

SPECIAL REPORT
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The Longevity Diet: Myths and Truths



by

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DISCLAIMER

The FDA requires all sources of education regarding your health to be accompanied by a disclaimer. It goes something like this:

The purpose of this information is to increase your knowledge about wellness and how to achieve it naturally. It is not intended as medical advice and it is not meant to diagnose or treat any individual's health problems. You should not discontinue any course of medical treatment or undertake any new treatment without first consulting your own healthcare practitioner.

Yeah, right - good luck with that.

After all, the FDA is a rogue government agency accountable only to Big Pharma. It is not your friend.

So take this disclaimer with a huge grain of salt.

Nevertheless, you should know I'm a professional research scientist, not a medical doctor. I do not provide medical advice.

You, like me, may already consider FDA-approved drugs, surgeries, and other short-sighted and destructive medical treatments (e.g., high-energy radiation therapy) as desperation measures of last resort.

If so, regarding your choice of physicians, the best starting point is generally a naturopathic medical doctor or other health practitioner who has been trained in **natural approaches** to health based on actual human biology.

With all that said, let's get you started on the path to eating right for a healthy lifespan.

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PREFACE

The first thing I want to make clear is that ‘the longevity diet’ overall is a myth. The truth is there are many eating styles behind a long and healthy lifespan.

In addition, several other factors play a role in longevity besides diet. Lifestyle choices and genetics come to mind.

Indeed, even though diet is important, it’s pretty far down the list of factors impacting your health and longevity.

Diet books about longevity routinely miss that point.

The main purpose of this book is to explain how you can capitalize on the benefits of foods in the context of other factors influencing your health.

So, starting with foods...

Making sense of all the modern advice about eating for a long and healthy life can be a challenge.

Some of it is science-based. Some of it isn’t.

Even the science-based advice is often contradictory.

Part of the confusion comes from studies with limited or unjustified conclusions based on faulty research design.

Part of it also comes from recommendations issued by government committees influenced by different food lobbies. (Yeah, I know – that’s a pretty scary thought, right?)

Regardless of its source, most dietary advice is simplistic when it focuses solely on food choices. Food comprises just one component of longevity, and a relatively minor one at that.

Missing Dietary Factors

Nearly all longevity diet books completely fail to address how prehistoric humans evolved to eat. They ignore basic human biology.

In addition, not one single set of recommendations accounts for the influence of cooking methods on food quality. It's a huge 'miss' that characterizes the entire diet industry.

As I mentioned, there's no 'one size fits all' diet for longevity.

Furthermore, eating right for a healthy lifespan depends on more than **what** you eat. More importantly, it also hinges on **when** you eat. Although many books target certain food quantities, **how much** you eat is the least important factor of all.

Perhaps the most glaring error of omission in all dietary advice is the significance of eating right for where you live. Doctors, dieticians, and nutritionists seem to be completely unaware of the fact that your latitude determines your optimal eating style.

Foundations of Your Longevity Diet

Given all that, the question is, what's **your** best dietary strategy for a longer, healthier lifetime?

This book will give you some good ideas on what you can do. Some suggestions come from general advice about food selection. They're based mostly on common sense and on commonalities among the most popular longevity diet books. You've probably heard most of them before.

Other suggestions come from looking back at ancestral diets. Then comparing them with diets of long-lived people currently living in different cultures around the world.

You may encounter some surprises along the way. Such as: food calories are meaningless, eating a plant-based diet is generally a poor long-term health strategy, and dietary fat isn't always the enemy it's purported to be.

The best news of all is that eating right for longevity is a lot simpler than you might think. Certainly simpler than all those book-length explanations currently on the market.

INTRODUCTION: WHERE TO BEGIN?

The landscape of dietary advice is overwhelming. A vast majority of it is about weight loss.

Focus on weight loss highlights the increasing interest in what's become a national health disaster: **obesity**.

You've undoubtedly heard about the statistics. You may even be one of them.

However, the emphasis on obesity is misplaced. Excess weight isn't the problem. Poor metabolism is.

Poor metabolism is at the core of accelerated aging, not just obesity.

Nevertheless, you'll find most diet books and diet programs to be dedicated to losing weight, with nary a nod toward fixing your wayward metabolism.

What you see instead is lots of advice from formerly overweight celebrities. The message is always, "I'm famous and I lost tons of weight by doing [fill in the blank], so you can, too."

Marie Osmond's endorsement of Nutrisystem and Oprah Winfrey's promotion of Weight Watchers are just two of the more prominent examples.

Or you'll see similar programs and products backed by doctors. The message is a little different. It's more, "I'm a doctor so you should take my medical advice on how to lose weight."

The confusion really ramps up when doctors don't agree. The contrast between the Atkins Diet (Dr. Robert Atkins) and the Ornish Diet (Dr. Dean Ornish) comes to mind.

Their respective recommendations are polar opposites of one another.

The better question to ask is, how do weight loss programs help improve your metabolism?

It's actually the same question to ask about eating for healthy longevity.

How does a longevity diet improve your metabolism?

Finding Answers

One place to begin looking for answers is by comparing different longevity diet programs to see where they're complementary vs. where they're contradictory. In other words, what their strengths and weaknesses might be so you can decide what's best for you.

That could be an expensive task even if you only buy a few of the top books on the subject. It could end up costing you a couple hundred bucks, even if you only get used paperback copies online. And if you read all of them, you'd still have to figure out who's right when they don't agree. (And they often don't.)

My goal is to cut through all the chaff and fluff in such programs to summarize their core recommendations. This should at least simplify your options.

Something Old, Something New

Modern diet books and programs, whether they focus on weight loss or longevity, all look good on the surface. Some dig deeper by comparing 21st century diets with how your parents and grandparents ate. Some go further back to how people ate centuries or even millennia ago.

Rarely do they examine ancestral diets of prehistoric people. Yet representative ancestral diets have been known from surveys of various indigenous cultures, some published as recently as 1939. This is a super-rich source of information largely ignored by the diet book industry.

Examining how people eat in so-called 'blue zones' has taken its place. Not very effectively, though.

A much better perspective would come from interviewing our Paleolithic ancestors about their diets. Then pinpointing what's good about them for health and longevity.

Unfortunately, since we don't have that time-traveling phone booth from *Bill and Ted's Excellent Adventure*, we must rely on indirect evidence from fossils.

And then relate it to human evolutionary adaptations.

These kinds of data place dietary advice squarely where it should be – i.e., on basic human biology.

At least one popular program *mostly* follows this strategy. It's known as the Paleo Diet. It's the main 'new' dietary approach to ancestral eating. It's pretty good, even though it has a few weaknesses. Even as it is now, it might be the best overall diet for health and longevity.

Addressing its weaknesses, which I'll do later in this book, would make it even better.

So let's start by digging into what longevity diets look like at the moment. Then we'll compare them with what they looked like tens of thousands of years ago.

Some of these comparisons will probably be just what you expect. Some of them undoubtedly won't be.

Ultimately, what I want to give you here is some good perspective of what you can do for your own health and longevity. That's what it's all about.

Do the Hokey-Pokey and turn yourself around – that's what it's all about!

EVALUATING LONGEVITY RESEARCH

As a professional research scientist, I think understanding longevity diets requires at least a little appreciation for how research on them is conducted. (Wouldn't you expect a research scientist to say something like that?)

I promise to keep this 'lesson' as brief and as clear as I can.

So here goes...

Clinically relevant research on diets and longevity rest on two main approaches: 1) observational studies; and, 2) experimental studies.

Understanding their differences, which are significant, and what their results mean is critical for deciding what works best.

1) Observational studies

This is basically people-watching for scientific purposes. It entails gathering data on what people do or have done and comparing their health results.

It's the fundamental approach to evaluating diets for longevity.

Data collection usually centers around interviewing older people about what they eat and what they ate growing up. It may involve digging into historical records when they're available.

The best observational data come from people who have lived in the same area and consumed the same foods their entire lives. This is the foundational approach to classic survey-type books such as Dan Buettner's, *The Blue Zones (2nd Edition): 9 Lessons for Living Longer From the People Who've Lived the Longest* and John Robbins', *Healthy at 100: The Scientifically Proven Secrets of the World's Healthiest and Longest-Lived Peoples*.

The underlying message in these types of books is, "This is how centenarians eat, therefore this is a good way to eat for healthy longevity so you, too, can live to be 100 or more."

Statistically, observational studies are **correlative**. They find *associations* among different factors. Logically speaking, they can never conclude cause-and-effect relationships.

This doesn't stop people from *implying* cause-and-effect. It's just not justified scientifically.

Nevertheless, plenty of authors, journalists, and researchers seem to be getting lots of exercise by jumping to (unwarranted) conclusions based on correlated factors.

What Mom Knew

My mom used to ask, "What does that have to do with the price of tea in China?"

I bet you heard something like that growing up, too.

It's basically a question about correlation. Mom was pointing out that if the price of something in the U.S. increased, it had nothing to do with a similar increase in the price of tea in China. It was just a correlation, with no cause-and-effect relationship.

2) Experimental studies

An experiment entails designing a study to figure out what cause may have what effect.

Ideally it entails evaluating possible causes for their effects on a group of people in a study population. It's best used for testing multiple possible explanations (aka, *alternative hypotheses*) to see which one fits the data best.

The quality of an experimental study depends on lots of moving parts – statistical design, sample size, controlling variables, etc. In clinical studies, quality also depends on controlling for 'investigator effects' by double-blinding treatments. This just means not letting the administrator of a treatment know which treatment it is. It keeps even inadvertent body language from influencing the results.

Clinical research also has to account for placebo effects.

If all that sounds a bit complicated...well, it is.

It's why looking at experimental details is so important when different studies come to contradictory conclusions.

It's also why studies can have flaws when their experimental designs aren't tight enough.

This is not a rare problem in health research. Indeed, it's so common that medical statistician, Dr. John P.A. Ioannidis, reviewed the magnitude of it, here: [Why Most Published Research Findings Are False](#). (You can download it at no charge at that link. Just be prepared for some shocking news about modern medical research.)

The Main Drawback for Experimental Longevity Studies

By its nature, longevity research must depend on measuring lifespans. For humans, this can mean a very long time. An experimental study may take decades to complete.

This is not the type of study for professors to get tenure. We always had to keep up a steady publishing rate to keep our jobs. And to keep research funding coming in.

What longevity researchers have done instead is to study different treatments on shorter-lived organisms. Yeasts, fruit flies, nematodes (microscopic worms), and mice are some of the favorites.

It's a strategy that works best when comparing similar biochemical pathways or 'longevity' genes shared between humans and lab organisms. Yet there are obviously many differences going from fungi to worms to fruit flies to mice to humans.

Extrapolating results to the human level is quite a jump scientifically. As one of my colleagues used to say, it's a leap of faith equivalent to jumping over the Grand Canyon.

The Only Data of Importance

Hi-tech research labs are something to behold. They're always packed to the gills with sophisticated equipment, cabinets full of reagents, and shelves loaded with all kinds of fancy glassware.

It was enjoyable having a lab, where I or my graduate students could measure just about anything we could imagine.

The same goes for longevity research labs.

However, all those highfalutin scientific resources are only capable of measuring *longevity surrogates*, not longevity itself. At least not in humans.

They should instead measure the one type of data of most importance for assessing longevity: **all-cause mortality**.

Longevity is best measured directly by... well, longevity itself. If a treatment (e.g., diet) or innate factor (e.g., a genetic variant) leads to lower mortality, then it's lifespan-enhancing. If it leads to higher mortality, then it's lifespan-reducing.

As I mentioned in my report, *How to Age Well in Spite of Modern Medicine*, all cause mortality is the most important measuring stick for any longevity study. (If you didn't get your copy, please send me a request for it to: boomerhealthcenter@gmail.com. I'll zap it off to you as soon as I see your note.)

Keep that in mind as you read anything about longevity research.

If the goal is discovering what helps you live longer and healthier, there's no better 'indicator' than all-cause mortality.

LONGEVITY DIET BOOKS AND RESEARCH

The top books on longevity back up their health claims based on published research, whether it entails observations of all-cause mortality or data from lab experiments.

In my opinion, such books are a cut above the rest. Providing scientific citations is especially gratifying for me because I like to verify claims by looking at the original research behind them.

The credibility of a book also depends somewhat on the author's research experience. If the author is a published researcher, so much the better.

Medical doctors, nutritionists, and other health professionals also have a certain amount of credibility.

The least valuable type of data are testimonials or anecdotes. It may be true that, according to some centenarians, their long lifespans were due to a shot of good whiskey every morning. We'll never know for sure.

As silly as that seems, if you look at what's behind quite a few diet books, they're mostly supported by individual observations – i.e., they're based on anecdotes and testimonials.

What to Expect

All longevity diet books share many features.

- First and foremost, they advise you on what foods to eat.

This is, after all, supposed to be the core information in any diet book.

- They're stuffed with 'filler' material.

This entails fluffing up a book with "extra" information to reach a price point for a 250-page goal or so. Fluff includes multiple pages of recipes, maybe a whole section of tables listing nutrient content of different foods, a number of personal

success stories (i.e., anecdotes), and frequent ‘bragging’ (i.e., author self-promotion citing professional expertise for ‘why you should believe me’ commentary).

- They make claims about being unique somehow.

Uniqueness claims may include a special anti-aging supplement, a ‘new’ way to time your meals, a selection of prepared-for-you meals, or the addition of a longevity-enhancing exercise program.

Let’s look into one of the more recent example books to see how all that can add up.

The example I’ve chosen is one of the top newer longevity diet books, *The Longevity Diet: Slow Aging, Fight Disease, Optimize Weight* (2019) provides all that filler along with its actual dietary advice.

The author, Dr. Valter Longo has the right chops for it, too - Professor at the University of Southern California and Director of the Longevity Institute at USC.

Prof. Longo clearly knows a thing or two about longevity. You can tell because he often says so throughout his book.

He does have an excellent track record of published scientific articles. As stated on his personal website, his studies, “...focus on the fundamental mechanisms of aging in simple organisms and mice and on how these mechanisms can be translated to humans.” In other words, experimental studies.

Note that, as I mentioned above, such experimental studies of aging mechanisms don’t really measure longevity in humans.

As for the actual dietary recommendations, he leans quite a bit on stories of growing up in Italy and the diets of the longest-living folks where he was raised.

He also tells his personal story of how he arrived at his chosen profession.

Besides such storytelling, which is fun to read, in addition he includes other typical fillers in his book. Food nutrition tables and recipes make up the bulk of it.

And an arm-waving set of recommendations about exercise not rooted in any kind of research. (This is a very common feature of diet books.)

When it comes to uniquenesses, Dr. Longo offers something he created called the “Fasting-Mimicking Diet” for enhancing longevity. (I’ll have more to say about that below.)

So let's take a look at what he's got to say and where I think his views could use some upgrading.

‘The’ Longevity Diet Itself

Prof. Longo’s basic longevity diet for adults is pretty straightforward. (It’s a bit different for children and for pregnant or lactating women.)

Summary of the key points, with a bit of my commentary [in brackets]:

- Eat mostly vegan, plus a little fish, limiting meals with fish to a maximum of two or three per week. Choose fish, crustaceans, and mollusks with a high omega-3, omega-6, and vitamin B₁₂ content (salmon, anchovies, sardines, cod, sea bream, trout, clams, shrimp). Pay attention to the quality of the fish, choosing those with low levels of mercury.

[The human GI tract isn't very well built for digesting lots of plant material. It's too short. Dr. Longo’s favorite go-to ‘bulk food’ for vegan eating is pasta. This is a poor food choice in many ways. Furthermore, eating a 'little fish' 2-3 times a week is inadequate. (More on that a little later.) Mercury isn't as big a problem as generally thought, since it's packaged in less toxic forms in whole foods. In addition, the key mineral for detoxifying mercury, selenium, is plentiful in seafood.]

- If you are under the age of 65, keep protein intake low (0.31 to 0.36 grams per pound of body weight). That comes to 40 to 47 grams of protein per day for a person weighing 130 pounds, and 60 to 70

grams of protein per day for someone weighing 200 to 220 pounds. Over age 65, you should slightly increase protein intake but also increase consumption of fish, eggs, white meat, and products derived from goats and sheep to preserve muscle mass. Consume beans, chickpeas, green peas, and other legumes as your main source of protein.

[It's difficult to overdo protein intake unless you're on an all-meat diet. The suggested numbers here emphasize the importance of regularly eating protein-rich foods. Fish, eggs, and meat are good choices. White meat is not necessarily better than red meat. Legumes (beans, chickpeas, green peas, etc.) contain lectins and phytic acid, which are anti-nutrients. (Even the widely known Paleo Diet looks askance at legumes for that reason.)]

- Minimize saturated fats from animal and vegetable sources (meat, cheese), and minimize sugar. Maximize good fats and complex carbs. Eat whole grains and high quantities of vegetables (tomatoes, broccoli, carrots, legumes, etc.) with generous amounts of olive oil (3 tablespoons per day) and nuts (1 ounce per day).

[Good fats are good fats, whether they're saturated, monounsaturated, or polyunsaturated. Hype about the dangers of saturated fats is misleading. 'Minimizing' saturated fats ignores how we metabolize different types. (E.g., those from coconut oil vs. those from lard.) Avoiding sugar is always good advice. Complex carbs can be many things. Some feed you, and others feed your gut bacteria. Whole grains are overrated, especially cereal grains. (Gluten from modern dwarf wheat is only part of the story.) Cold-pressed extra-virgin olive oil is the best - if you can get good quality from an industry that's been taken over by the Mafia. (California sources are more reliable than imports.) Most nuts should be fine if they're uncooked. (By the way, peanuts are NOT nuts - they're legumes.)]

- Follow a diet with high vitamin and mineral content, supplemented with a multivitamin buffer every three days.

[This is a no-brainer. The challenge is to find nutrition-rich foods in the first place. Food quality has taken a nosedive over the past few decades due to industrial agricultural practices. Taking a 'multivitamin buffer',

whatever that is, every three days makes little sense. You may need supplements **every day**.]

- Select ingredients among those discussed in this book that your ancestors would have eaten.

[You may be able to do this **IF** you consume only undomesticated or wild-raised animals and heirloom plants. There's very little modern food on the market resembling anything our ancestors would have eaten.]

- Based on your weight, age, and abdominal circumference, decide whether to have two or three meals per day. If you are overweight or tend to gain weight easily, consume two meals a day: breakfast and either lunch or dinner, plus two low-sugar (less than 5 grams) snacks with fewer than 100 calories each. If you are already at a normal weight, or if you tend to lose weight easily or are over 65 and of normal weight, eat three meals a day and one low-sugar (less than 3 to 5 grams) snack with fewer than 100 calories.

[The concept of eating three meals a day is a modern one. Its creation leads to one of the main bugaboos for longevity. Eating too frequently undermines your ancient cellular garbage removal system (termed: **autophagy**). Snacking makes it worse. The comment about consuming two meals a day if you're overweight harks to the old-time 'sloth hypothesis'. It implies you gain weight by eating too much (i.e., slothful). It's fundamentally a failed hypothesis. Oh, and selecting foods based on their caloric value is so simple-minded that it's ridiculous. Calories are a measure of heat, which we don't metabolize.]

- Confine all eating to within a twelve-hour period; for example, start after 8 a.m. and end before 8 p.m. Don't eat anything within three to four hours of bedtime.

[Highly recommended concept. If anything, I'd shrink the eating window to around 8 hours, thus giving you an overnight fasting period closer to 16 hours. Never, ever, **EVER** eat just before bedtime.]

- Periodically practice the 'Fasting-Mimicking Diet' (FMD).

[FMD capitalizes on established research about the value of fasting for healthy longevity. The particular approach created by Prof. Longo consists of extensive food restriction for a period of up to 5 days at a time. Thus, it supposedly provides the benefits of fasting (e.g., autophagy) without actually fasting. It's an appealing concept – it's like getting something (fasting benefits) for nothing (not really fasting).]

Why a Fasting-Mimicking Diet?

Fasting is supposed to mean no food at all. Humans are well adapted to it because it reflects how we evolved to handle food-free or low-food periods as hunter-gatherers.

Periods of fasting allowed our ancestors to fully benefit from the removal of cellular trash that now plagues our 'never go hungry' modern lifestyle.

The concept fasting for health and longevity was behind the development of 'calorie restriction' (CR) hypothesis. It's creator was Roy Walford, MD, at the UCLA School of Medicine.

Dr. Walford discovered that laboratory mice could almost double their lifespan by reducing their food intake by 50%. He eventually modified the recommendation to a one-third reduction in food intake.

This is equivalent to putting a meal on your plate, then eating only two-thirds of what's there.

And it worked fabulously – on yeasts, nematodes, fruit flies, and those lucky mice.

Ramping up to humans, however, was more challenging. First off, our closest primates (various species of monkeys), did live longer in some CR studies, although not in all of them. Contradictory results seemed to be explained by differences in genetics and food composition.

Second, different diets all shared one feature: they were highly processed. For you, eating that way would mean only consuming prepackaged foods. Oh, yummy!

Third, when the same program was applied to humans, the biggest challenge was compliance. A telling comment by Dr. Walford himself explained this when he said (during an interview on *60 Minutes*), “I’m hungry all the time.”

A very telling comment also came from Prof. Longo, who worked in the Walford lab early in his graduate studies. As Longo explained in his book, Prof. Walford spent two years as a volunteer in the 2-year Biosphere 2 study of people living a self-sustainable lifestyle indoors. Biosphere 2 (i.e., a ‘second’ Earth) was built to duplicate Earthly living (which it could never do).

What Longo said about his mentor upon the reemergence of the volunteers after 2 years was the appearance of being thin, frail, and angry. All volunteers looked that way.

Gee, who wouldn’t want to live like that? Yup, compliance is a big issue on CR.

This was the impetus for the Fasting-Mimicking Diet. A main perk is claimed to be the absence of hunger. Mostly, anyway.

The FMD is still challenging. As with most diet programs, compliance is somewhat difficult. In addition, it’s so harsh that you’re supposed to do it only under a doctor’s supervision. And only then a few times a year, maximum. You’re also encouraged to buy prepared foods under the brand name ProLon®. It’s a 5-day ‘Nutri-Technology’ program costing about \$170 for foods that are supposed to help you reap the benefits of a prolonged fast (>3 days) without actually fasting.

What’s also very interesting about the FMD is who is supposed to do it and who’s not. Most telling regarding longevity is the recommendation for doing the FMD by healthy, normal weight adults between the ages of 18 and 70 years old. It’s not recommended beyond the age of 70!

One more thing ... although this isn’t supposed to be a drawback ... is the recommendation to undertake the FMD only under a doctor’s supervision and only a few times a year.

I don't know about you. However, if I'm supposed to get my Harvard-trained family doctor (with little or no nutritional education) to supervise my diet, I'm already in trouble.

Another thing is, we need autophagy to be optimal every day, not just a few times a year. Aging proteins and other old cell parts are being continuously degraded and have to be constantly removed and replaced. Autophagy clears the way for all that to happen.

And that depends on regular fasting – not mimicking fasting once in a while.

Fortunately, neither CR nor FMD are necessary to achieve healthy autophagy. What you can do – and should do – instead is capitalize on your autophagy system the way Mother Nature intended it.

This means more frequent fasting for shorter periods of time. The field of study referring to this strategy is called Intermittent Fasting (IF). I'll have a lot to say about IF later, since it's one of the most common missing elements of all so-called longevity diet books and 'blue zone' surveys.

As you'll see, IF is simple and easy to do. I've learned how to do it with minimal suffering. (Actually, none at all once I got used to it.)

The Federal Longevity Diet

Lest you think your government hasn't got your back, think again. You can see a lengthy set of federal recommendations behind the USDA's published longevity diet whose title hits the nail squarely on the head. It's a 280-page report that came out in 2020, titled, "[Dietary Patterns and All-Cause Mortality: A Systematic Review](#)."

You can download it at that link at no charge.

If you decide to dig into it, keep in mind these are the same folks who foisted that horrible food pyramid on us back in the 1970s. You know, the one whereby eating according to it would make you look like a pyramid.

And the 'upgrade' – [ChooseMyPlate](#) – was only slightly better. (It got a lot of initial traction when then First Lady Michelle Obama endorsed it.)

Since the USDA report is a review of published articles, recommendations were a sort of 'average' of multiple studies (153 of them, to be exact).

While it's full of tables and commentary about the source articles, two basic recommendations stand out. They are:

- Strong evidence demonstrates that dietary patterns in adults and older adults characterized by vegetables, fruits, legumes, nuts, whole grains, unsaturated vegetable oils, and fish, lean meat or poultry when meat was included, are associated with decreased risk of all-cause mortality. These patterns were also relatively low in red and processed meat, high-fat dairy, and refined carbohydrates or sweets. Some of these dietary patterns also included alcoholic beverages in moderation.

And...

- Insufficient evidence was available to determine the relationship between diets based on macronutrient distribution and all-cause mortality.

This is more or less a Dr. Oz-ish diet. At first glance it seems like a good approach. (Keep in mind that, as a health guru, Dr. is a good cardiothoracic surgeon.)

Regarding...

The best parts of the federal recommendations are shared with all good diets, for longevity or otherwise.

Right at the top is the reduced consumption of refined carbohydrates or sweets. These recommendations fly in the face of the sugar lobby – you ought to see what contortions those folks undergo to claim sugar isn't a health problem. Ditto for the refined flour folks. (There was once a 'cookie diet' – I'm not making this up.)

The recommendation about consuming fish points in the right direction. However, the value of seafood is always – ALWAYS – understated. (I'll explain why later.) And the danger of mercury is always overstated.

Following a diet low in processed meat is generally good advice. If you've ever seen how hot dogs are made, you'd probably never let a mouthful of that junk pass your lips again. The additives in processed meats are mind-boggling. Dyes, preservatives, sugar and lactose (!), and even something called 'meat glue'.

Good grief!

However...

Note that the federal longevity diet, like most such 'health' diets, also includes several of the usual suspects that aren't really that beneficial for you: legumes, whole grains, 'unsaturated' vegetable oils, and lean meat lead the way.

- **Legumes.** Note my comments above about their antinutrients.
- **Whole grains.** Cereal grains, led by modern dwarf wheat, are a dietary abomination. It doesn't matter one whit whether they're 'whole'. This is such a huge topic that I'll just point out the two best books explaining why: [Wheat Belly: Lose the Wheat, Lose the Weight, and Find Your Path Back to Health](#) by William Davis and [Grain Brain: The Surprising Truth about Wheat, Carbs, and Sugar--Your Brain's Silent Killers](#) by David Perlmutter.

Other cereal grains (corn, rice, barley, rye) are not much better. Non-cereal grains (e.g., quinoa, amaranth, buckwheat) would be a big improvement for a healthy diet.

- **Unsaturated vegetable oils.** You can see the vegetable oil lobby's hand in this recommendation. Most commercial vegetable oils are just plain over-refined crap. They're highly processed. You didn't think the rich, consistent golden color of Mazola corn oil was natural, did you?

And they contain additives not even required to be listed on the label. Bromine is one of the worst. (By the way, brominated vegetable oil [BVO] is in just about everything – even certain sodas. Its use is banned in Europe and Japan. The U.S. is 'considering' banning it.

Meanwhile, due to popular demand [maybe], PepsiCo finally removed it from Mountain Dew. It was in *Mountain Dew!* Yeesh!)

All commercial vegetable oils contain unsaturated fats, just different ones in different amounts. The key issue is their omega-6 fatty acid content.

We have a fundamental dietary need for certain kinds of fatty acids. These are the so-called 'essential' fatty acids because our bodies don't make them. Two categories stand out: the omega-6 and omega-3 fatty acids. We are adapted to consume them in a certain ratio, between 4:1 and 1:1, omega-6 to omega-3. The frequent consumption of commercial vegetable oils has brought the average ratio in our culture to around 20:1. Since omega-6s feed the formation of inflammatory hormones, a high O6:O3 ratio is highly inflammatory. It puts aging on the fast track.

- **Lean meat or poultry.** If the quality of meat depends on its nutrient content, then lean meat or poultry are poor choices. Meat nearly always means skeletal muscle meat – beef steaks, chicken breast, etc. The most nutritious meats are actually organ meats – liver, heart, pancreas, tongue, brain, lungs, kidneys, gizzards, and even eyes. Most of these aren't routinely available in typical supermarkets. (Just look at the surprise on your butcher's face if you ask about eyes!)

What About Macronutrient Distribution?

Diet experts across the board all seem to have a perspective about what proportions are best among the Big 3 macronutrients: carbohydrates vs. fats vs. proteins.

Low carb or high carb? Low fat or high fat? Low protein or high protein?

If you're feeling confused, the second comment above from the federal longevity diet review won't help:

Insufficient evidence was available to determine the relationship between diets based on macronutrient distribution and all-cause mortality.

In other words, the ongoing controversy about proportions of carbs vs. fats vs. protein is supposedly a moot point.

That should put all those low-carb/high-carb, low-fat/high-fat, low-protein/high-protein gurus in a tizzy.

Hold that thought, though, because...

Neither the feds nor the diet gurus have a clue about how food metabolism changes with seasons and latitudes. Without going into details, I'll just say explaining why would involve a deep dive into the quantum physics of food electrons.

(**Electrons** are what we get out of foods for supplying energy, not calories.)

Since quantum physics is a pretty scary topic, just consider these two extremes: 1) high-carb eating is just fine on the equator, where it's basically summer all year round; and, 2) high-fat eating best serves folks in mid-winter above about 50 degrees north latitude.

Those two situations emphasize the close relationship between diet and sunshine. We get electrons from the food we eat and the sunshine we're exposed to.

Less sunshine translates into a need for more food electrons, which are most available in a high fat diet.

More sunshine translates into plenty of metabolic energy even when the weakest source of food electrons – i.e., carbs – is the main macronutrient.

If you're reading between the lines, those extremes matter only when you live or spend as much time as you can **outdoors**. With indoor living, all bets are off.

The bottom line is, you can do great when you eat in winter like an Inuit – seafood, seal blubber, caribou [no fruits or veggies whatsoever] – and you live like an Inuit, in the dark cold of winter.

And you can do great when you eat in summer like a native Hawaiian – fresh tropical fruits, starchy roots – and you live like an ancestral Hawaiian,

outside in the sun. (The popular ‘pig roast’ luau feast isn’t ancestral; pigs were first introduced to the islands by Polynesians only around 1,500 years ago.)

It all means the feds are right – i.e., by itself, generalizing macronutrient proportions says nothing about health or longevity.

However, considering macronutrient proportions by themselves is, at best, uninformative.

So, yes, macronutrient proportions do matter – depending your latitude.

How about seasonal variation?

To start with, humans harbor ancient hibernation genes. They were passed down from mammals who hibernated to survive the extinction event that destroyed the dinosaurs about 65 million years ago.

You can still capitalize on those ancient genes, without going into a 6-month long winter sleep. Eating seasonally like a hibernating mammal will do it.

In a practical sense, it just means eating proportionally more carbs in spring and summer, and more fats in fall and winter.

You’ll build up storage fat in spring and summer, then burn it off through wintertime.

Eating seasonally like that will cause your weight to fluctuate. It can go up by as much as 10 pounds as you prepare for winter, and drop back down as your body ‘emerges’ into spring.

This is basic human biology. Unfortunately, as far as I know, not a single diet book has ever mentioned it.

By the way, if you’ve ever been on a weight loss program, you may have noticed a bit more difficulty dropping pounds in spring and summer than in fall and winter.

Now you know why.

TRADITIONAL LONGEVITY DIETS

As you can tell by now, different sources of information about how to eat for a healthy longevity share some good points. And some not so good points.

Validating such modernized advice by looking into diets of people who live the longest would seem to be useful. This is why cultures where populations have a high proportion of nonagenarians and centenarians have attracted so much attention.

It all seems logical – until we actually examine their diets.

The following examples show how variable they can be:

The Swiss of the Loetschental Valley

Generous amounts of hand-milled rye bread, extraordinarily nutritious dairy products (typically as raw cheese), meat about once per week, small amounts of butter and raw milk, and an assortment of vegetables (fresh in the summer, stored in the winter).

The Gaelics in the Outer and Inner Hebrides

Rich in oat products (porridge and oat cakes at nearly every meal), ample seafood (mainly fish, lobsters, crabs, oysters, and clams), various vegetables (fresh in summer, stored in the winter).

An important dish was cod's head stuffed with oatmeal and chopped cod livers.

Yummy!

The Eskimos of Alaska

Liberal amounts of seafood – especially high in organ meats from various sea animals, plus fish, seal oil, seal meat, whale meat, and fish eggs. Also caribou. Plant foods were sparse. When available, they included summertime cranberries kelp, sea grasses, bulbs,

ground nuts and flower blossoms preserved in seal oil. Some plant foods were saved for winter.

The Native American Indians of the Rocky Mountains

Wild game (mostly organ meat from moose and caribou; not much skeletal meat), tree bark and buds, and some summertime vegetation.

The Melanesians and Polynesians on South Pacific Archipelagos

Rich in shellfish and finfish, plenty of tubers and tropical fruits. A staple included starchy taro roots (actually, corms), plus tender taro leaves.

The Tribes of Eastern and Central Africa

Sweet potatoes, beans, corn, millet. Fish when available from nearby waters, various wild animals, domesticated goats and cattle for meat and dairy, and a variety of insects (especially ants and locusts).

Bugs! Again, yummy!

The Australian Aborigines

Native plants and wild animals (especially wallabies, kangaroos, rodents and other small mammals). Seafood when living near the ocean.

The Maori of New Zealand

Lots of shellfish, plus muttonbirds and plenty of tropical fruits and vegetables (e.g., fern rhizome).

The Malay Tribes on Islands North of Australia

Abundant seafood, including sea cow (a mammal), plus tropical roots, greens, and fruits.

The Indians of the Andean Highlands

An abundance of potatoes, llama meat, and guinea pigs. Also dried fish eggs and kelp.

Missing Variables

Examining longevity diets around the world clearly does not explain why there's so much variability. Sure, you'd expect some differences based on available food choices.

Coastal cultures eat more seafood. Mountain or inland cultures eat more terrestrial animals. Plant-based foods vary similarly.

The proportions of animal-based vs. plant-based foods also vary widely.

A quick look-see at these diets for comparison with modern longevity books points to a glaring weakness in longevity diet advice – i.e., it routinely fails to account for the many lifestyle differences between 'blue zone' cultures and our own.

Outdoor vs. indoor living should be considered right at the top of the list. Yet it's never accounted for. Likewise for seasonal eating and location (latitude).

Other kinds of missing information can also have a huge impact on health.

For example, the high nutrient density of dairy in the Swiss diet relies on cattle that feed on springtime grasses. This is high-nutrition food for cattle, which transfers to high-nutrition meat and dairy. In comparison, a diet relying as we now do on modern beef and highly-pasteurized dairy from grain-fed cattle is severely nutrition-deficient.

In addition, the highly touted Mediterranean diet doesn't really represent the popular concept of how people are reported to eat on the Greek isle of Crete. The spectacular health and amazing longevity of that culture depend on a religion-based eating style that entails frequent fasting, totaling just over 180 days year. It includes abstinence from olive oil, all animal products except shellfish and snails, and alcohol during religious fasts. Therefore,

food alone does not explain the health and longevity associated with the so-called Mediterranean diet.

Without changing your lifestyle to live like the Cretans, the value of the Mediterranean diet for you is just so much pie-in-the-sky arm waving.

Then, of course, the lifestyles of all those cultures above reflect human circadian rhythms.

No diet, however 'perfect' it may be by any definition, can overcome the negative consequences of living a circadian mismatched lifestyle.

Likewise for the other three factors I explained in my report on How to Age Well – i.e., good sleep, plenty of sunshine, and avoiding blue light toxicity.

HOW ABOUT 'ANCESTRAL' DIETS?

Hoo-boy! Evaluating ancestral lifespans is a big can of worms. The supposed average lifespan of pre-agricultural ancients was 20-35 years. That number stays pretty consistent as recently as the 18th century.

For more recent calculations, researchers can evaluate lifespan data from pretty good records going back a couple of centuries. Still, factoring in huge mitigating influences such as disease prevalence and infant mortality can be challenging for accuracy.

Data on ancient cultures are even harder to come by. We just don't have access to full obituaries going back millennia. There's no *Neanderthal Gazette* or *Cro-Magnon Daily* for extracting numbers on ancient lifespans.

However, we can look at diets of indigenous cultures to see what people ate before adopting agriculture. From there it's a leap of faith that such diets were good for health and longevity.

With all those caveats, what kind of diets are we talking about?

What Did They Eat?

The most comprehensive survey I know of about ancient indigenous diets was published by Dr. Weston A. Price in the early 20th century. His 1939 publication is still available online in pdf format (and it's fascinating reading - highly recommended!) here: [Nutrition and Physical Degeneration: A Comparison of Primitive and Modern Diets and Their Effects](#).

A HEADS UP: The pdf file is pretty big - ca. 5.7 MB for the 445-page book. If you're more old-fashioned, like me, you may prefer a hard copy. Amazon, bless their pea-pickin' hearts, offers a modernized version [here](#). If you want to buy a used copy, they start at around \$18 (new is just under \$28).

The food selections from these old-time cultures might make your mouth water (they certainly do for me!).

The basic list recommendations from Price's updated report are:

- Eat beef, lamb, game, organ meats, poultry and eggs from pasture-fed animals.
- Eat wild fish (not farm-raised), fish eggs, and shellfish from unpolluted waters.
- Eat full-fat milk products from pasture-fed cows, preferably raw and/or fermented, such as raw milk, whole yogurt, kefir, cultured butter, full-fat raw cheeses and fresh and sour cream.
- Use animal fats, such as lard, tallow, egg yolks, cream, and butter liberally.
- Use only traditional vegetable oils - extra virgin olive oil, expeller-expressed sesame oil, small amounts of expeller-expressed flax oil, and the tropical oils -- coconut oil, palm oil, and palm kernel oil.
- Eat fresh fruits and vegetables, preferably organic. Use vegetables in salads and soups, or lightly steamed with butter.
- Use whole grains, legumes and nuts that have been prepared by soaking, sprouting or sour leavening to neutralize phytic acid, enzyme inhibitors and other anti-nutrients.
- Include enzyme-rich lacto-fermented vegetables, fruits, beverages and condiments in your diet on a regular basis.
- Prepare homemade stocks from the bones of pastured chicken, beef and lamb fed non-GMO feed, and wild fish, and use liberally in soups, stews, gravies, and sauces.
- Use filtered water for cooking and drinking.
- Use unrefined salt and a variety of herbs and spices for food interest and appetite stimulation.
- Make your own salad dressing using raw vinegar, extra virgin olive oil, and a small amount of expeller-expressed flax oil.
- Use traditional sweeteners in moderation, such as raw honey, maple syrup, maple sugar, date sugar, dehydrated cane sugar juice and stevia.
- Use only unpasteurized wine or beer in strict moderation with meals.

I'm sure your sharp eyes noticed some things that Price couldn't have said in his book. They're modern updates at the Weston A. Price Foundation, [here](#).

For example, filtered water wasn't a thing back then. Neither was stevia, except in the Amazon Forest where it's a native plant. Ditto for 'non-GMO' feed for domestic animals.

Oh, and good luck finding anything that's unpasteurized these days. (As far as I know, selling unpasteurized dairy is banned in the U.S. at the federal level.)

Or you could have your own dairy animals. (Not in my HOA, though!) And as for beer and wine ... well, making your own isn't too difficult.

A few key points about the list include:

- **Organ meats.** The greatest source of nutrition from meats is in the organs. If you're thinking steaks *inter alia* (steaks, ribs, loins, chops, roasts, etc.), think again. Skeletal muscle tissue is the least nutritious part of an animal. Some of the cultures Price surveyed let the folks lowest in tribal status have those tissues. These days, that's pretty much what we get in supermarkets. Liver is the most common organ meat you can find. You have to hunt for other organs - pancreas, heart, tongue, etc. [Brain is out, driven by fear of mad cow disease.] The most nutritious 'organ' meat would be eyeballs - I'm not kidding! They're packed with DHA [see below]. (Good luck finding them at your local Safeway, unless you can get whole fish heads and pluck out their eyes – they're delicious! [You can sometimes get fish eggs, though – which are just as good.])
- **Fish.** Human brains are relatively huge for our body size. They evolved to grow so large by running on cellular 'batteries' made from a membrane-spanning fatty acid called DHA (docosahexaenoic acid). The most common dietary sources are oily fish. (Unless you can eat like a whale and filter-feed on dietary krill or phytoplankton.) Eating fish once or twice a week is inadequate. So are fish oil supplements, since the native form of DHA gets altered when it's isolated from its whole food sources. Worries about too much mercury from seafood are unfounded, for two reasons: 1) mercury is 'packaged' in less toxic forms in whole foods; and, 2) seafood also provides selenium, which helps to detoxify mercury. And the best sources of seafood-based DHA? Again: eyeballs and fish eggs - again, not kidding!

Basically, a healthy human is a fathead. And the best fat for keeping the brain running well is DHA from seafood.

- **Fresh fruits and vegetables.** Local, indigenous-style eating was seasonal and latitudinal. Your style should be, too. You're adapted to what and when foods grow where you live. They change with seasons and with latitude. Eating bananas at the equator is okay any time of the year. Doing so in New York in January is a no-no. In fact, if you live north of about 50-degrees latitude, your best eating style would be closer to old-time Inuit diets - i.e., all animal-based and nearly no plants. Whale blubber and reindeer organs anyone?
- **'Traditional' vegetable oils.** Which oils were consumed depended on location. Tropical oils in the tropics. Olive oil in the temperate Mediterranean, etc. Modernizing this component of diet means choosing wisely among commercial oils, not all of which are good for you. In fact, most aren't.
- **Pre-treat grains, legumes, and nuts.** It would be easiest to just avoid them. However, if you must have them, the pre-treatments discovered in Price's surveys can diminish the effects of their anti-nutrients.
- **Lacto-fermented foods.** This is one of the best all-time components of healthy eating. And they're super easy to make. (See, for example: [How to Ferment Vegetables in Three Easy Steps](#).) Just let Mother Nature do her work. By the way, if you're in the supermarket looking for fermented foods, make sure they still contain live cultures. If they're in the refrigerated section, they probably do. The food label should say so. Avoid crap like unrefrigerated sauerkraut, etc.
- **Make your own salad dressing.** Food labels on salad dressings represent a food chemist's dream world. Unfortunately, they can contain a litany of junk you should never put in your body. Good ingredients such as raw vinegar and extra virgin olive oil are easy to come by. And if you're in the mood for mayonnaise, all you have to do is combine them with egg yolks for a great DIY recipe (Here's how: [How to Make Homemade Mayonnaise](#).)

Is It the Best Longevity Diet?

Probably.

As I've mentioned many times, the health and longevity benefits of your diet depend on much more than the food you eat.

Nevertheless, updating the food choices of the 'ancients' to incorporate their modernized versions as best you can is a good step forward. In addition, some of the nutritional deficiencies of our modern foods can be overcome by supplements.

And adhering to the four healing factors I explained in my *How to Age Well in Spite of Modern Medicine* report are foundational for longevity. They go hand in hand with all healthy eating styles.

One more thing, which I just barely touched on, is the role of fasting.

Some longevity diet books mention it, and some don't. In Prof. Longo's book discussed earlier, its role became so obviously important that he created a new strategy (the Fasting-Mimicking Diet) to harness its value.

However, we don't need a new strategy. Many years of published research studies already provide all the information necessary for adopting appropriate fasting. As I mentioned previously, this area of study is called **Intermittent Fasting**.

Intermittent Fasting: The Longevity Accelerator

Any of the longevity diets presented here should be good for you, especially if you keep in mind those lifestyle recommendations (and 'un'-recommendations) I outlined earlier.

Now, if you really want to take your lifespan to the top, practicing IF must be a regular part of your life. If your ancient ancestors didn't eat three meals a day (and snacks) every day of the week, then neither should you.

Fasting is in your DNA.

Now get this:

All of the major Diseases of Civilization – cardiovascular disease, diabetes, obesity, cancer, arthritis, metabolic syndrome, you name it – are caused by or made worse by lifestyle choices. Modern medicine only offers drugs and similar short-sighted treatments that will not make you healthy. Instead, the single most important lifestyle choice for preventing and even reversing DOCs is your eating pattern, specifically how often and how long you fast. The more science examines the effects of intermittent fasting (IF), the clearer it becomes that this is a crucial component of a long and healthy life.

How long you fast can vary. The most common period for IF is about a day – i.e., 18-24 hours. Research shows 18 hours of fasting to be about when benefits start to add up. And they level off beyond about 36 hours.

When done successfully, here's what you can expect from IF:

- Reduces body fat and body weight
- Helps build and maintain skeletal muscle mass
- Reduces blood glucose levels
- Reduces insulin levels
- Increases insulin sensitivity
- Increases lipolysis (fat breakdown) and fat oxidation
- Increases Uncoupling Protein-3 mRNA
- Increases adrenaline and noradrenaline levels
- Increases glucagon levels
- Reduces chronic systemic inflammation from food-related stress
- Increases cellular cleansing
- Increases growth hormone levels (the biggest benefit of all?)

Some of those items may seem a little technical. However, they show how important IF is in health research. Scientists do not do research just for the fun of it. They choose subject material because of its importance as reflected in the grant money that they can get for doing it. In other words, IF research is big.

Many Strategies for Intermittent Fasting

Research on IF entails different periods of fasting, although studies do not really compare different periods directly in the same experiment. It's left to us to dig into the results and decide what seems to be the best approach. Here is what we can surmise so far:

DAILY FASTING. A period of 4-5 hours is a requisite minimum fasting period between meals. The time between dinner one evening and breakfast the next morning is also a crucial 12-14 hour period for non-eating. This daily meal spacing pattern provides the optimum health benefits for your eating style. Note that it demands no snacking between meals, ever.

By the way, what we know about the health benefits of eating patterns highlights the *utter idiocy* of advice to eat several small meals per day. Do not believe such nonsense. Never eat that often. Do not snack between meals. **The worst possible thing you can do for your health, based on eating, is eat too often.**

Remember, the concept of eating '3 square meals' per day – breakfast, lunch, dinner – is a modern one. You do not have to eat 3 meals a day to be healthy. In fact, optimum health requires that you eat no more than 1-2 meals per day.

WEEKLY FASTING. This is where IF truly comes into its own. It's based on once per week, or more often, of non-eating for a period of about 24 hours. The minimum timeframe seems to be 18 hours. The maximum, on the other end, is about 36 hours of fasting. Fasting fewer than 18 hours undermines health effects, and fasting for more than 36 hours doesn't really add much. The target period can therefore be simplified by a 'dinner to dinner' fasting period. Eat dinner one night, then fast until dinner the next night.

Biology of Intermittent Fasting

We have about 30,000 genes in every cell nucleus. They're basically responsible for: 1) getting things made; 2) making sure that whatever gets made works right; and, 3) getting rid of or recycling old used up parts. Steps 1 and 2 have attracted the most attention over scientific history.

However, step 3 has recently become one of the hottest topics in scientific research over the past couple of decades.

Step 3, of course, means autophagy. Cells come and go. Proteins, hormones, even DNA itself, and other products of normal metabolism come and go. The cellular garbage system makes sure that everything that is old and worn out gets removed so that it doesn't hamper the ongoing building processes for new stuff. If too much garbage hangs around too long, then cells are unable to function properly. Such cellular dysfunction is the foundation upon which the Diseases of Civilization rest.

PubMed, the medical database at the U.S. National Institutes of Health, lists the first publication on autophagy as appearing in 1965. Since that time, more than 18,000 research articles have addressed this topic, nearly 17,000 of which have been published in just the past decade.

Yes, indeed, this is a **SUPER-HOT** research topic.

The driving force behind all this research intensity is the importance of autophagy in almost everything that impacts human health. Basically, a well-functioning autophagic system enables healthy metabolism. A poorly functioning autophagic system does just the opposite.

This is where IF comes to the rescue.

Some of the research on boosting autophagy also cites the benefits of a 'caloric restriction' (CR) eating style, which I mentioned earlier when discussing Prof. Longo's book. This means eating less at every meal – a lot less. Typical CR means eating two-thirds of what you normally eat. Some folks can do this, although most won't. Even the CR specialists admit that they're hungry all the time.

To be complete, therefore, keep in mind that IF is not the only way to boost autophagy. CR will also do so – if you can take it.

Most of the benefits of IF and CR are comparable. One of the main differences is a biggie, though: IF generally boosts fat metabolism better.

With that in mind, let's take a look at a recently published update on the comparative autophagy-boosting benefits of IF and CR. Some of these

effects are still only known in lab animals, which extrapolate to humans in ways that are not yet fully understood.

- Lengthen lifespan by up to 30 percent
- Provide resistance to diabetes
- Inhibit formation of cancer
- Prevent neurodegenerative diseases
- Enhance the effects of endurance exercise
- Protect against tissue injury and disease
- Boost maintenance of muscle mass
- Selectively metabolize fat (IF, not CR)
- Experience fewer side effects of chemotherapy
- Arrest brain cancer (single case study)
- Improve symptoms of asthma
- Ameliorate measures of cardiovascular risk

The list of benefits from IF continues to build.

Let's not be too delicate or technical here now:

- If you eat less often and incorporate IF into your lifestyle, you can expect to be healthier and live longer.
- If you eat too often, you can expect to suffer from an increasing number of DOCs all the way to the end of your shortened life.

Individual Results May Vary

This is an important catchphrase that drug and supplement companies use for wiggling out of poor treatment outcomes for some people. The truth is, however, that a gazillion things interact to make you unhealthy – anything from hormone imbalance, a toxic environment, poor sleep, to ineffective stress management, etc. Any one of them can undermine the expected benefits of IF.

The Role of Obesity

One particular factor that can torpedo almost everything you can do to be healthy, including IF, is obesity.

Being obese means you've lost control of autophagy.

The surprise about that is it's not related to food intake. It's actually dependent on the failure of one particular hormone to work properly. That hormone is the protein, leptin.

The primary leptin signal goes from fat cells to special receptors in an area of the brain called the hypothalamus. Once there, it communicates information about the amount of fat in storage.

It's how the brain controls fat metabolism.

However, when leptin is continuously overstimulated due to obesity (i.e., too much signal from too many fat cells), the receptors become tone deaf. This condition is described as **leptin resistance**.

And since leptin resistance is a fat-cell-to-brain signal failure, it pinpoints the cause of obesity as **brain inflammation** in the hypothalamus.

SIDENOTE: Diet books typically overlook this core explanation for obesity. They instead focus on eating less and exercising more, both of which fail to address the underlying leptin resistance. (In other words, they don't work.)

Can IF help with obesity? Maybe.

Success also depends on addressing leptin resistance.

I strongly encourage you to dig into the best source of information that I've discovered about leptin and how to manage it: the book, [Mastering Leptin: Your Guide to Permanent Weight Loss and Optimum Health](#) (3rd ed.) by Byron J. Richards and Mary Guignon Richards.

Dietary recommendations for reducing obesity and leptin resistance also address a slew of the Diseases of Civilization known to drive up all-cause mortality. The biggies are just what you'd expect: cardiovascular disease, diabetes, high blood pressure, and cancer.

If you want to get a head start, the best leptin-sensitivity accelerator is a short-term deep dive into a ketogenic (ketosis-inducing) diet. This approach was first popularized by the 14-day Induction Phase of the Atkins Diet.

It's simply to limit your carbohydrate intake to 20 grams or less every day.

You must keep track of your carb intake very carefully. You can also keep track of your level of ketosis at home with Ketostix Test Strips, available over the counter at many pharmacies.

As your level of ketosis increases, you will see phenomenal changes in your body. Your waist will shrink. Your weight will drop very fast ... which is mostly water weight at first. After a few days you will feel more energetic.

Once you complete the Induction Phase, you can slowly increase your carb intake to whatever level keeps you in ketosis. (It may be 40 grams a day, even up to 100 grams a day, depending on your metabolism.)

More On Ketosis

The key to staying in ketosis is your carbohydrate intake. Once you have achieved ketosis, during the 20-gram per day induction phase, you still must keep your carb intake low enough to hang around ketosis. Every cell in your body will benefit from it. Everything that you do to stay healthy will benefit from it. It is simply the way your body works best.

The question at this point is, how much carbohydrate can you consume and still remain in ketosis? Well, *individual results will vary*. However, it is very easy to monitor yourself with Ketostix. You will discover that you can slip out of ketosis within just one day of overdoing the carbs.

By the way, Ketostix measure one of the least impactful ketones (acetoacetate) on your health. The more impactful ketone during ketosis, beta-hydroxybutyrate, has to be measured by a blood test.

This is easy to do at home with a [KETO-MOJO Glucose & Ketone Testing Kit](#). This kit also provides blood sugar levels. It tells you immediately whether your ketone levels are increasing and your glucose levels are decreasing, as they should be when you're going into ketosis. And you get actual numbers, not just colors on a test strip.

How long should you stay in ketosis?

Whether a ketogenic diet is called for long-term depends on all the usual factors for seasonal and 'latitudinal' eating. (It will work better in winter than in summer.)

You may decide to live in ketosis permanently, which some people do with great success. Or you may practice ketosis for shorter periods, depending on how much you want out of it and how much you like a low-carb/high-fat eating style.

Frequency of Intermittent Fasting

It appears that the importance of IF increases with aging. In fact, it seems as though the older we get, the more frequent IF should be for staying healthy.

For example, folks in their 60s and beyond benefit most from IF when it is done 2-4 times per week. Or, up to the equivalent of every other day.

Indeed, there is nothing wrong at all with doing IF every day, as long as you eat well (i.e., Paleo-style, low carb) at every meal.

In my own personal experimentation – meaning, on myself – the best eating style is:

- 24-hour IF twice per week
- End each fasting day with a high-protein, high-fat dinner
- Start regular eating days with a high-protein, high-fat breakfast
- No lunch (never hungry after that kind of breakfast!)
- End regular eating days with a high-protein, high-fat dinner
- No between meal snacking; no after dinner snacking – **EVER**

That is an excellent recipe for a healthy 75-year old man (me) to stay in good health.

Can this eating style tolerate cheating?

Yes, of course.

Not so much if you are using it to reverse a health problem, such as type 2 diabetes. Cheating can set you back in a hurry if that is the case.

In contrast, I am very healthy and can get away with having beer at football tailgaters, cookies during the holidays, and my favorite See's chocolate on Valentine's Day and my birthday. My eating style gets me right back on track immediately, every time I fall off the wagon for a day or two.

COOKING: THE ELEPHANT IN THE DIET ROOM

Eating good food is wonderful. Knowing what's good and not so good in foods is crucial.

There are many thousands of toxic or non-nutritious ingredients in different foods. Sometimes they're natural (e.g., wheat gluten, lectins, phytates). Sometimes they're synthetic (e.g., preservatives, food dyes, flavor enhancers [think MSG]).

While diet books typically at least do some arm waving about them, 100% of such books totally whiff on the effects of cooking.

And it's a **HUGE** miss. No research on diets can be considered valid without considering the effects of cooking on food quality. Unfortunately, that's a missing variable in virtually all dietary research.

Therefore it's very important for you to understand what you do to influence the health benefits of your diet by how you cook your foods.

My focus on this topic starts and ends with two kinds of monumentally dangerous substances made from heating foods improperly.

They are...

AGEs and ALEs

These two abbreviations stand for *advanced glycation end products* (AGEs) and *advanced lipoxidation end products* (ALEs).

AGEs are formed by the non-enzymatic attachment of carbohydrates to proteins. Likewise, ALEs are formed by the attachment of fats to proteins.

All by itself that doesn't seem so bad. However, carbs and fats attached to proteins can become oxidized, thereby creating cellular debris that's difficult to metabolize.

Who am I kidding? They completely gum up the works inside your cells.

It's why these substances speed up aging and underlie many degenerative diseases, including diabetes, atherosclerosis, chronic renal failure, Alzheimer's disease, high blood pressure, stroke, osteopenia, and the formation of epithelial cancers (i.e., skin, blood vessel and organ linings, GI tract, etc.).

Unfortunately, scientific jargon about AGEs and ALEs has kept this all-important topic from becoming a popular subject on social media and at parties, picnics, and family gatherings. We clearly need a new term that the public can understand and talk about intelligently.

Since AGEs and ALEs represent oxidation gone amok, and since oxidation is a burning of sorts, I propose that we refer to them as *Burnt Crap in Foods* (BCFs). There, isn't that better? Now let's delve into BCFs to see what they do, where they are, and how to minimize damage to your health from them.

Note that most research has addressed AGEs much more than ALES. However, ALEs are estimated to cause four to six times as much oxidative stress as AGEs.

For the purposes of this article, BCFs refer to both of these categories unless stated otherwise.

One category of cooking artifacts I won't be talking about comes from charring foods. Charred foods can contain an entirely different type of BCFs, called polycyclic aromatic hydrocarbons (PAHs). Although I won't say anything more about them here, keep in mind that charring or blackening foods is a dangerous practice for your health, in part due to the formation of PAHs.

Avoid eating charred or blackened foods. (This includes 'caramelized' foods such as onions.)

Reducing Exposure to BCFs

Cooking is one of three main sources of BCFs. Another source includes certain raw foods. And a third source comes from BCFs made in our own bodies.

BCFs in Raw Foods

Even before you evaluate BCF-generating cooking styles, it's good to know where these kinds of substances can appear in foods before they're cooked at all.

A review a few years ago, *Advanced Glycation End Products in Foods and a Practical Guide to Their Reduction in the Diet* (Journal of the American Dietetic Association [2010] Jun; 110[6]: 911–16.e12) listed 549 foods surveyed for their BCF content. The list included raw and cooked foods. (You can download the full article at no charge [here](#).)

If you want an easy to get a quick peek at the summary table from that article, you can download it [here](#), also at no charge. It's a handy source of information for you when you want to minimize your AGE intake.

Thus, one step in avoiding BCFs is choosing foods containing the lowest amounts.

Cooking and BCFs

The main issue is cooking at high temperatures. It accelerates the formation of BCFs.

This table gives you an idea of what can happen when you cook:

Cooking	Glycation Products
Method	<i>(kilounits [kJ]/serving)</i>
Raw beef	636 (low)
Microwaved beef	2,418 (moderate)
Grilled beef	6,674 (too high)
Pan fried beef	9,052 (toxic)
Broiled beef hot dog	10,143 (more toxic)

Although the table lists the effects of some cooking methods, you can do better with still others, as follows.

Modifying Cooking Methods

The most effective way to reduce intake of foods high in BCFs is to modify cooking methods. Research shows that dry heat promotes BCFs formation by more than 10- to 100-fold above uncooked foods in all food categories. Foods cooked with moist heat, shorter cooking times, lower temperatures, and acidic ingredients such as vinegar or lemon juice produce the least amount of BCFs.

If you insist on grilling your food, just do so less often. When you do, use an acidic marinade that contains lemon or other citrus fruit juices, or vinegar.

Keep in mind that browned or charred foods indicate the formation of BCFs.

Reducing the formation of BCFs during cooking is the most crucial missing component of nearly all advice on healthy eating.

Your Body Makes BCFs Internally, Too

Reducing your exposure to BCFs must also include those your body makes *after* you eat something.

They're made when dietary fats and sugars combine with protein once they get into your body. This is equivalent to internal browning and charring, although you probably won't see it. The most obvious manifestation of internal BCFs is skin spots. The old terms for these spots – *liver spots* or *aging spots* – actually refer to BCFs that become deposited in your skin.

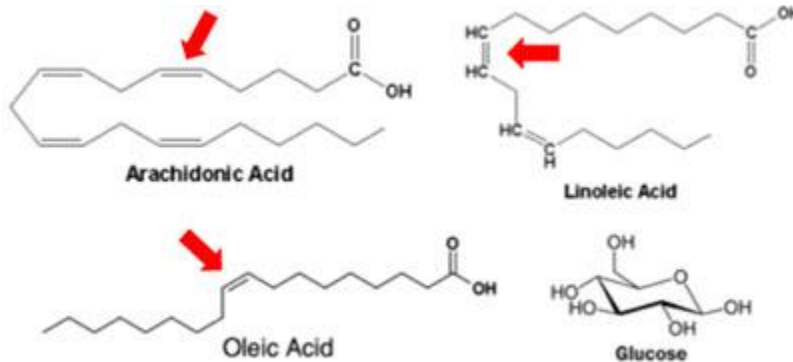
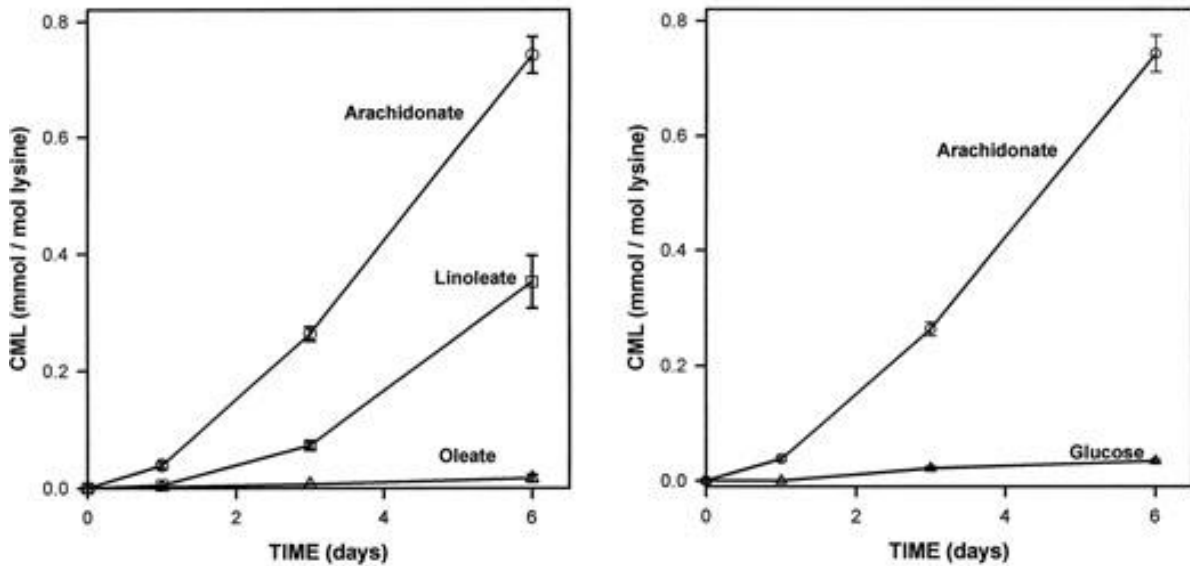
BCFs in your skin form when dietary sugar combines with collagen and elastin, the main structural proteins in skin. Yup – so-called aging spots are actually a sign of too much sugar in your diet.

Of course, the formation of skin spots is driven by inflammation – i.e., the 'burning' behind the formation of BCFs. Cutting down on sugar is just part of a solution that should address chronic inflammation, too.

Likewise, too much circulating blood sugar will begin to attach to one particular protein: globin (as in hemoglobin). The product, glycated hemoglobin, is measured as HbA1c. Levels of HbA1c are useful for determining the potential for diabetes.

Guess what the solution might be? *Cut down on eating sugar!*

Another source of internal BCFs is unsaturated fatty acids. Polyunsaturated fatty acids (PUFAs) are the biggest culprit. A brief survey comparing the effects of fatty acids and sugar reveals that PUFAs are much more damaging than our main blood sugar, glucose. See the graphs below.



As you can see, arachidonic acid (4 reactive double bonds) leads to the formation of more BCFs than do linoleic acid (2 reactive double bonds) or oleic acid (1 reactive double bond).

Note that arachidonic acid is a crucial precursor for many regulatory hormones. You need it in your diet. The highest levels of AA in foods occur in oily fish (sardines, wild salmon); eggs; beef, pork, and poultry fat; dairy; and seaweed (brown [e.g., kelp and kombu] and red [e.g., nori and dulse], not green).

Similarly, linoleic acid occurs as the predominant fatty acid in safflower oil (75%), sunflower oil (66%), hemp oil (60%), corn oil (59%), cotton seed oil (54%), soybean oil (51%), walnut oil (51%) and sesame oil (45%).

Since AA is an omega-6 fatty acid, it also must be balanced with omega-3s in whole foods, especially those providing DHA and EPA.

Cutting down on AA-containing foods, however, is an over-simplified strategy for reducing internal BCFs.

Since you have to consume AA and other PUFAs, reducing their attachment to proteins means reducing inflammation.

Once again, how your body handles fatty acids regarding the formation of BCFs is completely dependent on your chronic inflammation load. If you have any kind of chronic inflammation (e.g., ANY chronic disorder or disease of aging), cutting out essential fatty acids will not help. You have to address the inflammation first.

And that harks right back to the combination of a good diet with other key lifestyle choices.

Neutralizing BCFs

As you can see, even so-called health foods can either be laden with BCFs, form BCFs when cooked, or lead to the formation of BCFs in your own body. Besides skipping eating entirely, what can you do to minimize exposure to these dangerous substances?

Reducing the consumption high-BCF foods, modifying cooking methods, and reducing your inflammatory load are key steps for minimizing BCFs in your body.

Your body also makes a fantastic substance that reduces one of the BCF categories, AGEs. It's a dipeptide (i.e., two amino acids) called **carnosine**.

(Normally carnosine occurs in high levels in brain and muscle.)

Carnosine is an ingredient in most meats, especially beef and pork. Poultry has less, and seafood the least.

Plants don't make it, so vegetarians typically have as much as 50% less in their muscle tissues than meat eaters.

Supplement manufacturers have recognized the health benefits of carnosine. It's widely available as a supplement in part because it's so well supported by research.

So far the benefits of carnosine are known to include the following:

- Increases life expectancy
- Reduces familiar signs of aging such as wrinkling skin, cataracts, and the destruction of our brain and nervous system
- Prevents Alzheimer's Disease
- Thins the blood of people whose blood tends to clot too much and increases the clotting tendency in those with a low clotting index
- Suppresses excess immune responses in those who have "hyper" immune systems (allergies, autoimmune disorders), whereas it stimulates the immune response in those with weakened immune systems
- Helps to normalize brain wave functions (with invaluable role in helping to prevent and control seizures)
- Helps control blood glucose
- Helps control primary factors in the onset of diabetes, including protection against diabetic echo effects (organ protein degradation, loss of kidney function, damage to the eyes, neuropathy, and cardiovascular damage)
- Helps the heart muscle contract more efficiently

- Helps with wound healing
- Protects against the side effects of chemotherapy
- Protects against alcohol induced liver damage
- Reduces inflammation in your brain

Just a quick peek at that list tells you that **carnosine is an excellent anti-aging substance**.

Indeed, Jon Barron at the Baseline of Health Foundation provides details of its history and current usage as an anti-aging supplement, here: [Carnosine, Still the Best for Anti-Aging](#).

Research on the effective dosages for carnosine supplementation shows that 1,000 mg a day will provide the benefits shown in research studies. Getting an equivalent amount from food would require consuming about 7 ounces of steak at least 3 times a day.

Carnosine metabolizes fast once we consume it, usually within a few hours. It therefore has to be replenished 2-3 times a day.

QUICK SYNOPSIS

Eating for longevity doesn't have to be complicated.

It does require some knowledgeable perspective on which foods are the best choices and which foods aren't so hot **for you**.

Unfortunately, all longevity diet books (all diet books for that matter) include both.

It's up to you to decide what's best. So I hope my reasoning and explanations in this report help you see what you should eat and why.

Right at the top, one of the most important steps is to cut *WAY* down on processed foods, especially those made with refined carbs and added sugar.

Once you decide on the foods you want, it's equally important to eat them at the right times. Meal spacing is crucial. A 4-5 hour break between meals, plus an overnight break of 12-14 hours are bedrocks for optimal eating patterns.

Adding 1-4 days of full fasting (18-24 hours) a week is also extremely important.

And, of course, keep in mind that the success of all your dietary strategies accelerates when you adhere to the four top healing strategies I outlined in my report, *How to Age Well in Spite of Modern Medicine*. In fact, even the healthiest longevity diet will fail without them.

As you've hopefully learned in this report, the first myth about a longevity diet is that there's just one. Many diets worldwide can be considered 'longevity' diets.

A second series of myths centers around recommended foods that shouldn't be recommended. Recommended foods should be whole foods. Non-recommended foods are modern creations.

The core truth about any longevity diet is how well it works in the context of healthy lifestyle choices. And how poorly it works without them.

As you now know, you're much more than what you eat.

All the best in natural health,

Dennis

