It is important to understand that these substances are largely unregulated by the government, which give manufacturers broad scope as to what they put in the bottle, can, or bag. For example, recent reports have demonstrated that certain supplements contain things other than those on the label. In addition, the vast majority of supplements have never been tested scientifically as to whether they may do harm or whether they have any benefit. Finally, we are increasingly aware of harmful interactions between prescription medicines and supplements – but again, our current awareness is likely only the tip of the iceberg. For these reasons, as a generality I do not recommend supplements – you certainly do not need them if your diet is whole food, plant-based. However, you should understand that there are certain circumstances in which a particular supplement will be useful in protecting your health. You should be sure that you bring the containers of any supplements you are taking with you to all of your physician visits, and be prepared to discuss the pros and cons of each. If you are considering a new supplement, discuss this with your physician in advance.

4. What about “artificial sweeteners”?

Gave that I am advising you to avoid foods to which sugar is added, this is an important question. These are considered to be substitutes for sugar, given that they cause the brain to perceive sweetness. They include acesulfame potassium (Sunett®, Sweet One®),

aspartame (Equal®, NutraSweet®), saccharin (SugarTwin®, Sweet N' Low®, NectaSweet®), sucralose (Splenda®), stevia extracts (PureVia®, Truvia®), and tagatose (Naturlose®). Their attractiveness is based on the fact that they add few calories, and because they are many times sweeter than sugar, you need only a fraction of the amount to get your sweetness “fix.” I am suspicious of these chemicals, for three reasons:

a. They are often used in foods which have been processed to taste good, but in addition to the artificial sweeteners contain items known to be harmful. Thus, as often as not, artificial sweeteners are a marker for foods that you'd do well to avoid.

b. Although most have been “generally recognized as safe” by the federal government, this definition is typically murky and poorly defined.

c. I am concerned that, despite the lack of calories, these chemicals cause the brain to respond in a way similar to as if you had eaten sugar. The science here not clear and so should be considered a work in progress, but my feeling is that when it comes to chemicals (“food” or otherwise) which are not found in nature (and therefore unfamiliar to our bodies), they are guilty until proven innocent, which these chemicals certainly have not as yet.

5. What about salt (sodium)?

The typical American diet contains more salt than is necessary or healthy. Sodium is the active ingredient in salt that you need to be concerned about. Much of this comes from processed foods (see above). In addition to avoiding such foods, I would recommend that you do not add salt to your food. Instead, try experimenting with flavorful herbs and spices, including garlic/garlic powder, lemon juice, flavored vinegar, salt-free herb blends, cumin, nutmeg, cinnamon, fresh ground pepper, tarragon, and oregano. Salt substitutes should, in general, be avoided. If you are going to use a salt substitute, check with your doctor first. You should become adept at reading food labels to see how much sodium is contained in the product you are considering. You should assume that any food that is prepared for you in a restaurant contains too much salt, given that among other things it prolongs the duration of servability. This one reason to limit your eating out frequency.