

DAVID A. KEKICH

MAXIMUM
LONGEVITY: ♦♦

VOL.1

EATING FOR A HEALTHIER YOU

Maximum Longevity: Eating for a Healthier You

Volume 1

David A. Kekich

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Nothing tastes as great as being healthy and fit feels.

“A Healthy Person Has 1000 Wishes. A Sick Person Has Only ONE”

We have identified 7 simple steps for you to take to thrive at 100... and beyond.
www.MaxLife.org

All seven steps are vital. If I were forced to pick one above all though, it would be Nutrition a.k.a Diet, edging out Exercise. However, this assumes you are at least moderately active, and it's only your starting point, not your endpoint. Exercise is more effective than most *standard* models of healthy diets.

Before you start your steps, you might want to determine your “biological age.” We all know our “chronological age.” That’s the number you give when asked how old you are. It’s the number of years since you were born. However, some of us age well, while others look and feel older than their chronological ages. You might swear a 50-year-old is no older than 40, while one of his or her classmates might look closer to 60. Genetics play a small part in the difference. Lifestyle habits are the big differentiator in our biological ages.

Want to know your biological age? Then go to <https://bioviva-science.com/collections/products> and click on “TimeKeeper.” Once you know your biological age, this volume and the six that follow should enable you to reverse it. Finish these volumes, put what you learn into practice, and get tested again. If you do that, I’ll bet you’ll shave years from your age.

Nutrition is critical, because the largest volume of chemicals to which your internal organs are exposed come from your food. The most powerful weapon you currently have for fighting the ravages of aging is a healthy diet.

A good diet lowers risk of death from all causes.

Some foods can be toxic, especially in the West. For millions of years, the balance between oxidants and antioxidants was pretty even. But starting about 10,000 years ago,

we got away from the Paleolithic, hunting-gathering diets that consisted of about 70% raw fruits and vegetables, started growing our food, and got away from eating a wide variety of raw foods. Then we gradually started cooking more and processing food as well. Cooking can destroy many vital nutrients, and overcooking can create carcinogens.

The U.S. government reports genetic mutations are responsible for an estimated 6,000 diseases, including all cancers. Researchers believe if this one factor were eliminated, humans would routinely live to 100 years and beyond. In fact, if every cell's DNA replaced itself perfectly during cell division, we would be more likely to reach a lifespan of approximately 120 years.

But they don't, thanks in part to the way we cook our food. Well-done, grilled, fried or barbecued meats instead of baking or stewing at moderate temperatures are mutating your genes. Eating poultry with skin does the same.

Key Points Regarding the Effects of Cooking on Food and Health

- ♦ Much of food's life force is greatly depleted or destroyed when it is overcooked. The bioelectrical energy field is altered and greatly depleted and has been graphically demonstrated with Kirlian photography.
- ♦ Fiber in plant foods is broken down into a soft, passive substance that loses its broom-like and magnetic cleansing quality in the intestines.
- ♦ Nutrients, like vitamins, minerals, and amino acids are depleted, destroyed, and altered. The degrees are simply a matter of temperature, cooking method, and time. For example, if you cook raw broccoli in the microwave, with a little water added to it, it can lose up to 97% of the antioxidant benefits that the food contained prior to being microwaved. If you steam broccoli, it will lose less than 11% of its nutrients.
- ♦ Up to 50% of the protein may be coagulated when cooked. Much of it may be rendered unusable.
- ♦ The interrelationship of nutrients is altered from its natural synergistic makeup.

- ♦ Overcooking creates unusable waste material, which has a cumulative congesting and clogging effect on your body and is a burden to the natural eliminative processes of your body.
- ♦ Many enzymes present in raw foods are destroyed at temperatures as low as 118 degrees Fahrenheit. Some of these enzymes are important for optimum digestion.
- ♦ Some raw food is more easily digested and may pass through the digestive tract in a half to a third of the time it takes for some cooked food.
- ♦ After eating some cooked foods there is a rush of white blood cells towards the digestive tract, leaving the rest of the body less protected by the immune system. From the point of view of the immune system, the body is being invaded by a foreign (toxic) substance when some cooked food is eaten.

And it goes on and on. In general, your aging process is accelerated by too much cooked food. People who lean toward raw food often become biologically and visibly younger.

MaxLife recommends you obtain a minimum of 30–50% of your food as uncooked. Vegetable juicing and a salad at lunch will easily put you at that volume.

The Downside of Raw Food

Many people with poor digestion don't handle raw foods or beans very well. The higher proportion of nutrients in raw food is useless if the food can't be digested, absorbed and assimilated.

Raw foods also have a higher percentage of bacteria and parasites, such as most commercial chicken and a good deal of beef and pork. Although some raw food is digested more efficiently, many vegetables, unless juiced, are harder to digest when raw. The phytates or anti-factors in grains also bind up minerals, making them unavailable to the human body, a probable reason why most grain has traditionally been fermented or sprouted rather than eaten raw or simply ground into flour.

Many beans and legumes, especially raw soybeans, lentils, black-eyed peas, peanuts, and mung beans, also contain trypsin inhibitors, which block key digestive enzymes. Trypsin is an enzyme that helps us digest protein.

Raw sprouts, green onions and lettuce may be sources of food-borne illness, so wash these and all raw foods thoroughly before you eat them. And raw (sprouted) kidney beans and rhubarb can be poisonous.

While cooking can destroy vitamins, it helps with the absorption of carotenoids such as beta-carotene and other nutrients. This is why most nutritionists recommend a mix of some cooked food with raw products.

So, there are tradeoffs in each case. Ultimately it comes down to each individual situation—and a matter of balance.

A great way to discover what works best for you is to read *Total Health Program*. It's much more than just a cookbook. This food and lifestyle guide recommends all the real, whole, healthiest foods—both lightly cooked and raw—from the right sources, in the right proportions, in a comprehensive program that is all about *balance*. You get key information, tools and recipes that let you access and identify your own personal metabolic type. It helps you learn how to listen to your body, to fine-tune your diet to the foods and macronutrient ratios, the ratios of fat, protein and carbohydrates that are precisely what you need.

Instead of thinking about raw foods versus cooked foods, focus on getting a balance of raw and cooked foods, depending upon the season, climate, your health, etc.

Some general cooking rules are to cook at low temperatures, lightly steam vegetables, stir fry when you fry, and poach your eggs. Also, use a pressure cooker for legumes, including beans, in order to efficiently break down lectins. Lectins are a family of proteins found in almost all foods, especially legumes and grains, and can be toxic. Cooking can easily get rid of them.

Tickle Your Taste Buds with Raw Foods

I understand how challenging maintaining a raw food diet can be. Let's face it, processed food is engineered to taste good. That's one reason it's so easy to get hooked on it. As far as taste goes, ice cream beats spinach hands down.

If you want to do anything regularly, it's got to taste or feel good. So, what's the easiest way to adhere to a largely raw foods diet? The answer is simple and enjoyable. Green smoothies.

"Greens are the only living thing in the world that can transform sunshine into the food that all creatures can consume," points out Victoria Boutenko. She goes on to explain in her book, *Green Smoothie Revolution*, that without green leaves, there would be no [complex] life on our planet. She also reminds us that greens contain all the essential minerals, vitamins except for B12, and amino acids that humans need for optimal health. And best of all, she discloses how to make the healthiest foods taste even better than the unhealthiest.

Integrate superfoods into your diet too. Superfoods are almost always eaten raw. They have a dozen or more unique properties, not just one or two. Superfoods can turn your health and your life around. They are nature's most perfect foods, and for the most part, are delicious. Learn more about them from David Wolfe's book, *Superfoods: The Food and Medicine of the Future*.

When a Value Meal Isn't

One day, my friend John Lustyan found himself driving by Whole Foods and feeling like a snack. He pulled in and spent 75 cents on a big, delicious, organic Fuji apple. Munching away on it, with the radio on in his car, he heard an all too familiar commercial for a 99-cent meal.

He said there was a time he might have thought: "Darn, I could've gotten a full meal for 24 cents more."

Knowing what he does today, he thought: "We've all bought the ingredients to make a taco or burger using real meat, lettuce, and cheese. We know how much it costs. Yet, this company pays for:

- ♦ The ingredients,
- ♦ Meal packaging,
- ♦ Trays, utensils, and napkins,
- ♦ Tables and chairs,

- ♦ Their cooks and servers,
- ♦ Cooking & refrigeration equipment,
- ♦ The restaurant rent,
- ♦ All their utilities and...
- ♦ Daily advertising in print, on TV and the radio, like he'd just heard."

So, he asked himself.. and hoped other listeners were doing the same: "What in the world are they doing with, and adding to, naturally wholesome food—making it worth so little—that they still make a profit by selling it at 99 cents?"

Processed Food

Processed food is enormously profitable. It is big business at its worst (and this is coming from a free-market enthusiast). When it comes to deciding who to believe, follow the money. The food giants spend billions on advertising to steer you toward their products and away from whole natural foods. Their lobbies spend small fortunes to influence your politicians as well. The result—Americans are the fattest society in history.

So, food can be a double-edged sword. With every bite, you either pay a price or reap a reward.

How poisonous is your diet? Did you know bad diets can do more damage to you than smoking (and smoking kills over half of all smokers)? Imagine how your life can come to a grinding halt once you suffer a serious stroke or get cancer. If you mentally classify processed foods as "poisons," instead of viewing dangerous foods as treats, visualize the damage done to your DNA with each bite. Eating sensibly reduces disease risk in people of all ages, so it's never too late to start eating well. My best advice is to regard many popular foods as poisons that will cause you unimaginable suffering and premature death.

You obviously need food to sustain, strengthen, and energize your body. Whether it enriches you or kills you is your decision. And you don't need to endure a painful diet for optimal health. This This volume is all about having a long full life while enjoying the ride. You can easily elevate your mind, body, and spirit because you *want* to take the steps, not because you have to. It's all a matter of learning a few basics.

Once you understand the difference between nourishment and deadly food cravings, your food choices will generally be healthy since you cherish your life and your looks. Rather than using food to extinguish cravings like you would a campfire, eat vibrant, raw living food to stoke your fire.

So, here's your exercise: Hesitate between your urge to eat and actually eating. Consider your rewards or consequences with each temptation. As your awareness grows, it won't take conscious thought at all. You will naturally and effortlessly gravitate toward life-enhancing food since we get uncomfortable when our actions conflict with our values. Eventually, you will be so used to running on high grade fuels that nothing else will satisfy you.

We tend to get away with a lot of things when we're young that we can't get away with as we age. The young typically get away with bad food, although kids are getting much worse now. They are now getting Type II diabetes. Millions of children are now affected. You never saw that twenty years ago.

So, what can we do about it?

Breakthrough Discovery – How to Stop Your Aging Now

I have a good friend, Dr. Michael Rose, who is a preeminent evolutionary biologist with thirty-three years of research under his belt. The specialty from which he has attained international acclaim is, you guessed it, longevity.

Recent years of his research were devoted to proving aging *cannot* be stopped. He finished that phase of his research early in 2010 and came to the surprising conclusion that... he was wrong. Yes, he says, according to his conclusions, aging *can* be stopped. And he draws on his lab's thousands of papers and calculations to support it from the standpoint of adaptation to our diets over millions of years.

The best part is Dr. Rose says you can stop your rate of degeneration right now, today. Anyone can. I believe this is a critical thing you can do for your longevity. For details, please see Dr. Rose's "55 Theses – A New Context for Health" at <https://55theses.org>.

Caloric Restriction

How *much* should you eat? Generally speaking, the less you eat, the healthier you'll be and probably, the longer you'll live.

Here's just one example of what overeating can do to you.

Eating too many calories at once overloads your bloodstream with fats and sugars long after your meal. That causes severe oxidative and inflammatory damage to your inner arterial walls. That's just one meal. Imagine the cumulative damage caused by chronically overeating. No wonder cardiovascular disease is our number one killer.

Of all the techniques that have been tried on mammals in an attempt to slow the process of aging and extend the maximum lifespan, the only one that works definitively in many mammals is caloric restriction. This technique has been used on mice, rats, and most recently monkeys. It consists of reducing the total number of calories ingested by an animal by 30%. This technique has resulted in an average of a 15% and as high as a 40% increase in the maximum lifespan of rodents. The monkey studies are conflicting regarding extending maximum lifespan but consistent when it comes to health and appearance.

The calorically restricted monkeys looked and acted younger. And most of them had healthier hearts and immune systems and lower rates of diabetes, and cancer and fewer age-related diseases than the control monkeys. That's true for humans who practice CR too.

There's more evidence that humans experience the same type of effects from caloric restriction as animals do. Okinawa natives eat about 40% fewer calories than Americans and live about 7% longer and are 75% more likely to retain their cognitive ability. Both animals and humans show lower blood glucose, lower cholesterol and decreased blood pressure while undergoing caloric restriction. These factors may be prime mechanisms of life extension in animals and could very possibly lead to slightly longer maximum lifespans in humans.

But we're endlessly inundated with temptations to eat unhealthy calories. You may enjoy the taste and convenience of refined sugar, saturated and modified fats, simple carbohydrates and processed foods, but your body is designed for something far different.

A study at Cornell confirmed people are powerless to resist overeating if foods are visible and convenient. Another study concluded specific changes occur in our brains when we're tempted with foods. That's one reason it can be so tough to eat healthy.

Like most of us, do you lack willpower? If so, simply keep junk food out of your house. Know this: People eat for entertainment, not for nutrition. When grocery shopping, shop on a full stomach to keep from being tempted by every junk food goodie on the shelves.

Do You Need to Starve Yourself?

Okay, so are we saying we should all go out and reduce our calories by 30%? Not necessarily. It's a tough way to live. I recommend about a 10% reduction in calories from the suggested number of calories for your optimum weight, gender age and activity level. That equates to about 2,000-2,400 calories a day on average for an adult instead of close to 3,000 calories consumed daily by most Americans (according to a USDA General Survey). So, for this example, you would reduce your intake by 200 calories or so.

You can get fast benefits once you start restricting calories, even up to late mid-age. Your benefits revert if you stop though. Do not reduce the number of calories you eat if you are over the age of seventy and close to your ideal weight, as elderly people have difficulty absorbing enough of their food as it is. If you are overweight, you should be reducing your caloric intake anyway.

If you are serious about proceeding with caloric restriction, we suggest you follow the advice of Dr. Roy Walford, one of the pioneers in this field. He wrote an excellent book on the subject, *The Anti-Aging Plan*. His website, www.walford.com, contains excellent diet software.

Reducing calories by 30% is a Spartan diet, it takes discipline to adhere to it, and there may be no more benefits than a 10% reduction would give you. One easier way to cut your calories is to simply use smaller plates and to keep the rest of the food out of sight. You can easily cut your calories by 20% this way without feeling deprived.

For convenience, you might want to forget about counting calories and simply focus on portions. Each portion of protein and carbohydrates at each meal should be about the size of your palm. Since fat is much denser, and since fewer calories should come

from fat in most cases, keep your portion to about one-quarter to one-third the size of your palm. Reduce those portions slightly for caloric restriction.

As Dr. Walford and others have pointed out, what type of food you eat is also important when practicing caloric restriction. You must still eat a fully nutritionally balanced meal. This means you should eat foods that are low in calories and high in essential vitamins, minerals and nutrients.

Does this mean you have to be a fanatic and give up some of your best pleasures of life? Not at all. It just means you should be aware of the consequences of overeating and of an unhealthy diet. If you're not able or willing to change your diet overnight, start with one day a week. Then two. Work your way up to five or six and indulge one or two days if you absolutely must. Otherwise, with the way science is charging forward, you may be eating yourself into missing the super longevity train.

When it comes to overeating and unhealthy diets, be aware of your choice between short-term gratification and long-term satisfaction, health and longevity. This means you should apply the same sensibilities to your health that you should apply to your job, business or finances.

Having said that there is light at the end of the tunnel for those who want the benefits of caloric restriction (CR) without cutting calories drastically. New supplements and drugs are being developed called CR mimetics. They send the same messages to your genes that cutting calories does. So, you could get the same benefits from these compounds as you get from eating less. Think of this as having your cake and eating it too.

Each bite of food contains hundreds or thousands of individual chemicals that affect a wide range of your bodily functions. Let's talk a bit about how carbohydrates, proteins and fats influence your body's biochemistry, so you have a better understanding of how your various foods affect you.

Carbohydrates

Carbohydrates are your main fuel source and are the most consumed nutrients in the world. They fall into three major categories: sugars, complex carbohydrates, and fiber.

Simply put, carbohydrates are fiber or non-fiber. Fiber is good for you, and non-fiber carbs are bad. When you eat a non-fiber carbohydrate, it turns into sugar.

Your body needs to break down the sugars into a simple sugar called glucose so your body can use it as fuel. Your body stores the glucose it doesn't use in a form called glycogen. When your blood glucose drops too low, glycogen is converted to more glucose. If you use up all your glycogen, your body starts breaking down your muscle tissue to get more glucose. Two major hormones that regulate this process are insulin and glucagon. When your blood sugar levels rise typically after you eat carbohydrates, insulin signals your body to store your excess glucose. Glucagon has the opposite duty. It signals your muscles and liver to convert glycogen back to glucose to dump back into your bloodstream. Diabetics have abnormally high blood glucose levels.

A high simple carbohydrate diet has been implicated as being a factor in heart disease, cancer, diabetes and a whole host of other problems. If you are on a low carbohydrate diet, be sure to supplement with at least thirty grams of a high-quality fiber.

The glycemic index is a measure of how much foods elevate blood sugar levels. Simple sugars have a high glycemic index. These are the foods that are most prone to triggering diabetes over time and increase your storage of body fat. Larger, more complex carbohydrates have a low glycemic index, because they cause a gradual increase in blood glucose levels.

To reduce your chances of diabetes and obesity, eat low glycemic foods like nuts, seeds, fruits and non-starchy vegetables. If you insist on eating grains, eat only whole grains (especially barley).

Stay away from high glycemic index and glycemic load foods such as sugar, white bread, cookies, cakes, candy, soft drinks and jams. Freshly ground cinnamon can reduce the glycemic index of a meal by up to 29%. Take up to four grams with any given meal (about 1.5 teaspoons) to lower your blood glucose as well as your LDL cholesterol and triglycerides. Since it could have a blood thinning effect, limit your consumption to four grams a day.

But there's more to the story than glycemic index. The glycemic index compares the potential of foods containing the same amount of carbohydrate to raise blood glucose.

But the amount of carbohydrates you eat also affects blood glucose levels and insulin responses.

The glycemic load of a food is calculated by multiplying the glycemic index by the amount of carbohydrates in grams in a food and dividing the total by 100. The concept of glycemic load was developed by scientists to simultaneously describe the quality (glycemic index) and quantity of carbohydrates in your meal or diet. Your body's insulin response is affected more by a food's glycemic load than by the glycemic index.

See the table below for the glycemic index and glycemic load values of popular foods. Foods with higher glycemic index values are at the top of the table, while foods with lower index values are at the bottom. To find the glycemic index, glycemic load or name of individual foods, go to www.glycemicindex.com, and click on GI Foods Advanced Search.

Proteins

Proteins maintain your body's normal structure and function. Proteins are the building blocks of your tissues, enzymes, DNA, hemoglobin and antibodies. Your body's proteins are made up of twenty amino acids. Your body makes twelve, and you need to get the other eight, the "essential amino acids" from the food you eat. If you don't get enough of these eight, your body can't repair itself, your immune system suffers, your metabolism slows down, and so do you.

If one amino acid out of twenty is missing, or is in short supply, then that limits your protein synthesis. So, what are your best sources of essential amino acids? Whey protein tops the list, followed by eggs (I suggest omega-3 enriched eggs). You can accomplish the same thing by combining lentils and rice, legumes or vegetables and grains, legumes and vegetables and nuts and mushrooms and vegetables. But if super longevity is your goal, you may want to eliminate grains altogether, as well as dairy and legumes (Although legumes cooked in a pressure cooker might be fine). That means egg protein may be a better choice than whey.

If you shy away from animal products, or even if you don't, try the algae spirulina. It is one of nature's most perfect foods. It is a complete protein source and has the highest

concentration of protein found in any food. AFA blue-green algae from Klamath Lake is nearly as good. Try both.

Hempseed also contains all the essential amino acids, and in a high concentration. Plus, it provides you with all the essential fatty acids in a perfect ratio. This is a true superfood for vegetarians and meat eaters alike.

Proteins do not spike your blood sugar levels like carbohydrates do. They are also more satiating and increase your metabolism more than carbohydrates and fats.

A group of scientists and physicians have been very vocal in advocating what the mainstream media and the medical establishment calls a “high protein diet.” This group includes Dr. Robert Atkins, *Atkins Diet*; Dr. Barry Sears, *Zone Diet*; Drs. Andrews, Balart, and Bethea, *Sugar Busters*; and Drs. Mary and Michael Eades, *Seed Power*.

None of these diets is extremely high in protein; they are just lower in carbohydrates than what the USDA has been recommending for the past thirty years. This group and Dr. Walford are essentially all saying the same thing—simple carbohydrates can kill! After a thorough review of the literature, it becomes clear that these people are right. Anyone who is saying 60%+ of your diet should be carbohydrates is dead wrong (pun intended) unless they are made up exclusively of high-fiber complex carbohydrates found in foods such as raw vegetables and fruits, and if you are a carbohydrate nutritional type. If you’re interested in losing weight or staying healthy, find out what your type is. You can use your favorite search engine to find websites that will give you online tests to see where you stand. Search for “metabolic type testing.” Your anti-aging physician may be able to give you a more accurate test in his or her office.

But high protein diets could shorten your life.

IGF (Insulin Growth Factor) is a key player when it comes to longevity. It appears that by inhibiting IGF you can boost lifespan and reduce your risk of cancer. And what nutrient determines your level of IGF? Protein. Higher protein intake elevates IGF, and lower intake decreases it.

Consuming large amounts of protein is one of the quickest ways to shut down autophagy, which prevents your body from effectively cleaning out debris and damaged cells.

Based on these findings, I recommend limiting protein to about 25–40 grams per day. These numbers represent the most current findings. However, the elderly may need more protein since we assimilate it less well as we age. Monitor your blood protein levels and adjust your intake accordingly.

Fats

Fat is not the villain many make it out to be. All your trillions of cell membranes are made of fat. Next to water, fat is the most abundant substance in your body. Ideally, your body weight should be made up of 10–20% fat. Women typically carry a higher percentage of body fat than men.

You may have heard of the different kinds of fat including the “good” fats and the “bad” fats. We often hear how bad saturated fats are for us. But nutritional typing predicts that one-third of people will do very well on low saturated fat diets (which supports the studies showing they work), but another one-third of people need high saturated fat diets to stay healthy. Saturated fats actually play crucial roles in many body functions and should account for about 20–25% of the fats you consume on average. Get these from low-fat meats like organic poultry, coconut oil and lean red meat from grass-fed/free-range animals.

Polyunsaturated fats, so called “good” fats, help to reduce inflammation and decrease serum cholesterol. Find these omega-3 fatty acids in fish and fish and krill oil, flax oil, walnuts, and algae. Polyunsaturated fats are normally liquid at room temperature, and saturated fats are usually solid.

Commercial food processors often solidify polyunsaturated fats through a hydrogenation process to increase their products’ shelf life. These are called trans fats and are linked to cancer, atherosclerosis, diabetes, obesity, immune system dysfunction and—well, you get the idea. You’ll find these trans fats in processed packaged foods like chips, baked goods, candy and margarine.

Then we have monounsaturated fats. They increase your good cholesterol (HDL) and lower your bad cholesterol (LDL). You’ll find these in olives, pure virgin olive oil, nuts and avocados.

Why Obesity is Becoming Epidemic

Eating fat will not make you fat.

Unless you're a carb nutritional type, eating excessive carbs and sugar is virtually guaranteed to pack on the pounds. Why?

Because your cells need fuel to function and they can get their fuel in the form of sugar or fat. But here's the kicker. Your body will burn all of the available sugar first before it turns to burning fat. So, let's say you eat loads of pasta, sugar, bread, baked goods, crackers, cookies and countless other carbs. Your body doesn't know how to handle all that sugar, so it continues turning it into fat to get it out of your bloodstream.

For a while, you'll keep gaining weight. This is in response to your cells keeping you alive by turning the excess sugar into fat. Eventually, though, even your fat stores can get filled up. This is why people who become obese almost always end up with diabetes; there's no place left to store the excess sugar as fat, so it stays in your bloodstream, driving your insulin levels up.

The solution? Eat fewer carbs and less sugar and eat more healthy fats.

This way, your body can easily burn the sugar that you do eat and continues to be adept at burning fat as well. You'll stay leaner and healthier, and you'll feel fuller, too.

We all need some fat, but some of us need upwards of 50% of our diet in the form of fat, while others need as little as 10%. The distinction depends on your nutritional, or metabolic type. If you're interested in losing weight or staying healthy, find out what yours is.

One of the best benefits of learning your nutritional type is you don't have to worry about counting calories or fat grams. Instead, you focus on eating the right proportion of carbs, fats and protein for your body. It's a much more natural, intuitive way of eating. And you'll know when you've found the right ratio for you, because you'll feel wonderful.

Why Diabetes is Becoming Epidemic

Some of the most damaging groups of substances we are exposed to on a daily basis are starches and refined sugars such as sucrose, fructose, glucose, dextrose and corn syrup.

Our metabolism was just not designed to handle these tremendous amounts of nutrient-free calories (i.e., sugar, starches, and to some degree fat) that the typical American diet has in it. The majority of those calories come from refined sugar (sweets, soft drinks, etc.) and starches (bread and pasta).

Excess sugar and starch cause multiple assaults to your system. First, as we discussed, high blood sugar causes excess insulin release. Of the two hormones that control the amount of sugar in your blood stream—insulin and glucagon, insulin causes sugar to be taken into the cells, while glucagon causes it to be released. By eating excess carbohydrates, you put your blood sugar control system onto a dangerous roller coaster ride. Up, down, up, down—after repeated bouts of this, your system will crash. The result is Type II diabetes, which is becoming more and more prevalent.

There's more. People with diabetes are twice as likely to have arthritis. In fact, more than half of the U.S. adults diagnosed with diabetes also have arthritis. That puts them in a double bind, as the pain in their joints keeps them from getting enough exercise to keep both diseases at bay.

Diabetics are unable to take up sugar efficiently because their cells no longer respond to insulin. A nasty side effect of this process is that your body begins producing way too much insulin to try and overcome the unresponsiveness of your cells. So now you have high insulin and high blood sugar, which causes all kinds of damage to your arteries. This includes higher cholesterol in your blood, more useless molecules being made by sticking to the excess sugar (crosslinking) which clogs your arteries, the production of oxidized molecules, and the release of the stress hormone cortisol which causes muscle breakdown and fat storage.

Insulin also causes excess sugar to be converted to fat. Want to lose weight? Stay away from white flour and sugar.

We also know sugar depresses the immune system. The root of all disease, common cold or cardiovascular disease, osteoporosis, or cancer, is at the molecular and cellular level. And insulin is probably going to be involved in almost every aging disease, if not totally controlling it.

Insulin is that important.

Some of us are less susceptible to the perils of sugar and starch than others. Starch in general does not cause diabetes according to a new study by Dr. Richard Johnson, the chief of the division of kidney disease and hypertension at the University of Colorado, and author of *The Sugar Fix*. The new appreciation is that if you have your uric acid level checked and have a level of 4 for men or 3.5 for women, you probably are at a low risk for fructose toxicity and can be more liberal with your intake.

The higher your uric acid is though, the more you need to limit fructose to about 16 grams a day, or even avoid it until your uric acid level normalizes.

Even with a healthy uric acid level, I suggest avoiding all foods with added fructose like the plague. A growing lineup of scientific studies is demonstrating that consuming high-fructose corn syrup is the fastest way to trash your health. It is now known without a doubt that sugar in your food, in all its myriad of forms, is taking a devastating toll.

And fructose in any form, including high-fructose corn syrup (HFCS) and crystalline fructose, is the worst of the worst!

To replace those high-calorie, low-nutrient carbohydrates you were consuming before, eat lots of raw fruit and vegetables. Some fruits that have been discovered to be particularly good for their anti-aging properties are blueberries, pomegranates, bilberries, strawberries, purple grapes, and tomatoes (Yes, tomatoes are technically fruits, not vegetables). Since fruits contain natural fructose, I suggest you eat more veggies than fruit.

The deeper and richer the colors of your fruits and vegetables, the more nutritional value they have for you. If your meals look like rainbows, you're on the right track. Why all the fuss about color? Because loads of scientific studies have shown the natural pigments that give fruits and veggies their vibrant colors offer remarkable health benefits. A major class of compounds in this category is the flavonoids.

Flavonoids are powerful antioxidants that are linked with health benefits including protection from cancer, heart disease, dementia, diabetes, stroke and more.

Fruits with rich colors, especially deep blue or purple, tend to have high concentrations of anthocyanins, one of nature's most potent classes of flavonoids. And get this. In case you haven't heard, dark chocolate and red wine are also rich sources of flavonoids.

A study at University Hospital Zurich showed 6 grams of dark chocolate a day reduces risks of heart disease and stroke by 39%. Take it easy though. Too much dark chocolate will overdose you with sugar and saturated fat. Limit yourself to 7.5 grams of dark chocolate a day unless you eat 100% cacao. More than two glasses of red wine a day works against you due to excess alcohol and sugar. Moderation is the word of the day if you must indulge.

Strawberries have high concentrations of ellagic acid, another antioxidant that has been shown to protect rats against many age-related defects. The molecule lycopene in tomatoes is yet another powerful antioxidant.

If you do eat simple carbohydrates, take some high-grade protein with it to reduce its damage by about half. Don't beat yourself up and worry about eating a hamburger, ice cream or pizza once in a while if it gives you pleasure. But making it a habit will undermine your health and shorten your life.

On the flip side, when you plan your meal or snack, visualize yourself as being healthier and slimmer. Then concentrate on your food while eating and reward yourself mentally when you make your healthy choices.

Eat a Wide Variety of Fresh or Frozen Produce—and Lots of It

The quarter of the population eating the fewest fruits and vegetables has over three times as much heart disease as the quarter of the population that eats the most. Eat a minimum of six servings of fresh vegetables per day. This isn't as much as it seems. One serving equals only one-half cup or one cup if they are leafy vegetables. A good rule of thumb is to stay with brightly colored veggies. And eat a wide variety—mostly raw and organic, if possible.

Also add one to three servings of fresh fruit per day. Again, have a wide variety—and again, raw and organic if possible. Buying local produce may be more important than buying organic, since freshness is so important. You're better off buying fresh, vibrant, conventionally grown produce than wilted organic.

Stay away from white potatoes, too. Your body reacts to them like it reacts to white bread. Increasing vegetables and fruits from two servings to only five servings a day can cut the incidence of many cancers in half. That's only two and one-half cups. Consider

getting a Vita Mix. It's like a kitchen in one appliance and is the best juicer on the market.

Make sure you get your money's worth from your juicer. Drink five glasses of fresh juiced fruits and veggies every week. I combine them in my drinks, changing the mix each time. As an alternative, you might get a high quality "green drink" in powder form. Mix with water and drink every day. There are lots of good ones on the market. I have yet to find one that is purely Paleo.

The human body evolved with a diet that was high in fruits and vegetables. If you fight nature with your diet, your health and energy level will tank. People are shocked at how much better they feel after substituting high-fiber foods for fast foods and processed foods. You need fiber to regulate your bowels, for good colon health and for weight loss if you are overweight. Eating fruits and vegetables increases your fiber intake. Juicing makes it easy. You might also supplement with psyllium fiber and bran fiber.

How you combine your foods is also important. The best combinations are proteins or fats with vegetables, vegetables with simple carbohydrates or vegetables with fat. Combining your fruit with protein and healthy fats slows sugar/carbohydrate absorption. In fact, make protein the first bite of each meal to slow absorption even more. That means less fat storage, longer lasting energy, and fewer food cravings shortly after you eat. And you will easily accomplish that by eating less. In fact, even if you eat unhealthy food from time to time, eating less of it at each meal can be almost as important as eating the right food.

Remember to lower your carbohydrate intake by replacing high-calorie, low-nutrient carbohydrates (white bread, pasta, table sugar, soda, candy) with low-calorie, high-nutrient carbohydrates (brightly colored fruits and vegetables and sweet potatoes).

If you add sweeteners to anything, the healthiest sugar substitute we know of is stevia. Stevia is a delicious natural herb sweetener with added health benefits. You can find it your local health food store. I found another that tastes even better, BochaSweet. It is a diabetic-friendly, zero calorie sweetener that tastes like cane sugar and has zero bitter aftertaste. Avoid artificial sweeteners. Most are toxic and can undermine your health.

For example, high doses of aspartame may lead to neurodegeneration. Aside from the damage it can do to your brain, aspartame can cause cancer. One well-controlled, peer-reviewed, seven-year study even found that as little as 20 mg per day can cause cancer in humans. One 12-ounce diet soda contains about 180 mg of aspartame, so you do the math for that risk!

It can also lead to multiple sclerosis, Parkinson's disease, Alzheimer's disease, memory and hearing loss and hormonal problems.

How about Splenda? That's harmless, right? Well, look at what a recent study, published in the *Journal of Toxicology and Environmental Health* found. Splenda reduces good bacteria in your intestines by 50 percent, contributes to weight gain, increases the pH level in your intestines (bad for your digestion) and affects a glycoprotein in your body that can have crucial health effects, particularly if you're on certain medications.

"Diet soda anyone?"

In addition to changing what you eat, consider changing when you eat. One school of thought is the fluctuations in your insulin levels, which are so damaging to your system, can be controlled by eating smaller, more frequent meals. This will also boost your metabolism, causing calories to be burned faster, and will raise your energy level.

However, newer studies show intermittent fasting can help type 2 diabetics manage their symptoms to the point where it virtually disappears. For those who are borderline diabetic, fasting has the potential to reverse insulin resistance.

Longevity Dietary Recommendations

- ♦ Reduce your simple carbohydrate intake by removing refined sugars and starches from your diet. The first things to go should be candy, cookies and soda. Pasta and white breads are also problems and should be eliminated. Replace the above carbohydrates with at least six servings of brightly colored fresh or frozen vegetables and one to three servings of fruit each day. One serving equals one-half cup. Fruits and vegetables are nutrient dense sources of carbohydrates and contain loads of essential vitamins and minerals, many of which are terrific antioxidants.

- ♦ Combine fruit with protein and healthy fats to slow sugar absorption.
- ♦ Eat lean protein, including protein from organically grown plant foods, spirulina and “broken cell wall” chlorella. Plants have one-seventh the contaminants of most commercial animal products. Eat 25-40 grams of quality protein per day, including egg protein powder. More if you are an athlete or elderly.
- ♦ Be cautious with fried foods. Deep-fried foods and solid fats (butter, margarine, and lard) are especially damaging to your digestive and cardiovascular system. If you do eat fried foods, fry with macadamia oil or coconut oil, and stir fry rather than deep fry. Use macadamia oil or coconut oil for all your cooking needs. Both have a high smoking point and are ideal for sautéing and cooking. Macadamia oil tastes almost like butter and has the lowest Omega-6 fatty acids of all cooking oils and the highest monounsaturated fats of all cooking oils. While extra virgin olive oil can, and should be, included in your diet, do not use it to cook with. It is highly susceptible to oxidative damage when heated. Only add it cold to salads and other dishes.
- ♦ Replace bad fats with good fats. You need fats to absorb many vitamins and to have cells function properly. Low-fat diets trigger famine response and increased production of body fat. Get most of your fats from monounsaturated fats and essential fatty acids. Saturated fats are found in meat and are not the villains they are accused of being in limitation. Trans fatty acids are the real culprits. They’re basically unsaturated oils treated with hydrogen to create an artificial saturated fat. A perfect example is heated French fries. Eat fresh olives, extra virgin olive oil, avocados, seeds and nuts, and supplement with fish oil. Forget flaxseed oil, but freshly ground organic flax seeds are at the top of my food list.
- ♦ There is so much information about healthy versus unhealthy fats out there, and I realize it can be confusing. But I can sum up the difference between a healthy fat and an unhealthy one in one word: “natural.” If it was made by man, in a lab, as opposed to naturally in a plant or animal, just pass. Just about every naturally occurring fat you can think of is great for your health. This includes the natural

fats in animal products (in moderation). When choosing which dairy products and meats to include in your diet, always keep in mind these tips to live by:

- ♦ Dairy products should be raw (unpasteurized) if you absolutely refuse to do without them. Yes, pasteurization does kill bacteria. But it also kills beneficial bacteria, destroys enzymes, lowers, or wipes out vitamin content, denatures fragile milk proteins and is associated with allergies and more. What happens to pasteurized and homogenized milk when you leave it on a counter? It turns rancid. But raw milk ferments and turns to a beneficial food such as yogurt. Healthy alternatives to milk are almond milk, especially home-made, organic coconut milk, and coconut water as well as hemp milk. My favorite brand is Tempt Hempmilk. It's creamy, delicious, and the unsweetened versions are sugar-free.
- ♦ Look for organic meats from grass-fed or free-range animals from a local source.
- ♦ Ideally, eat meat items that support your nutritional type.
- ♦ Increase your intake of fish. Fish oils are rich in omega-3 fatty acids (the good fat), which aid immune function, cardiovascular health and brain health. As you age, your red blood cells lose their elasticity and become sticky. Fish oil helps keep your red blood cells slippery and elastic. Eat fish at least three times per week. But limit your intake of larger fish found at the top of the food chain such as swordfish, tuna and shark because of the high toxic levels of mercury and other contaminants.
- ♦ Lower your intake of red meat unless it is extremely lean. Most red meat is high in nitrosamines, a compound that has been directly linked to some forms of cancer. It is also much higher in fat than most other meat. It is a myth that all meat causes cancer. There may be no correlation between cancer and high protein intake, only commercial red meat and cancer. Lean, skinless organic poultry breast is a good substitute with occasional lean red meat. I prefer ostrich as a red meat choice. Ostrich is tasty and has a fraction of the fat found even in turkey. We recommend wild game or buffalo as well. Lamb may be much healthier than beef, since it is mostly grass-fed and much lower in hormones, antibiotics and

other contaminants and lower in saturated fat. However, lamb has a high fat content, so limit your consumption. In fact, I believe it is best to limit your consumption of most animal products.

- ♦ A study showed wild African animals contained 3.9% fat, while commercially bred and fed beef contain 25–35%. Does this give you a clue about fast foods? Researchers say eating too much fast food can cause serious damage to your liver in as little as a week. Instead, opt for egg protein, whey protein (if you eat dairy), egg whites and beans/legumes (if you eat legumes) as your good protein sources.
- ♦ Avoid blackened or burnt foods. Food charred to a crisp contains many toxic chemicals and has been implicated in some forms of cancer. It also accelerates glycation. A good rule of thumb is to cook with as low temperatures as possible.
- ♦ The average person should eat fewer than 2,000 calories a day, or around 12 calories per pound of your optimal weight or 80% of your optimal weight if you're on a caloric-restricted diet. For a 2,000-calorie-a-day diet, many recommend a 40% carbohydrate, 40% protein, 20% fat diet (percentage of calories). We're all different, and the 40:40:20 ratio is a rule of thumb.
- ♦ For example, your metabolic type might determine that you function better with less protein and more carbohydrates or more protein and less carbohydrates. Or more fats, etc. I used to go slightly higher in protein and a little lower in carbohydrates, but then I found out I was a “mixed” metabolic type, which suggested I function better with slightly more complex carbohydrates and slightly less protein.
- ♦ Another reason I cut back slightly on protein is recent studies suggest a high protein diet may increase your IGF-1 level, which could possibly shorten your life and increase your cancer risk. This may be attributed to the fact that methionine, one of the body's essential amino acids, is prone to rapid oxidation. That may be a reason to consider increasing your intake of antioxidants such as a bioavailable glutathione if you are on a higher than normal, protein diet. High

protein diets can also deplete calcium. But other studies show how lean protein foods drastically reduce your chances of cancer and heart disease. The 40:40:20 ratio will shift toward more complex carbohydrates (fruits and vegetables) if you are observing a strict reduced calorie diet. I have adopted a modified Paleo diet which calls for a ratio of roughly 33:30:37 including high omega-3 fats. Others suggest 25:25:50, with 50% of your calories coming from healthy fats.

- ♦ Graze, or eat smaller meals that are less spaced out throughout the day in an eight-hour window. Three to four smaller meals during an eight hour (or less time span) are much healthier than three large meals over twelve or so hours. Even though you might eat the same number of calories as you would with three spaced out meals a day, grazers won't gain the weight. Grazing also keeps your energy high, your body strong and your mind alert while improving your digestion, nutrient absorption and metabolism. Maybe make one or two of your meals a highly nutritious and well-balanced energy shake.
- ♦ Drink plenty of filtered or alkaline water (at least one-half ounce a day for each pound of body weight), eliminate soda, and reduce coffee from your diet. (Recent studies have shown coffee consumption can dramatically reduce the risk of diabetes, cancer, liver disease, cognitive decline and DNA damage. However, you can get similar benefits from supplementing with chlorogenic acid, a polyphenol found in the green coffee bean. (Polyphenols are potent antioxidant compounds in plant foods.)
- ♦ Inflammation and glycation damage your immune system and promote disease. So, stay away from refined foods. Low-fat varieties are usually high in sugar. Whole grain foods, if you choose to eat them, and fresh fruit have more fiber and are converted to sugars more gradually. Fiber also prevents carcinogens from entering your bloodstream. To control inflammation, lower your blood sugar level, lose weight, exercise more, reduce stress, avoid or cut back on red meat, coffee and alcohol. Limit egg yolks to ten a week and take a daily baby or whole aspirin with your biggest meal under a doctor's supervision.

- ♦ Reduce your intake of commercial dairy products or eliminate all dairy in general. Commercial cow's milk has up to 59 active hormones, scores of allergens, fat, and cholesterol, and much of it contains herbicides, pesticides, dioxins, up to 52 powerful antibiotics, blood, pus, feces, bacteria, and viruses. Get your calcium from non-dairy sources. You'll find calcium in every natural food we eat. For example, a cup of sesame seeds contains ten times the calcium as a cup of milk.
- ♦ Add spices to your diet. Many contain powerful antioxidants, and they can do wonders for taste. Some of the better ones are cayenne, garlic, turmeric, cumin, rosemary, oregano and paprika.
- ♦ Eat a balanced breakfast to help you lose weight, increase your strength, boost your brainpower and focus, lower your stress and decrease fat storage. Of people who lost an average of seventy pounds and kept it off for six years, only 4% said they ever skipped breakfast. I recommend eating breakfast later in the morning to squeeze all your meals into eight hours.
- ♦ Reduce your consumption of foods that require labels. Introduce probiotics into your diet. (See the next section on Digestion). The *Bacillus Coagulans* strain is good. Its main benefits are it survives the acidic environment of your stomach, making it to your small intestine where it does the most good and it does not need to be refrigerated. Infintis, Reuteri, Jarro-Dophilus EPS Ultra Potent 50 Billion, Ultimate Flora Critical Care 50 Billion and Dura Flora are also excellent. They are therapeutic to the colon and strengthen colon health.
- ♦ I also suggest prebiotic such as FOS (FructoOligoSaccharides). They are used by the beneficial bacteria in your colon as a food source, promoting the growth of beneficial bacteria, which suppress harmful organisms.
- ♦ You could keep it simple by adopting the Mediterranean diet. Italians and people in Southern France stack up well against strict vegetarians when it comes to health statistics. (Most vegetarians do not eat enough vegetables. They load up on grains which tend to make them unhealthy.) The Mediterranean diet emphasizes fresh fruits and veggies, whole grains, garlic, olive oil, tomatoes and tomato

sauce, moderate amounts of fish and poultry, some lean red meat—and one glass of red wine a day. Although it's low in saturated fats, perhaps the most significant thing about the Mediterranean style diet is the absence of processed foods, which are loaded with sugars and dangerous trans fats.

If you think you can't carve out enough of your time to master these guidelines, why not put a good nutritionist on your team? You might contact Prof. Joe Carrington at carrington@post.harvard.edu.

Apples or Bananas for Longevity?

How do you *really* know what to eat? What foods are best for longevity, for your heart, for losing or gaining weight, to reverse or avoid type II diabetes and for your overall health in general?

How about all the words and terms thrown at you like nutrient density, enzymes, ATP, BMI? How do you determine what they mean without doing an individual search on each one? And how do they relate to or interact with one another? What impact do they have on you... which ones are more important for you and which don't apply to your particular situation?

Do you really know the differences between different types of fiber, how much you need and why... and the best way to get them?

Inflammation is a life-shortener and a major contributor to virtually every disease. While inflammation is an epidemic of extreme proportions, there's no reason for most of us to be inflamed.

Which foods are the best inflammation fighters?

We know how bad fast foods are for us, yet many of us still eat them. Sometimes it's just, well, convenient. And it's hard to beat them for taste, isn't it? Wouldn't it be nice to know which are best for you?

And wouldn't it be cool to have a simple quick way to track the nutrients, calories and more in everything you eat, any day you want? And finally, you can be one click away from knowing exactly what foods best suit your personal needs.

Ya gotta love the Internet, because there's a website that gives you all the above and waay more. This is one you should bookmark for sure. It's for the casual user as well as for the serious food researcher. I just love this site: <http://nutritiondata.self.com>.

Acid/Alkaline Balance

Acid and alkaline refer to the acid base characteristics of any liquid.

Your health is extremely sensitive to the tiniest change in your pH levels. We often hear about how acidosis, or being too acidic, can lead to disease. Cancer cells thrive in a highly acidic environment. Alkalosis, or being too alkaline, is much rarer and can cause problems as well. Ideally, the relative pH of your blood balance should be around 7.4. The lower you go on the scale, the more acidic, and the higher, the more alkaline. A balance of 7.0 is perfectly neutral, so 7.4 is slightly alkaline.

Many people call certain foods "acidic" and others "alkaline." This is a little misleading. Measuring the pH of food outside your body is irrelevant. How your food is metabolized is what happens to it after it is digested and absorbed. After most of the components of food are oxidized, you have minerals left over that are alkaline, acidic or neutral. The minerals that are found in fruits and vegetables are alkaline forming and lead to good health and a strong immune system.

The minerals found in proteinaceous foods, mostly in meat, fish, poultry, eggs, cheese, grains, legumes, and most nuts are acid forming. Salt can be toxic in excess because of its high chloride content. However, salt plays a crucial role in maintaining human health. It is the main source of sodium and chloride ions in your diet. Sodium is essential for nerve and muscle function and is involved in the regulation of fluids in the body and plays a role in your body's control of blood pressure and volume. When you get your regular blood panels, make sure you are tested for sodium levels.

Foods that don't contain protein such as soft drinks and coffee are extremely acid forming.

According to William Wolcott, although red meat is generally considered to be acidic, it can be alkalotic for pure strong protein types, while fruits and some veggies make them acidic. William Wolcott is a recognized metabolic typing authority. It pays to know your metabolic type.

Except for salt, soft drinks and coffee (and cheese, grains, and legumes if you follow a hunter-gatherer diet) your body needs a balance of alkaline and acid forming foods. So just because a food is acid forming doesn't necessarily mean it is bad for you.

But most of us are too acidic. To avoid colds and flu and other more serious disorders, keep your body slightly alkaline.

Vegetables and fruits help to alkalize your system. You will normally need lots of vegetables and fruits to optimize your body's pH acid/alkaline balance, so you might supplement with the three alkaline minerals: calcium, magnesium, and potassium. You might even try a teaspoon of Arm & Hammer soda in a large glass of water. This will cost you pennies.

How else can you alkalize your body? Exercise and deep breathing. We cover those in Volumes Two and Six.

Digestion

Let's wind down our diet chapter with a few words on digestion.

Most people don't realize that about 70% of your immune system is located in your digestive system. That means a healthy gut is your major focal point since you want to maintain optimal health. Remember, a robust immune system is your number one defense system against all disease.

Undigested food doesn't magically disappear. It passes into the colon where it is fermented by intestinal bacteria. Then a related reaction called putrefaction emits a long list of toxins. As you know, indigestion can be awfully uncomfortable. How often did you feel bloated after a meal or get gas or abdominal pain? Here are six easy steps to improve your digestion:

1. Eat small amounts spread over three to four meals a day over an eight-hour period instead of stuffing yourself two to three times a day.
2. Chew your food well.
3. Eat slowly. The heaviest people tend to eat fast. Since it takes about twenty minutes for your brain to recognize you are full, the faster you eat, the more you overeat. Think of your meal as a series of first bites. You'll savor your food, im-

prove your digestion and eat less. Eating slowly also tends to lower your blood glucose levels. Take small bites over a long period of time and chew each mouthful of food at least twenty to thirty times. If your biggest meal takes you less than thirty minutes, you are probably eating too fast.

4. Don't wash your food down with a beverage. Chew well, swallow and then take a sip of room temperature water, tea or maybe red wine. Stay away from ice cold beverages with your meals.
5. Relax while you eat.
6. Supplement with a high-quality probiotic, a supplement containing friendly bacteria. Without good gut bacteria, your body can't absorb certain undigested starches and sugars. And it doesn't absorb minerals and break down toxins efficiently. Normally, you don't need to take probiotics forever, but they can be incredibly helpful when you eat excess grains or sugar, or if you have to take antibiotics. Taking a high-quality probiotic for a month, every 30–60 days, will typically help your digestive system function efficiently.

You may not need probiotic supplements though. Cultured foods like yogurt and sauerkraut are good sources of natural, healthy bacteria. And fermented foods, such as natto, can give your body the similar benefits of consuming a whole bottle of good bacteria, at a fraction of the cost. But I prefer the supplements since we are not genetically engineered to eat dairy. And fermented foods may not be necessary and may even be counterproductive if you are on a Paleo diet.

As you can see, you can follow our guidelines and still enjoy eating. In fact, if you like to eat, you should have extra incentive to live longer. Just think—if you add only five years to your life—that means you get to eat about 5,500 more meals.

Top Ten Foods for Longer Life

They're all backed by major independent studies.

1. Tomatoes: Tomatoes contain a powerful antioxidant called lycopene. Studies show lycopene cuts cancer rates by 40% and heart disease by 50%. And it makes

- the elderly function better mentally. Tomato sauce has five times as much lycopene as fresh tomatoes. And surprisingly, canned has three times as much.
2. Olive oil: Reduces death from heart disease and cancer. Use extra virgin olive oil.
 3. Red or purple grapes: Grape juice and red wine increase longevity. Two alcoholic drinks per day maximum.
 4. Garlic: Packed with antioxidants. It fights cancer and heart disease and overall is anti-aging.
 5. Spinach: Follows right behind garlic for antioxidant protection. It's rich in folic acid, which helps fight cancer, heart disease and mental disorders and may help prevent Alzheimer's. According to a featured study in the *Journal of Nutritional Biochemistry*, plasma concentrations of the B vitamin folate (folic acid) correspond to telomere length in both men and women via its maintenance of DNA integrity and DNA methylation.
 6. Salmon and other fatty fish: These contain lots of omega-3 fatty acids, which fight virtually every disease and keep your brain and heart functioning optimally. They also lower inflammation. Caution: make sure your salmon is wild Pacific or Alaskan salmon. Farm and Atlantic salmon can be contaminated.
 7. Nuts: Eat over five ounces per week. They can cut heart attack deaths by 40% in women. People who eat about two ounces of nuts four times a week tend to live longer, in fact, up to two to three years longer! Almonds and walnuts lower cholesterol. Unsalted are best for you. And eat them raw if you can. You may want to avoid nuts altogether during pregnancy if you have a family history of asthma. If you have most any disease, or any kind of insulin-related problems, you may want to avoid large amounts of seeds and nuts except for flax, chia and walnuts.
 8. Blueberries: High in antioxidants. One-half cup a day can retard aging and block brain changes leading to fading memory. Other dark, richly colored berries run neck-and-neck with blueberries.

9. Matcha green tea and black tea (maybe white too): One cup per day can cut heart disease risk in half. (Note: Instant or bottled have little effect) Other beneficial effects include improved mental alertness; lower blood cholesterol and triglyceride levels; reduced blood pressure; lower risk of breast, colon, lung, ovarian and prostate cancers; protection against Type II diabetes; improved exercise performance and lowered risk of obesity.
10. Pomegranate: New studies show pomegranate to be one of the richer sources of antioxidants. More about pomegranate later.

Fasting

How about fasting? There are pros and cons about extended fasts, but nearly everyone agrees that skipping meals or fasting gives your digestive system a rest and helps detoxify your system if your diet is unhealthy. If you are a carbohydrate nutritional type who fares better with a high complex carbohydrate diet, you might do better with fasting than a protein nutritional type who functions better with a lot of protein.

Fasting helps, because what you eat, drink and breathe all have the potential to increase your toxic load. Ditto for what you put on your skin. Even though your lungs, liver, kidneys, and your skin are designed to remove your toxins, they are stretched beyond their limits in today's polluted world. So, it's up to you to periodically cleanse your system if you want to keep toxins from prematurely aging you and making you sick. You can do this by either periodically fasting or detoxifying. You might consider both.

Fasting is simple and easy. I recommend short fasts, two to four days every month. Or you might try two days every two weeks or one day every week. I used to fast one day a week—no food for 24 hours. Now I practice Intermittent fasting (IF) instead.

If you abstain from food completely, drink only filtered, alkaline or distilled water and bone broth. For even better results, you might drink two to three large mugs of hot filtered water each fast day with two tablespoons of raw apple cider vinegar and one teaspoon of raw honey.

You can get the beneficial effects of caloric restriction (CR) if you eat as much as you want every other day and fast every other day. Besides being the only proven way to extend maximum lifespans in mammals, CR is also an effective way to dodge diabetes, heart disease and nearly every other disease associated with aging. However, CR (not fasting) may be counterproductive if you are elderly and of normal weight or underweight. Since we digest less efficiently as we age, CR may under-nourish you. Although I practice IF, I ingest enough healthy calories to maintain my weight.

Another form of fasting is going on a CR 7 eating schedule. This means you utilize a concept called intermittent fasting to redistribute and lose body fat and to simulate CR. Do not eat past 6 PM, and do not eat before 11 AM. By doing so you go on a 17 hour fast every day. According to a 2005 article in *Lancet*, mice and rats maintained on an intermittent fasting regimen lived up to 30% longer than those fed otherwise.

On IF, the longest time you should abstain from food is 36 hours, although 16-18 hours is more common. Skipping breakfast is far easier and logistically and socially more acceptable but avoiding dinner might be better from a health perspective.

Our genes are optimized for this type of feeding schedule. It takes about six to eight hours for your body to metabolize your glycogen stores, and after that, you start to shift to burning fat. However, if you are replenishing your glycogen by eating every few hours, you make it far more difficult for your body to use your fat stores as fuel.

Surprisingly, hunger is not the problem you might think. Fasting also has a profound effect on your food cravings. It shifts cravings toward more subtle tasting, nutrient dense, satiety-promoting foods, which can then lead to a spontaneous decrease in your overall calorie intake.

When following an IF regimen, make your diet low glycemic and high in protein and fiber. Eat whole foods, along with nutrient dense antioxidant foods. Don't even think about IF if you eat the typical American portions of high glycemic junk food.

Importantly, our ancestors did not eat regular meals like we do today. They ate when they killed or found food and when they had some stored food left over. Extended periods between meals were normal. Our bodies are still programmed to miss meals. That's one reason you should break up your regular meal schedule or grazing with some type of intermittent fasting.

More Fasting Benefits

Could fasting for two days a week prevent age-related brain shrinkage, heart disease, diabetes, and possibly even cancer? New research suggests that fasting triggers a variety of health-promoting hormonal and metabolic changes.

Fasting has been shown to reduce:

- ◆ “Bad” LDL cholesterol
- ◆ Total cholesterol
- ◆ Triglycerides
- ◆ Inflammation levels
- ◆ Free radical damage

Fasting also normalizes your insulin sensitivity, which is key for optimal health. Insulin resistance (which is what you get when your insulin sensitivity plummets) is a primary contributing factor to nearly all chronic disease, from diabetes to heart disease and even cancer. And fasting promotes human growth hormone (HGH) production, which plays an important part in health, fitness and slowing the aging process.

Except for intermittent fasting, fasting usually does, but does not necessarily mean abstaining from ALL food, but rather a dramatic reduction of caloric intake. You could cut your daily calories at least in half, and preferably consume no more than 500-800 calories a day during your fasts. That’s not so tough, is it?

“Suddenly dropping your food intake dramatically, cutting it by at least half for a day or so, triggers protective processes in the brain,” explains Professor Mark Mattson, head of neuroscience at the U.S. National Institute on Aging.

He adds, “It is similar to the beneficial effect you get from exercise.”

Hunger seems to benefit your physical shape and longevity similarly to physical exercise. When manipulated properly, hunger has shown to trigger mechanisms that increase your energy, repair your tissues and keep you in prime physical shape.

Interestingly, some of the mechanisms largely responsible for weight loss and diabetic control when fasting are also the ones responsible for the benefits to your brain.

Research suggests that caloric restriction can protect brain cells and make them more resilient against stress. This protective effect is partly due to fasting's effect on leptin and ghrelin; two hormones involved in appetite regulation. According to Professor Mattson, these hormones are also involved in the process of renewing brain cells—especially in the hippocampus—*when you are not overweight*.

This could help protect your brain against memory loss and degenerative diseases such as Alzheimer's and Parkinson's.

How Fasting Triggers Your Longevity Genes

Your body thrives when under nutritional and physical stress. Both caloric restriction and physical hardship are perceived by your body as survival signals to adapt and improve.

The effects of caloric restriction and physical hardship on longevity seem to be deeply rooted in your biology. Both trigger biological mechanisms that evolved to help humans endure times of food scarcity and extreme physical hardship. When triggered, these mechanisms compensate your body by protecting your insulin system, strengthening your immune defenses, improving your tissue restoration and upgrading your muscle fiber quality.

To trigger your longevity genes, you need to routinely challenge your body. Train and feed your body as it's originally destined to operate.

It has been widely agreed that the human body is not programmed for a world of plenty. Your body declines and deteriorates by chronic indulgence and lack of challenge.

It's starting to look like the longevity benefits of fasting can be attributed to the degree of caloric restriction. That is, fasting is total caloric restriction, while CR is partial. When you fast, you're going whole hog. You're subjecting yourself to an acute stressor, getting the hormetic benefits, and then recovering from that stressor by eating normally thereafter (until you do it again). When you restrict calories, you're undergoing a chronic stressor. Day in, day out, you may worry about food, restricting energy and nutrient intake, and there's really no period of recovery. You're always residing in a partially restricted state, drifting from paltry meal to paltry meal. There is no feast.

There's one more advantage of intermittent fasting over CR. Research shows it appears to conserve more lean mass than CR.

Fasting and Exercise: Are They Compatible?

Fasting affects your muscles similar to physical exercise. Besides stabilizing your insulin and accelerating fat burning, fasting activates genes and growth factors which regenerate new brain and muscle cells.

In the brain, fasting promotes activation of stem cells, making them committed to restore and regenerate new neurons. In the muscle, fasting turns on satellite cells to commit, differentiate and fuse into new muscle cells.

Fasting is the most powerful trigger of muscle tissue recycling. It increases removal of broken proteins and damaged cells to allow synthesis of new protein and regeneration of new muscle cells for repair and sustainability.

So periodic (intermittent) fasting may prove to be a most effective anti-aging strategy as well as a key weight loss tool... and even more so, when combined with exercise.

For muscle rejuvenation, you need to initiate muscle catabolism to remove and recycle broken proteins and damaged cells. This can be done by increasing the gap between your meals and exercising while fasting. This regimen seems to be most effective in activating mechanisms that repair and rejuvenate your tissues.

For muscle buildup on the other hand, you need to promote muscle anabolism. You can achieve that by feeding your muscles with frequent, fast assimilating protein meals throughout the day including 2-3 post exercise recovery meals. This pulse feeding regimen has shown to yield maximum protein utilization efficiency.

Fitness expert Ori Hofmekler also concluded fasting has the surprising benefit of helping you reconstruct your muscles when combined with exercise. This is due to an ingenious preservation mechanism that protects your active muscles from wasting. In a nutshell, if you don't have sufficient fuel in your system when you exercise, your body will break down other tissues *but not the active muscle*, i.e. the muscle being exercised.

Cutting down on your grains and sugars, replacing them with high quality fats and skipping some meals, especially before exercise, seem to be a powerful combination to help you take control of your well-being.

Detoxifying

If you're average, you may be carrying around pounds of putrefying sludge in your colon. Get rid of it. It is aging you before your time by reducing your body's ability to absorb nutrients. It also makes you sick by dumping its rotting by-products into your system.

A pure diet coupled with regular exercise is your best way to remove toxins from your body and to keep them from accumulating in the first place. Some people recommend a three-week purification program every three months as well as annual full body cleansing. For detailed information on detoxifying your body, you might get a copy of *Detoxify or Die* by Dr. Sherry A. Rogers. If you decide to buy any detox, cleansing or purification products, make sure companies selling them can back up their claims with hard independent data.

The "Healthiest" Alcoholic Beverages

To drink or not to drink? What's the purpose of living longer if you can't enjoy yourself? We're not encouraging drinking. Just limit yourself to two drinks a day if you do drink. And that does not mean abstaining six days a week and having fourteen on the seventh. Drink sensibly. Besides social issues, drinking more than one or two a day for the average sized person can wreak havoc on your body and lead to all kinds of long-term physical and mental problems.

If you decide to imbibe, remember that alcohol is a toxin. Drinking too much on a regular basis has been linked to weight gain, high blood pressure, stroke, heart disease, dementia, osteoporosis, certain cancers and dry wrinkled skin.

If you drink, we suggest eating before or during drinking, and drinking water with your alcoholic beverages. We recommend only beverages made without grains such as the following:

Red wine. Dry wines have less sugar. In general, most red wines have little or no sugar. Most sweet wines are white. A four-ounce glass of dry red wine usually contains about 83 calories, no sugar, .5 grams of carbohydrates and no fat. Many people claim health benefits for moderate red wine consumption.

Tequila. One shot contains around 97 calories, no fat and no carbs as well as no sugar. There is even a bit of potassium.

Brandy. Unflavored brandy has about 72 calories per shot, no sugar and zero fat and carbs. The sugar has been removed in the distillation process.

Rum. The unflavored versions have about 64 calories per shot. They also contain no sugar, fat or carbs.

Bottoms up if you must, but not too often.

So, in summing up our diet chapter, be aware of the consequences of over-drinking, overeating and of an unhealthy diet. With the way science is charging forward, you may be eating and drinking yourself into missing the super-longevity boat.

You will live a long, healthy life to the extent you can: prevent oxidation; reduce inflammation; prevent glycation; maintain healthy blood pressure and enhance methylation. Start with your diet. Climb aboard the Longevity Express today. You'll never have a chance to relive this moment.

Are There Exceptions to My Diet Recommendations?

YES!

I discovered this the hard way.

I spent decades tinkering with my diet. A few months ago, I found myself growing weaker and weaker. Then I suddenly started shedding weight that I couldn't afford to lose. Within weeks, I was bedridden almost all day, every day.

Did I have cancer? Another deadly disease? I got extensive bloodwork to see if it would turn up anything and an order for a full body CT scan to detect possible cancer or an organ disorder.

I waited an agonizing 11 days for my lab results to arrive during which time I kept sliding downhill to the point where we were planning for possible hospice care in the event my bloodwork and CT scan did not turn up a fixable cause. This was Christmas season of all times.

Finally, when I got my labs, Prof. Joe Carrington rushed to my rescue... and most likely saved my life. During a discussion, I told him “When I got sick...” He corrected me by telling me I should say “When I got myself sick.

After reviewing my labs, he found I created a perfect storm that led to my condition by medically overcompensating for a hypothyroid condition which led to an extreme hyperthyroid diagnosis. And here is a contributing culprit that made my symptoms so dangerous:

First, some background:

I tend to be a bit of a fanatic about my diet, and really got carried away the past ten or more years. I tried paleo for a long time with low to moderate animal protein intake. Then I eased into veganism after blending veganism with paleo. There’s actually a name for that – “Pegan Diet.”

It does include animal products, but only free-range and of course strictly organic, which I adhered to for two decades. But I eventually eliminated animal protein and continued avoiding grains and legumes. Then I got lectin conscious, avoiding night-shade plants and most fruit. Finally, I continued fasting one day a week until I switched to intermittent fasting, not eating 17-18 hours a day by eliminating breakfast.

My dietary constraints became so extreme that I had a hard time finding meals I could eat without guilt even in my favorite restaurant, one famous for healthy eating. In fact, when I did find that menu item gem, I would usually ask the servers to modify it to conform with my restrictions... It got crazy.

Joe told me the way I ate (except for the fanatical tweaks I gradually adopted over the years) was the way most people should eat because most are overweight. But I was lean all my life and gradually got skinny. And then when My thyroid spiraled out of control, my body was burning calories faster than I was ingesting them. I wasted away until I almost looked like I was in a concentration camp.

Joe said I was dying and would have if I didn’t reverse the path I was on.

Fortunately, Prof. Carrington is a genius. He knows more about medicine and nutrition than any doctor I know, and I know some of the best in the world due to my extensive involvement in the life extension community.

So, Joe prescribed medicine for me.

Not drugs... but the very foods I avoided for decades. The foods that could be poison for most overweight people were exactly what I needed to regain my strength and weight. He pointed out that since labs showed excessive thyroid medication, he immediately suggested I modify my thyroid meds to give us a chance to stabilize my hormones and restore the metabolic balance between my caloric expenditure and intake.

That means lots of healthy complex carbohydrates with stabilizing glycemic indexes, specific animal proteins and other nutrients and formulations that would pack on the healthy pounds and muscle.

Pancakes with healthy syrup, white potatoes, baked beans, bread, cereals, certain dairy and even some nutritive sugar to stimulate insulin production that I avoided like the plague as most people should! Lots of **good** foods too. The good news is they taste GREAT. No wonder most people get overweight and sick from their diets. Hmm, do I dare order a pizza?

It is important to recognize that the one size fits all approach to medical nutrition and illness that the mainstream follows often does more harm than good and sometimes one must break the rules to get well! Thankfully, Prof. Carrington knows which rules to break and when!

This will be about a three-month diet. I'm going on two months in so far and felt like a new man after just two to three weeks except for feeling full and satisfied from eating all the time. But there's already more of me, and I'm still gaining back body weight. Joe wants me to ease back into a healthier but more-broad spectrum, liberal diet in another month or so... without the fanaticism I slipped into over the years.

I do plan on returning to intermittent fasting too.

If you gain and maintain optimal health, or if you have ANY health issue, Joe could be your solution. A-List celebrities seek his advice regularly to attain and maintain maximum wellness. Prof. Carrington has taught courses for inquisitive medical doctors for decades. His consulting fees are extremely affordable, and he will always give you more time and attention than you pay for.

Contact him at carrington@post.harvard.edu with "Consultation" or something to that effect in the subject line so he doesn't miss it. I receive nothing from introducing you other than the joy of helping another human being recover from what ails you.

As new nutritional strategies are discovered, we can notify you in our weekly newsletter. Simply visit www.MaxLife.org/longevity-news now to be alerted.

Next, see the other half of the two habits that can add 14 amazingly active years to your lifespan. Read *Volume 2. EXERCISE – Move Your Way to Super Longevity*.