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Wise Traditions

IN FOOD, FARMING AND THE HEALING ARTS
A PUBLICATION OF THE WESTON A. PRICE FOUNDATION®



Education ♦ Research ♦ Activism
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Volume 24 Number 3

Fall 2023

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THE WESTON A. PRICE FOUNDATION®


Education ♦ Research ♦ Activism

The Weston A. Price Foundation is a nonprofit, tax-exempt charity founded in 1999 to disseminate the research of nutrition pioneer Weston A. Price, DDS, whose studies of isolated nonindustrialized peoples established the parameters of human health and determined the optimum characteristics of human diets. Dr. Price's research demonstrated that men and women achieve perfect physical form and perfect health, generation after generation, only when they consume nutrient-dense whole foods and the vital fat-soluble activators found exclusively in animal fats.

The Foundation is dedicated to restoring nutrient-dense foods to the American diet through education, research and activism and supports a number of movements that contribute to this objective, including accurate nutrition instruction, organic and biodynamic farming, pasture-feeding of livestock, community-supported farms, honest and informative labeling, prepared parenting and nurturing therapies. Specific goals include establishment of universal access to clean, certified raw milk and a ban on the use of soy-based infant formula.

The Foundation seeks to establish a laboratory to test nutrient content of foods, particularly butter produced under various conditions; to conduct research into the "X" Factor, discovered by Dr. Price; and to determine the effects of traditional preparation methods on nutrient content and availability in whole foods.

The board and membership of the Weston A. Price Foundation stand united in the belief that modern technology should be harnessed as a servant to the wise and nurturing traditions of our ancestors rather than used as a force destructive to the environment and human health; and that science and knowledge can validate those traditions.

The Weston A. Price Foundation is supported by membership dues and private donations and receives no funding from the meat or dairy industries. 



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President's Message

In this issue we focus renewed attention on the fat-soluble activators—vitamins A, D and K₂—which form the crux of the nutritional program formulated by Dr. Weston A. Price. Foods rich in these vitamins were the basis of all healthy traditional diets, protected nonindustrialized peoples against tooth decay and illness, and ensured wide attractive faces and strong bodies generation after generation.

Pam Schoenfeld, RD, has done a masterful job collecting the research on vitamin A and fertility, and shares her experiences as a fertility specialist in helping couples conceive and have healthy babies (page 15).

Then we get a look at Liz Schlinsog's review of Dr. Price's research on Activator X—vitamin K₂, MK-4—with an enumeration of the various proteins that are activated by the (well-named) Activator X (page 29).

On page 38, I share information on Dr. Price's remedy for accidents, trauma and serious illness—alternating drops of high-vitamin cod liver oil and high-vitamin butter oil under the tongue.


Finally, in this issue, we are publishing the results of additional testing for the fat-soluble activators in various foods.

The bottom line: ignore the dietary guidelines! For good health it is essential to consume foods that provide vitamins A, D and K₂—butter and whole dairy products from grass-fed cows, poultry fats and lard, liver and other organ meats, fish eggs and shellfish—the very foods that government mandates say to avoid. Truly, government guidelines and the industrialization of our food supply have caused untold health problems that worsen with each generation.

Maybe our motto should be, “Enjoy caviar and pâté, and have healthy children along the way!”

We will be featuring nutrient-dense foods at our upcoming Wise Traditions conference, October 19-23 in Kansas City, Missouri. We are working with wonderful chefs who are very excited about preparing meals for us.

As always, we have a great lineup of speakers and panelists, and an exhibit hall full of interesting offerings. We provide CEUs for nurses, acupuncturists, NANP nutritionists and massage therapists. A pre-conference raw milk gathering will celebrate our recent victories in raw milk legislation and a sold-out farm tour on the final Monday will round out the activities. A children's program is available.

Don't be left out! Tickets are selling fast. We look forward to seeing you there! 

Letters

THE HEALING POWER OF SAUERKRAUT

For those who weren't aware of the healing power of fermented vegetables, in this case sauerkraut, this story may be a surprise. I've learned that one tablespoon of organic sauerkraut has more probiotics in it than an entire jar of probiotics bought at a health food store.

I've been a member of Weston A. Price since I first heard about the Wise Traditions diet in Detroit in 2000. These ideas were stunning to someone who had no idea that her diet was contributing to her asthma and eczema, and like most newcomers to the WAPF family, I spent the next several years improving my health.

During that time, I told friends and family what I was learning, especially after I started working with our local organic farmers on issues like raw milk. As with most people who first hear our ideas, my family rolled their eyes and ignored me. Several years later, my nephew Dale, in his forties, had a very bad experience with diverticulitis. This devastating condition is likely caused

by bad eating habits and stress. Diverticulitis seems an enigma to allopathic doctors, whose main solution seems to be removal of the colon, little by little, which affects our immunity and absorption. This irreversible path is not the only option for many sufferers.

When Dale called me from the hospital to tell me what the doctors wanted to do, I convinced him to wait until I could drive from Michigan to Tennessee with organic cabbages and organic whey made from raw milk. My friends had warned me that he would probably think my recommendations for a cure were a "Mary Poppins-style fantasy," one that only someone having just dropped from the sky with her umbrella would offer. But if my nephew felt that way, my guess is that his fear far outweighed his skepticism.

In Tennessee, we bought a food processor, many quart-sized mason jars, a meat pounder, and I demonstrated how to make sauerkraut, which is so easy. Thirteen and one-half quarts later, Dale had his antidote: one tablespoon of sauerkraut in the morning, and one tablespoon of sauerkraut in the evening,

which is the usual suggestion.

Here's Dale's story from his perspective:

When I was forty-two years old, I had some unusual lower abdominal pain, which I thought was a pulled muscle from racquetball, so I ignored it. Four or five days later, a sharp intolerable pain sent me directly to the ER, where the diagnosis was a ruptured colon from diverticulitis: the colon had burst from the diverticuli, and had spread nasty bowel and intestinal fluids and toxins into my abdominal cavity, which is life-threatening.

"For five days, the doctors had me lie on my left side with a drain tube through my left hip that went into my abdominal cavity on one end and into a container on the floor on the other end where the poisons from my body drained. If I moved too much, I could become septic and I could die, even though I was on tranquilizers to remain calm and taking antibiotics for infection. The doctors told me that I had a fifty-fifty chance of leaving the hospital.

"A further plan for me later was the doctors' intention to remove twelve

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Letters

to fourteen inches of my colon, after I'd healed enough. During that operation they would give me a temporary colostomy bag, waiting to see whether the operation went well. If it did not, I would have another operation to remove all of my colon and the colostomy bag would become permanent. I was forty-two!

"About two months after my initial hospitalization, I was scheduled for a doctor's visit which I assumed was a follow-up. Imagine my surprise when the doctor wasn't a gastroenterologist, but a surgeon who'd already scheduled surgery to start removing my colon and who refused to hear that I was not in agreement. I told the doctor that I was healing very nicely with sauerkraut, which he informed me would kill me in short order. I asked for time to think about it and left his office, never to go back.

"A diagnosis such as I'd received completely focuses your thinking. So on the fifth day in the hospital, I called my aunt Heidi for help. I'd known that she was involved with organic health and healing groups and I prayed she could help me. Little did I know just how much or how easily.

"Heidi arrived shortly after my hospital discharge and we made our first batch of sauerkraut. At that time, I thought one tablespoon of kraut seemed totally inadequate so I ate a bowlful morning and night until I felt healed enough and then dropped to a tablespoon morning and night. That was probably after two months.

"Determined to heal myself quickly, I quit eating conventional beef,

which I'd read was hard on your intestines, and started eating organic food. At the same time, I found an organic raw milk dairy, began drinking raw milk and started making my own whey



plus more batches of sauerkraut. Because my knowledge of healthy eating was so inadequate, I started reading *Nourishing Traditions* by Sally Fallon, *Fire Your Doctor* by Andrew Saul, *A Prescription for Nutritional Healing* by Balch and issues of the *Wise Traditions* journal.

"I'd also realized that the development of diverticulitis was exacerbated by the terrible stress of working for a corporation that had unrealistic and abusive expectations of their workers, so I changed jobs. The absence of stress was such a relief both for me but also for my family, as was the amazing healing of my body.

"In the years since, I've realized that developing life-threatening conditions such as diverticulitis is totally within our control by the food and lifestyle choices we make, and furthermore, if we slide back into our

old habits, these conditions can reoccur because our bodies now have that tendency. I've also talked to several friends who have had health issues and shared my experience with sauerkraut, which in turn has helped them. My aunt and I hope that our stories can help others who may be unaware of healthy solutions. No matter how strange this sounds, it actually works and didn't involve removing body parts."

Heidi and Dale Allen
Milford, Michigan

FROM SENOMYX TO A BETTER WORLD

Thank you for your Caustic Commentary on Senomyx (Summer 2023). According to the "always" accurate Wikipedia, "Senomyx patented several flavor enhancers. . . which have been previously expressed in human cell culture, in HEK293 cells."

HEK293, Wiki says, is "Human embryonic kidney 293 cells. . . derived from a spontaneously miscarried or aborted fetus or human embryonic kidney cells grown in tissue culture taken from a female fetus in 1973."

Why would our "trusted" food providers put something like this in food? Good question!

Behind the "what's in our food" and "how to eat better," the question is, why are we being attacked? Why has our health system been turned into such a harmful monstrosity? Why are our children being "educated" in such an absurd manner? Why can't we trust the "news" to bring us truth?

Why is our world going so crazy?



Letters



Are our “authorities” there for our own benefit? If not, then what is their agenda?

Difficult questions. Difficult answers. While not developing severe anxiety about it all, we can still calmly face what's happening in our world. In my research into where we've been, how we got to here, and where it's all headed, I've seen horrid insights but also heartening solutions, solutions that are actually of the order of magnitude needed to matter.

When an intensely divisive, manipulative, deceptive, controlling, corrupt system that's been in place for so long finally meets its match, sparks might fly. For what it's worth, I see calmer seas ahead of us and a lot of work to build a better world.

Janice McLain
Colorado Springs, Colorado

LIVESTOCK VACCINES

Thank you for your article in the Summer 2023 issue on livestock vaccines. The distinction between antibiotics and vaccines is accurate. However, the toxins in the preservatives and boosters in vaccines are much more worrisome than the antibiotics in the food that we eat—yet antibiotics are barred and vaccines are allowed in organic production.

I understand that mRNA genetically engineered vaccine material is or will be used on animals including livestock, which is a huge concern now that we know just some of the serious side effects of these. And, since we also now know that vaccines largely just reduce symptoms rather than prevent transmission, it would be much more

consistent with the organic model to bar vaccinated animals from organic labeling, while encouraging improved diet, exercise and natural remedies consistent with organic farming. I am a certified organic farmer and have been for years. I have livestock, but do not sell the animals or animal products. Thank you for discussing this important topic.

Kristina A. Boudreaux
Sebastopol, California

REPORT FROM NEW ZEALAND

I want to let you know where my family and I are after the December 2019 raids on raw milk farms in New Zealand. Eight cars, Ministry of Primary Industry (MPI), Serious Fraud Squad and our local police charged up our drive at nine in the morning.

It was the most gruelling day of our lives. They sure were intimidating, but we stood strong in that we had not broken any law. In our house, the only true law is God's Law. “They” have achieved their objective of removing so many sources of real food from so many good people.

We have been avoiding regular mail communications for a very good reason. We have battened down the hatches and trusted no one until this battle was over.

We were originally charged with the selling of raw milk, but as all of our donations were donations to a charitable trust, they couldn't make that charge stick. Instead they came back at me for “promoting an unsafe food item.”

The irony of the situation was we had seen the writing on the wall, and had gone from supplying raw milk

only to charity members to supplying the bulk milk company. On the day of the raid, when one of our sons at the shed was questioned as to what we do with our milk, he strung them along. “Well,” he said, “the cows come in full and ever eager to donate their milk, and return to a paddock of lovely grass to repeat the exercise morning and night. The milk goes into the big vat and then in the night, this big tanker lit up like a Christmas tree comes and takes the milk off to the treatment station, and each month we get a goodly payment into our bank account.” To say the guy from MPI was annoyed was putting it politely.

Months later, in December of 2022, we finally got through the many court hearings, the comings and goings with lawyers, all interrupted by our lockdowns, to have me finally found guilty of the charge. The ensuing fine is minimal in light of the possible fine I could've received. In my defence I gave my life history of half a century of teaching new breastfeeding mothers, on to mothers as their children grew up, and adults themselves, all along the lines of health not through supplements, but from a diet of traditional tried and tested eating habits. My Maori judge would've been a true hypocrite if she had fined me heavily, as everything I wrote in my affidavit is exactly what the Maori cry out for in their people needing to return to the eating ways of their ancestors.

They wouldn't let me spread the payment out over ten years, I don't think they believed I was good for that long, so I have five years of deductions from my pension. The biggest loss is all of our



Letters



lovely friends who partook of the beautiful raw milk. We are hearing stories of how they and their families are not coping healthwise with the removal of it from their diet. There are a few farms who have braved the legalities and registered into the government control system, but only to drop out over the cost of the system.

In the early days of our struggles I contemplated getting a T-shirt printed RMF, for either “raw milk fan” or for me “raw milk felon”!

My sincere thanks for all the good work that WAPF formulates; the journals are amazing.

Alison Ellett
WAPF Auckland

WHAT MAKES US SICK?

A cousin of mine read the article “What Makes Us Sick?” (Spring 2023), which dismisses viruses as a cause of disease, and sent me this comment: “But we have found the DNA and RNA of many viruses (including SARS-Co-V-2) and can see that their genetic code correlates with the symptoms that we observe and a specific kind of protein capsids that the virus uses to package itself.

“The genetics of the virus are often used as a more useful proxy of the virus because it’s easier to work with. We know how to replicate or amplify DNA or RNA and then sequence it. It turns out this is easier than trying to isolate specific viruses in their capsids and then trying to isolate the genetics.

“We also have studied our cells enough to know that we have built-in responses to certain strands of RNA and DNA. This is part of our innate

immune response. If our cells detect a certain strand of genetics inside them, they start the process of apoptosis (cell death). When a virus is not detected by the innate immune system our body can still detect foreign proteins in the debris field from viruses taking over cells and reproducing until the cell pops. Our immune system can learn to produce antibodies, which are protein molecules specifically coded to bind to certain other specific proteins and mark it for destruction by the immune system’s autophagy response.

“You don’t have to believe me, but at least question this article as much as you want to question me and what I said. Honestly this is a terrible article that appeals to the scientific process and then ignores any actual knowledge from the field of molecular biology.”

Anonymous

Tom Cowan replies: This thinking is straight out of standard virology textbooks and doesn’t even attempt to address the issues I brought up in the article. This is typically how these exchanges go, there is no mention of the actual issues brought up

Virology rests on five sequential premises, each of which has been proven false, but if he has the references that dispute this, I am happy to review them and change my opinion. Here are the principles and what I am requesting:

1. *The assumption that diseases are contagious. We have shown many studies showing that sick people don’t make well people sick. Please send us a proper study with appro-*

priate methodology that shows that sick people can make well people sick when exposed in normal ways.

2. *Viruses, before electron microscopy, were called filterable agents. Please provide a single study showing that the filtrate from a sick person, the part that contains the virus, when exposed to well people or to animals, causes the identical illness. As far as we can tell, no such study exists.*

Given these first two facts, there is no point in the further investigation into virology; however the virologists press on, so the next principles are:

3. *“Isolation” means to separate one thing from all other things. Please provide a study in which a so-called virus was isolated from any sick person or animal, which includes a photograph of the pure virus. No such study exists meaning no virus has ever been purified and isolated, which by definition means that no component of such an entity (DNA or RNA) could possibly be said to be coming from this particle. Neither could there be any “immune response” against this particle, which has never even been shown to exist or to be seen in pure form.*

4. *Given that no particle that fits the definition of a virus has ever been found, how do we know the electron microscope photos of cellular de-*

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Letters

bris represent these viruses? Many studies were presented proving that all such photos are not viruses but cellular debris. Please show us one study proving that any electron microscope photo is actually a pathogenic virus.

5. *Given the fact that no virus has ever been isolated or purified, how can we possibly know the origin of the DNA/RNA in the debris? The fact is, all such DNA/RNA has been shown to be cellular or microbial in origin. Please provide a study showing the DNA/RNA was extracted from a purified particle, so by logic and reason we can know its origin.*

The truth is there will be no response, for the simple reason that none of the above studies exist and the "science" of virology is a fraud.

KEN HARDY

I am writing on behalf of my husband and me. We lived in Nevada for a number of years and Ken Hardy was our chapter leader there. I am writing

this in memory of him.

Ken was a friend, teacher, mentor and resource. We are stunned and heartbroken about his passing. We still cannot believe he is gone. I feel rather lost, because I cannot imagine not being able to contact him and pick his brain. I just cannot process it.

Fourteen years ago, I read a book that greatly affected my life and set me on this journey of learning real medicine, nutrition and wellness. I also had to unlearn a lot of things and that is even harder because I am a nurse and entrenched in allopathic medicine for so many years. Right after reading this book, I discovered the Weston A. Price Foundation. Ken and Rosemary were the chapter leaders in our area. I called and left a message and when Ken called me back, we spoke for an hour. I was so voracious for information and Ken loves to teach. We hit it off right away, and then Steve and I met him in person shortly after and we have all been friends ever since. Ken was a lifetime learner. He was so incredibly generous with his knowledge and infor-

mation. He was also tireless in doing all he could to provide good food, healthy natural medicine resources and so many other things. He represented WAPF and its values so well. He truly lived it.

While Ken could be quite intense, because he was so passionate about waking people up, he also had a great sense of humor. I cannot count how many times over the years we have laughed out loud at some of the emails and videos he would send. He particularly had a heart for helping single moms and their kids find healthy food.

They say when a person passes, an entire library of knowledge, wisdom and information is lost. That is particularly true where Ken is concerned. He was one of the most intelligent and well-read people I have ever met. We are so incredibly grateful to have known him for so long. It has been a privilege. We truly feel that the Lord led us to Ken and we hope we were a blessing to him, as he sure was to us.

Steve and Julie Martin
Kalispell, Montana



TAKE THE 50% Pledge! Spend at least 50% of your food dollars on direct purchases from local farmers and artisans; with the remainder of your food dollars, you can celebrate how small the world has become!



Caustic Commentary

Sally Fallon Morell takes on the Diet Dictocrats

ADVIL AND THE BRAIN

Baby has a fever? Baby is fussy after a vaccination? “Give him Tylenol” is the advice. A new literature review by William Parker, PhD, and others, published in the *European Journal of Pediatrics* (May 2022), reveals that this is not a good idea at all. Parker’s review has uncovered “troubling associations” between acetaminophen—the active ingredient in Tylenol and hundreds of prescription and over-the-counter medications—“at typical pediatric doses and serious, likely permanent, impairments in cognition and socialization in susceptible children.” The authors note that “recent studies in animal models demonstrate that cognitive development is exquisitely sensitive to paracetamol [acetaminophen] exposure during early development.” In a literature search, the authors found fifty-two papers designed to test safety, but these looked only at liver toxicity; none monitored neurodevelopment. While “abundant and sufficient” evidence indicates that Tylenol and related drugs do not induce liver damage in babies or children, the target organ for toxicity is the brain, not the liver. Animal studies reveal long-term brain damage and behavioral changes in youngsters following exposure to acetaminophen in doses considered safe, with the brains of male animals affected more than the brains of females. Parker notes that an analysis of over sixty thousand babies in the Danish National Birth Cohort found an increased risk of autism spectrum disorder (ASD) up to 66 percent after exposure to acetaminophen, and he connects widespread accidental overdoses of acetaminophen in Korea with the country’s otherwise inexplicably high rates of ASD. Not just in Tylenol, acetaminophen is often combined with other active ingredients in medications for allergies, colds, flu and sleeplessness.

ADVIL AND THE SPERM

Ibuprofen (sold as Advil, Motrin and Smart Sense Children’s Ibuprofen) is a popular nonsteroidal anti-inflammatory drug (NSAID) taken for headache, toothache, back pain, arthritis, menstrual cramps and minor injury that works “by reducing hormones that cause inflammation and pain in the body.” It turns out that the drug reduces other hormones as well, namely androgens such as testosterone. In an article titled “Ibuprofen alters human testicular physiology to produce a state of compensated hypogonadism,” published in *Proceed-*

ings of the National Academy of Sciences (January 8, 2018), the authors review evidence that analgesics like ibuprofen “may be involved in adult male reproductive problems and lead to depression of important aspects of testicular function, including testosterone production.” A clinical trial with young men exposed to ibuprofen indicates that the “analgesic resulted in the clinical condition named ‘compensated hypogonadism,’ which is prevalent among elderly men and associated with reproductive and physical disorders.”

MORE DANGERS FOR MEN

Fluoride added to water is said to make circus animals calm and prisoners docile. Now we know the reason. A Google Scholar search of “fluoride” and “testosterone” turns up dozens of studies showing adverse effects, such as “Effects of sodium fluoride and sulfur dioxide on sperm motility and serum testosterone in male rats,” “Sodium fluoride disrupts testosterone biosynthesis by affecting the steroidogenic pathway in TM3 Leydig cells” and “Fluoride toxicity in the male reproductive system.” It’s mostly Chinese researchers who are looking at this problem. A group from Shanxi, China, led by Jiahai Zhang investigated what happened to rats when given sodium fluoride in their drinking water (and also exposed to sulfur dioxide in the air) for eight consecutive weeks. Exposure to fluoride with sulfur dioxide but also to fluoride alone adversely affected testis tissue and serum testosterone levels in rats. Addition of fluoride—a toxic waste—to drinking water should be banned worldwide, but of course there is resistance, because then the industries producing it (such as the fertilizer and nuclear industries) would have to engage in the expensive process of cleaning it up.

MORE REASONS FOR USING PLENTY OF SALT

Did you know that not using enough salt could cause your bones to weaken? That’s because your salt status controls magnesium and calcium levels. If you don’t use enough salt, your body will start pulling sodium and magnesium from your bones. You might also become diabetic and salt deficiency increases your chances of developing insulin resistance—because higher insulin helps your kidneys retain more salt. Many conditions contribute to sodium loss and increase our requirement for this essential food—such as inflammatory bowel diseases, sleep apnea, kidney diseases,

Caustic Commentary

hypothyroidism and adrenal deficiency. And when you exercise, especially in the heat, you need more salt. Lack of salt often leads to sugar cravings and other addictions. Read more in *The Salt Fix* by James DiNicolantonio.

DOUBLE SIGH

A new million-dollar project aims to produce sheep whose farts have a low methane content! Oh my, they are very serious about this. Breed for CH₄ange, led by genetics company Innovis, will measure methane emissions from almost fourteen thousand sheep in forty-five flocks using “new and innovative tools and technologies including Portable Accumulation Chambers (PAC).” The information gathered “will enable understanding of the genetic control of these characteristics and DNA sampling will allow relationships with the underlying genome of the sheep to be investigated. This will result in tools to compare the breeding value of sheep in the flocks, identifying breeding stock that will contribute to improving farm carbon footprint” (britishlivestockgenetics.co.uk, July 9, 2023). I have a prediction for these jolly geneticists: sheep that produce less methane will not be healthy. Since sheep are ruminants and the main job of the rumen is to break down cellulose into methane, sheep that can’t do this very well won’t thrive. But what’s a few million sickly sheep compared to the noble goal of stopping climate change!

VITAMIN K AND DIABETES

The more we learn about the animal form of vitamin K₂ (MK-4)—Dr. Price’s X Factor—the more amazed we become. The vitamin is important for building strong bones and teeth while preventing mineralization of the soft tissues, such as the arteries. Vitamin K₂ helps prevent heart attack, stroke, peripheral vascular disease and cancer. Now investigators have added another malady that vitamin K₂ helps prevent: diabetes. Researchers have found vitamin K in large quantities in the beta cells, where insulin is produced, and have discovered that it plays an important role in maintaining calcium, which supports insulin secretion (<https://nouvelles.umontreal.ca/en/article/2023/05/19/vitamin-k-helps-protect-against-diabetes/>). So, in addition to moderating sugar and carbohydrate intake and avoiding artificial sweeteners, industrial seed oils and statin drugs, maximizing vitamin K₂ intake is a good strategy for avoiding this modern affliction. That means eating the fats of grass-fed animals—butter and

egg yolks, and especially poultry liver and fat. No more skinless chicken breasts! Opt for the wings and thighs and enjoy the skin! Enjoy chicken liver pâté. In 2018, diabetes was responsible for over eight million hospital visits, seventeen million emergency room visits and sixty-two thousand cases of end-stage kidney disease. Saying no to the lowfat dietary guidelines is the best way to avoid joining the thirty-seven million Americans afflicted with diabetes.

SUCRALOSE DANGERS

When the toxic effects of aspartame (the active ingredient in Equal and Nutrasweet) began to emerge, the industry came up with another artificial sweetener: sucralose (Splenda). Described as six hundred times sweeter than table sugar, the ingredient shows up in baked goods, canned fruit, beverages, chewing gum, gelatins and frozen dairy desserts. The FDA says sucralose is safe, but some researchers are not so sure. In an article published in the *Journal of Toxicology and Environmental Health* (2023 Aug 18;26(6):307-341), Susan S. Schiffman and her team found that sucralose-6-acetate, an intermediate and impurity in the manufacture of sucralose, caused DNA strand breaks and impaired intestinal integrity. According to the research team, “The amount of sucralose-6-acetate in a single daily sucralose-sweetened drink might far exceed the threshold of toxicological concern for genotoxicity. . . Overall, the toxicological and pharmacokinetic findings for sucralose-6-acetate raise significant health concerns regarding the safety and regulatory status of sucralose itself.”

ONE SAUSAGE PER MONTH

The average consumption of meat in Germany today is seven hundred sixty-three grams per week—just over one and one-half pounds, a low number compared to other westernized countries—Americans, for example, consume over twice that amount. Recently the German Nutrition Society (DGE) decreed that Germans should reduce their consumption to no more than six hundred grams weekly. Now, the German Nutrition Society has announced that Germans should consume no more than ten grams (about two teaspoons) of meat per day, which amounts to just one sausage per month! Why the sudden change? The Society is now taking into account “climate factors” in addition to nutrition standards. Germans need to eat more meat, not less, says Heike Harstick, general

Caustic Commentary

manager of a meat association. “Even in Germany, many people are already undersupplied with certain nutrients, such as iron or vitamin B12” (climatedepot.com, June 4, 2023). Of course, Germans don’t have to comply—not yet. The DGE certifies restaurants and canteens and could refuse to issue certificates to establishments that offer meat beyond the recommended quota. And electronic banking systems could be used to punish those who purchase “too much” meat for themselves and their children.

AT IT AGAIN

They are at it again! Even as evidence for the ineffectiveness of cholesterol-lowering statin drugs continues to mount, and reports of side effects accumulate, physicians are targeting these poisons to young men and women. “More young people should be getting their cholesterol tested and taking statins,” argues Dr. Suhas Gondi, resident physician in internal medicine and primary care at Brigham and Women’s Hospital (statnews.com, May 29, 2023). Gondi decided to start taking statins at the age of twenty-seven because his LDL-cholesterol was “at the upper limit of normal range.” Gondi laments that “Young adults are often excluded from studies of cardiovascular risk because heart attacks are less common under age forty. As a result, evidence on cholesterol and statins in young adults is lacking, which makes it difficult for national committees and professional societies to write useful guidelines that apply to us.” Alas, young people are not being checked, and hence, not treated. One cardiologist who spoke to Gondi declared, “LDL is a toxin—just get rid of it.” Statins “are highly effective at lowering LDL and reducing cardiovascular risk.” Well, actually no. For example, the Honolulu Heart Study found that “those individuals with a low serum cholesterol maintained over a 20-year period will have the worst outlook for all-cause mortality” (*Lancet* 2001 Aug 4;358:351-355). And there’s no downside, says Gondi, except for some muscle pain and a “slightly increased” risk of diabetes. Oh, and Parkinson’s, mental decline, heart failure, depression, anger, risk of accidents and suicide and erectile dysfunction. Good luck, Dr. Gondi! Your statin-pushing ways may make you head of your department, but will you be happy?



MORE BAD NEWS FOR FISH OILS

The observation that populations who eat lots of oily fish have fewer coronary events had stoked a thriving industry in fish oil supplements—but study results have been disappointing. In the OMENI trial involving about one thousand older patients, researchers found no difference in the rate of myocardial infarction, revascularization, stroke, death or hospitalization for heart failure between those taking a fish oil supplement and those taking a placebo. In fact, a secondary analysis of patients with no prior history of atrial fibrillation (AF) found that individuals in the supplement arm had a 90 percent higher rate of AF compared to those on the placebo. Two other trials—ASCEND and VITAL—looked at low-dose supplementation and found that AF occurred at approximately the same rate in the supplement group and controls. A trial of high-dose supplementation, STRENGTH, was terminated early because of a signal for increased AF risk in the supplement arm. A meta-analysis found that omega-3 fatty acid (fish oil) supplements were associated with a 25 percent increased risk of AF in the treatment group (medscape.com, August 10, 2023). WAPF has never recommended fish oils, which are processed at very high temperatures from the waste products of the commercial fishing industry, temperatures bound to degrade the delicate omega-3 fatty acids they contain. Better to take cod liver oil processed at low temperatures, which provides not only intact omega-3 fatty acids but valuable vitamins for the heart. ☹️

FOR SCIENTISTS AND LAY READERS

Please note that the mission of the Weston A. Price Foundation is to provide important information about diet and health to both scientists and the lay public. For this reason, some of the articles in *Wise Traditions* are necessarily technical. It is very important for us to describe the science that supports the legitimacy of our dietary principles. In articles aimed at scientists and practitioners, we provide a summary of the main points and also put the most technical information in sidebars. These articles are balanced by others that provide practical advice to our lay readers.

Fixing your Fertility— The Answer Could Be Vitamin A

How Modern Fertility Treatments Ignore Basic Biology

By Pam Schoenfeld, RD

In 1924, Dr. Carl Hartman at the University of Texas published a paper regarding his ongoing research on the embryology of the opossum.¹ During the first few years of his research, the opossums' diet consisted of skim milk, bread, tallow and lean meat. Then, between 1916 and 1917, “the problem of cheap feeding was solved by [Hartman’s lab] by securing slaughterhouse offal, such as ‘lights’ (lungs), heart, liver, and tripe.” With the change of feed, Hartman’s opossum colony began to reproduce efficiently, growing to some two hundred fifty animals, and all previously noted eye pathologies resolved.

In his 1924 paper, he commented about a type of sterility that at the time was noted in female animals kept in cages for several years, characterized by atresia of the ovarian follicles (a degeneration that prevents ovulation). In these sterile females, Hartman reported, estrus cycles either disappeared or became greatly prolonged and “abnormal in their manifestations.” Research colleagues H.M. Evans and K.S. Bishop suggested to Hartman a possible connection between the caged animals’ diets and sterility—as they had, according to Hartman, “discovered a type of sterility in the rat referable to a deficiency of vitamin A—too light to affect the weight and general health of the animal but yet sufficient to cause an upset in the oestrous cycle. Biology was thus given a most ‘delicate’ indicator of vitamin-A.” Subsequent animal studies revealed that deficiencies of the fat-soluble vitamins, and in particular, vitamin A, led to fetal death, prolonged gestation and difficult parturition (delivery).

Scientists discovered that vitamin deficiencies—and, most dramatically, deficiencies of vitamin A—were a reliable way of producing congenital malformations in the embryo.

My personal discovery of Dr. Hartman’s novel evidence for a “delicate indicator” of early vitamin A deficiency—that is, the interruption of normal reproductive functioning in the female—was extremely exciting to me, especially since it aligns with my own clinical experience. Women who come to me with problems getting pregnant often exhibit one or more of the clinical signs of vitamin A insufficiency,² and/or their diets are extremely low in preformed vitamin A (also known as retinol). Furthering my suspicions of inadequate vitamin A nutriture, these women often report vaginal dryness and lack of fertile cervical mucus. To my knowledge, these two uniquely female problems have not been recognized as possible signs of vitamin A deficiency in humans, even though scientists have consistently observed these reproductive problems in rats put on diets devoid of vitamin A. Dryness, caused by a “cornification” or hardening of the mucus-secreting vaginal epithelium (surface cells) was reported as an early manifestation of vitamin A deficiency by multiple groups of researchers.³ But just as vitamin A was shown to be highly effective against measles, this discovery—and its relevance for human reproduction—was thwarted by the arrival of modern medicine with its patented drugs and profitable procedures.

VITAMIN A DEFICIENCY ATTRACTS INTEREST

Beginning in the late 1980s, renewed interest in vitamin A led to an explosion of studies reaffirming its versatility.⁴ We now know that more than five hundred genes are regulated by vitamin A, many of which control embryonic and fetal development.⁵ Acknowledged by experts to be one of its most critically important roles, successful childbearing requires pre-

formed vitamin A at each developmental stage, from preconception and pregnancy through lactation and postnatal development. Vitamin A is “crucial for maintaining pregnancy and morphogenesis of developing organs and tissues.”⁶ (Morphogenesis is “the shaping of an organism by embryological processes of differentiation of cells, tissues, and organs and the development of organ systems according to the genetic ‘blueprint.’”⁷) Scientists have vastly expanded upon early discoveries made in the 1930s, when they conducted dietary deprivation studies on animals to see what happens to developing embryos when individual vitamins are removed from the maternal diet. What they discovered was that vitamin deficiencies—and, most dramatically, deficiencies of vitamin A—were a reliable way of producing congenital malformations in the embryo.

Researchers demonstrated that a wide range of embryonic defects occur in the vitamin A-deficient embryos of pigs, sheep, cattle, rabbits, rats and humans. The list included defects to the brain and central nervous system, eyes, face, teeth, ears, limbs, kidneys, genitals, skin, lungs and heart, and, in severe deficiency, complete fetal resorption.^{8,9} In human infants born to mothers with *lower levels* of vitamin A (even in the absence of a frank deficiency), also documented were increased incidence of severe vision problems, heart defects, orofacial defects, delayed growth and impaired lung function.¹⁰ Further investigations determined that these defects are caused by the down-regulation of genes (occurring with a shortfall of vitamin A) that tightly control the changing anatomy of the embryo.

Subsequently, researchers found that vitamin A produced a similar spectrum of abnormalities when provided in excess dur-

VITAMIN A VOCABULARY: RETINOL, RETINAL AND RETINOIC ACID

Dietary retinol is converted to retinal and then to retinoic acid, which acts in the nucleus of our cells to govern genetic transcription. Transcription can be thought of as the process of putting genes into action with the synthesis of specific proteins being the ultimate target.

Because retinoic acid controls the action of our genes, its levels are tightly controlled in the body. Retinol and retinyl esters (the forms of vitamin A found in animal foods) are not the active forms for gene regulation; rather, they enter circulation after a meal and then in large part are shuttled to the liver for storage. As it is needed, the liver releases retinol, carried on a transport protein called retinol binding protein; this complex circulates in the blood to be taken up by receptors on the cells of our tissues and organs and then converted into retinoic acid.

ing the gestational period. However, these animal feeding experiments were done using vitamin A metabolites, in particular the most biologically active form, retinoic acid, supplied in large excess to pregnant animals. Several of these same abnormalities were then seen in human babies when their mothers inadvertently took a synthetic form of vitamin A, Accutane (13-cis-retinoic acid), during pregnancy.⁸ (The mechanism of action by which excessive vitamin A exerts teratogenicity is attributed to the influence of high concentrations of certain retinoic acid metabolites, such as trans-retinoic acid and 13-cis-retinoic acid, on the function of genes during critical periods of organogenesis and embryogenesis.¹¹) The focus on the necessity of vitamin A began to shift to a concern that pregnant women could be at risk of getting too much.

A RECKLESS RECOMMENDATION

The study that eventually led to striking preformed vitamin A from the list of nutrients reproductive clinicians consider essential for proper fetal development was published in 1995 by Rothman and colleagues in the highly influential *New England Journal of Medicine*. Rothman warned against intakes of preformed vitamin A, or retinol, that exceeded 10,000 IU per day from supplements or a total of 15,000 IU per day from diet and supplements, linking these levels to neural crest birth defects.¹² To ensure a margin of safety, the researchers urged women to avoid taking supplements that exceeded 4,000 to 8,000 IU daily (the range in typical prenatal multivitamins at that time) and further suggested that even without supplements, women consuming liver frequently could exceed safe intakes of vitamin A.¹³

Chris Masterjohn, PhD, has critiqued this study for its several weaknesses in methodology.¹⁴ Nevertheless, as a result of the Rothman study, expectant mothers have been warned not to consume liver—the most excellent source of preformed vitamin A. Not unexpectedly, 65 percent of prenatal vitamins now contain no preformed vitamin A (identified on the label as retinyl, retinyl palmitate, or retinyl acetate) and instead only contain beta-carotene, essen-

tially a “provitamin A” or vitamin A precursor that has little utility for people with genetic polymorphisms and other causes of low conversion of carotenoids to retinol.¹⁵ Prenatal vitamins that do contain retinol/retinyl provide daily doses from a very low 500 IU to 4,300 IU.¹⁰ In the last few years, more prenatal vitamins with the retinol form of vitamin A have come onto the market, which is an encouraging response to the unintended consequences of the Rothman study.

Additional research has further exposed the recklessness of the widespread warnings against consuming any amount of retinol during pregnancy (including from liver) that arose following the Rothman study. In a 2022 review article on “evidenced-based recommendations for an optimal prenatal supplement,”¹⁰ the authors cited two studies that found that pregnant women in the U.S. are more likely to be deficient in vitamin A than their non-pregnant counterparts, even after supplementation. One of these studies found that 33 percent of the unsupplemented pregnant women were vitamin A deficient as compared to 17 percent of those who supplemented with 4,000 to 6,000 IU of preformed vitamin A; neither group was low in beta-carotene.¹⁶ The second study found that the lowest quartile of maternal dietary intake of vitamin A was associated with a 3.4 times higher risk of a serious heart defect in the baby.¹⁷

For women whose diets are low in preformed vitamin A, I concur with the conclusion of these review authors, who stated: “Overall, these studies suggest that higher levels of supplementation of vitamin A, but not carotenoids, are needed during pregnancy.” They continued, “Vitamin A levels decrease during pregnancy, the average intake is below the RDA, and 2500 IU (750 mcg)/day of retinol was insufficient for women in the US to increase levels to that of non-pregnant US women. Therefore, higher levels of retinol are needed [italics added]. Beta-carotene or mixed carotenoids may also be helpful, but are insufficient even at normal levels to normalize levels of retinol” [the physiologically essential form of vitamin A measured in the serum].

Unfortunately, widespread misinformation persists about the need for preformed vitamin A before, during and after pregnancy, and only 13 percent of prenatal supplements meet or exceed the review authors’ recommendation for preformed vitamin A. Furthermore, there seems to be almost no recognition by the medical community that vitamin A is instrumental to fertility in women and men.

I have discussed the exaggerated fear of preformed vitamin A during pregnancy previously.¹⁸ What is important to understand, is that *the traditional pattern of consuming animal liver* (one to two servings per week) has never been linked to a single case of birth defects. (In the literature, “only one case of congenital abnormalities has been reported [in 1986] that was associated with high liver consumption”; the authors who flagged the 1986 study note that evidence about vitamin A intake during early pregnancy often is “anecdotal” and “poorly documented.”¹⁹) In addition, the window where an excessive intake of retinol has the potential to cause birth defects is within the first eight weeks of pregnancy.²⁰ This does pose a challenge for licensed practitioners like myself when treating women who are actively trying to conceive and have indications of a pre-

There seems to be almost no recognition by the medical community that vitamin A is instrumental to fertility in women and men.

existing vitamin A deficiency. As their nutrition improves, they could become pregnant at any time and, therefore, as a licensed practitioner, I can only suggest a total intake of preformed vitamin A from foods and/or supplements that is well within the guidelines published by the Society for Birth Defects Research and Prevention, which (along with other mainstream medical organizations) used to advise, “Supplementation of 8,000 IU vitamin A (as retinol/retinyl esters) per day should be considered the recommended maximum prior to or during pregnancy until further evaluations can be performed in the human population. . . . Most prenatal vitamin preparations contain 8,000 IU/capsule of vitamin A as a daily supplement.”²¹

Fortunately, my experience has shown that for women who choose not to eat liver, amounts of retinol between 2,500 and 6,000 IU from supplements along with a diet rich in pastured eggs and full-fat dairy will replete most women (and their male partners) in just one to three months’ time, and they successfully conceive. In the third trimester, I suggest that a woman consume slightly higher amounts of vitamin A—between 6,000 and 10,000 IU—to provide for herself and her baby and prepare for lactation. This is somewhat lower than both the Weston A. Price Foundation guidelines of 20,000 IU per day before, during and after pregnancy, and the 25,000 IU daily recommendations of two influential nutritionists and authors, the late Carlton Fredericks and Adelle Davis.^{22,23} Interestingly, when lactating mice were supplemented with the human equivalent of 20,000 IU of retinol, no signs or symptoms of vitamin A toxicity were observed in the offspring.²⁴

To my knowledge, there is only one published case report of a woman who was given a large dose of retinol—100,000 IU intramuscularly—just two weeks before she learned that she was pregnant.²⁵ Her ophthalmologist, unaware that she was concurrently seeking fertility treatment, diagnosed her with a corneal problem caused by a severe vitamin A deficiency due to gastrointestinal malabsorption, along with a B12 deficiency, and treated her accordingly. Consulting obstetricians suggested allowing the woman to carry to term, and at twenty-eight weeks, the

anatomy scan was normal. The twenty-eight-year-old had been diagnosed with secondary infertility after delivering two babies within the previous four years. No cause was identified by the infertility clinic—her periods were regular and progesterone levels suggested she was ovulating, but she did have a polycystic appearance to her ovaries. This is a pattern I see in many of my patients who have been unsuccessful in conceiving or maintaining a pregnancy after one or more successful pregnancies, especially when they are closely spaced.

Of note, these authors remark, “This is a rare case of established vitamin A deficiency related to secondary infertility”; they add that “there are no reported cases in the literature to suggest management of cases with vitamin A deficiency and infertility.” In this “rare case,” secondary infertility was quickly solved in about a month after restoration of vitamin A levels; however, B₁₂ repletion may have played a role as well. My practice experience indicates that this is not a rare occurrence. On the contrary, multiple pregnancies, especially if followed by lactation, put a woman at much higher risk for vitamin A deficiency. Because I employ a total nutrition approach, none of my cases solely involve repleting vitamin A to restore fertility, but it is clear to me that it is one of the most significant dietary factors—if not *the* most significant. The lead author of the case report is an IVF (*in vitro* fertilization) specialist whose primary interest is the clinical management of couples with fertility problems²⁶; he and his case report co-authors wisely suggest, “if a woman with vitamin A deficiency is seeking pregnancy, *it seems a better solution to have. . . vitamin A levels replenished and then starting active attempts to become pregnant*” (italics added).

In my patients’ and my own experience, the vast majority of OB-GYNs simply advise women trying to conceive to “eat healthy,” “lose weight if obese” and “take any prenatal vitamin that contains folic acid.” This guidance does not typically change even when a woman has gone a year or more without success. (Many fertility doctors are now recommending various supplements, but with the exception of Iva Keene, ND, I have yet to see any recommend a source of

performed vitamin A, either in my patients or on their websites.)

Contrast this absence of vitamin A to the policy statement of the American Academy of Pediatrics (AAP), which identifies vitamin A among the dozen key nutrients that support neurodevelopment in the first one thousand days of life, *starting from the moment of conception*. The AAP urges women and their children to get referred to nutrition support during this crucial time and posits, “Understanding the complex interplay of micro- and macronutrients and neurodevelopment is key to moving beyond simply recommending a ‘good diet’ to optimizing nutrient delivery for the developing child.”²⁷

Unfortunately, fertility doctors and even OB-GYNs are often completely uneducated on the foods and nutrients required for successful reproduction. When they do give their patients advice, it is limited at best and dismissive or harmful at worst. Pediatricians also lack awareness of the importance of the complete array of essential nutrients, often only considering vitamin D or iron to be of concern. In my own profession, the contingent of dietitians who are educated on the principles of traditional diets is relatively small. (One notable example is Lily Nichols, RD, author of *Real Food for Pregnancy*.) The majority of dietitians guide parents and parents-to-be on the benefits of eating a more “plant-based” diet and choosing lean proteins.

ASSISTED REPRODUCTION: A GLOBAL INDUSTRY

For couples experiencing fertility challenges, there exists a myriad of conventional medical and alternative providers, as well as websites, social media, books, videos and courses providing treatment or guidance on improving the chances of conceiving. One of the most popular strategies is to seek the care of a fertility specialist who is licensed to deliver assisted reproduction technologies (ART), which can include prescribing drugs, performing intrauterine insemination, and, if needed, performing the most invasive treatment of all: IVF.

ART treatments, including IVF, are a global industry, bringing in sixteen billion U.S. dollars worldwide in 2021 and growing at an annual rate of 10 percent.²⁸ The term “reproscope” has been

coined to describe this booming business. Each year in the United States, more than fifty-five thousand women give birth to a baby conceived through ART. Twelve percent of American women fifteen to forty-four years old—over seven million of them—have received medical care for infertility.²⁹ In the U.S., the average cost of one IVF cycle is over twenty thousand dollars,³⁰ plus the cost of expensive medications; each cycle has a success rate of about one in three for women under age thirty-five and steadily decreases with age to less than 2 percent for women over age forty-four. Many women go through multiple cycles of IVF,²⁸ and in the majority of states, insurance either does not pay or caps payments, leaving couples with large medical expenses. Worldwide, there are over six thousand assisted reproduction clinics; India has the highest number of clinics overall, while Israel has the highest number per capita. In some countries, the number of children conceived via IVF is as high as 6 percent.³¹

Perhaps even more alarming is that babies conceived through IVF are at higher risk for congenital problems, including cardiac, musculoskeletal and genitourinary malformations. There is also an increased risk of respiratory, blood-related and brain abnormalities if frozen embryos are used, and higher risks for pre-eclampsia for the mothers.²⁹ The risks for preterm birth and low birth weight are over 50 percent higher than in non-IVF pregnancies. Swiss physicians hypothesize that in addition to maternal and paternal factors, causes of these problems may include the IVF technology itself.³¹ In addition, I hypothesize that the increased risks are in part due to the probable inadequate nutritional status of the parents, which may have prevented them from conceiving naturally in the first place.

The Swiss medical doctors have gone on the record, warning, “For the well-being of the children to be conceived, *IVF therapy should only be carried out in cases of infertility that cannot be treated by any other means*, as the precise causes of the risks of IVF to child health are unclear” [italics added].³¹ But can infertility be treated by “other means” in these seemingly difficult cases? If so, what are the problems that health care providers should be trying to solve?

Unfortunately, fertility doctors and even OB-GYNs are often completely uneducated on the foods and nutrients required for successful reproduction.

What means should they utilize? And perhaps the biggest question of all is one that I will leave the reader to ponder: *Does it align with the self-interest of the reproductive industry for health care providers to work to solve these problems?*

Restorative reproductive medicine (RRM) is an alternative medical approach to help couples conceive without ART. The interventions include educating couples on fertility awareness methodologies, providing treatment for metabolic and immune diagnoses and correcting levels of hormones, including thyroid, progesterone and androgens, as appropriate.³² It also encourages improved nutrition, using targeted nutritional interventions as a first-line therapy.

WHAT'S BEHIND DECLINING FERTILITY?

The global fertility rate declined by nearly 1 percent per year from 1960 to 2018. This equates to more than 10 percent per decade and more than 50 percent over fifty years. In just forty years, sperm counts have fallen by 50 percent as well.³³ In the U.S., up to 15 percent of couples currently are infertile.³⁴ Globally, as reported by the World Health Organization in 2023, one

in six people will be affected by infertility in their lifetime, up from the prior estimate of one in eight.³⁵ When I meet with a woman experiencing what I refer to as “subfertility,” she often shares that she feels alone—but clearly, she is far from alone. Unfortunately, many women take on self-blame, especially if their partners’ semen analysis comes back “normal.”

A woman is diagnosed with infertility when she fails to get pregnant after twelve months of targeted unprotected intercourse, or after six months if she is over thirty-five years of age. Experts consider the occurrence of multiple miscarriages (medically termed “recurrent pregnancy loss” and defined by the spontaneous loss of two or more pregnancies) to be distinct from the diagnosis of infertility. Infertility is thought to depend on female factors in anywhere from 20 to 70 percent of cases, on male factors in about 30 to 50 percent of cases, and on both male and female factors in 40 percent of cases.³⁶ The most common known causes of female and male infertility are listed in Table 1.³⁷

Note that while some causes are readily identifiable, they are not always easy to resolve with conventional medical treatments. For both female and male infertility, conventional medicine—in contrast to nutrition and other holistic therapies—can offer no treatment to improve overall egg quality and sperm quality. The best that doctors can do is to force the ovaries to produce more mature eggs with medications like letrozole, select the most viable sperm for IVF with a technique called intracytoplasmic sperm injection (ICSI) and, after fertilization is achieved outside the body, select the most viable embryos to “implant” into a woman’s uterus. Implantation is a very complicated process and may be the most difficult problem to overcome, even if all else goes according to plan.

The known causes of infertility listed in Table 1 do not include the 30

TABLE 1. Leading Causes of Female and Male Infertility

FEMALE CAUSES	MALE CAUSES
<ul style="list-style-type: none"> • Egg quality (measured by antral follicle count, embryo genetic testing) • Ovulatory disorders (polycystic ovary syndrome, thyroid disease, undereating or overexercising, premature ovarian failure, or, more rarely, tumors) • Uterine or cervical abnormalities (such as polyps, fibroids, abnormal shape of uterus) • Damaged or blocked fallopian tubes • Endometriosis • Pelvic scar tissue • Insufficient cervical mucus • Short luteal phase • Insufficient progesterone production 	<ul style="list-style-type: none"> • Abnormal sperm production or quality—number or function (measured by count, motility, morphology and genetic defects) • Exposure to toxic chemicals, radiation, or prescription or non-prescription drugs, including chemotherapy • Frequent exposure of testicles to heat

percent of infertility cases that doctors diagnose as “unexplained” because they cannot identify a cause. In 2015, the editor-in-chief of the *Journal of Reproduction & Infertility* wrote:

“The veracity of ‘unexplained infertility’ term has been challenged by many clinicians and researchers; they emphasize that the assignment of this title to an infertile couple is much dependent on the quantity, quality and nature of the applied diagnostic tests. [. . .] Our inability to find the causes of couples’ infertility does not mean that there is no cause for the disorder. Extensive research should be conducted on other possible causes of failed conception such as ovarian and testicular dysfunctions, sperm and oocyte quality, fallopian transport defects, endometrial receptivity, implantation failures, and endometriosis.”³⁸

Moreover, while the issues listed in Table 1 may appear to be root causes, in my experience (and that of other holistically oriented professionals), clearly, they often are not. For example, there is growing recognition of the detrimental effects of environmental toxins and synthetic chemicals on both female and male fertility.³³ Multiple scientists and authors are now warning women and men to limit exposure to toxins like BPA, phthalates and PFAS (per- and polyfluoralkyl substances); even the CDC website lists published research on BPA and implantation failure in women undergoing IVF.³⁹

Undernutrition and specifically micronutrient deficiencies can adversely affect the outcome of every maternal and fetal stage—preconception, conception, implantation, placental development and embryo/organogenesis. Studies have linked vitamin and mineral deficiencies to “significantly high reproductive risks, ranging from infertility to fetal defects and long-term diseases.”⁴⁰ Unfortunately for couples undergoing ART, a 2022 systematic literature review concluded that “findings. . . do not support any single dietary pattern for the purpose of improving pregnancy or live birth rates in women undergoing IVF treatment.”⁴¹ This recent review claiming to encompass the “breadth of the scientific evidence” probably explains in part

why ART doctors do not refer their patients to qualified nutritionists like myself. (If I were to be more suspicious, I would guess that these MDs may prefer that couples don’t find success outside of their revenue stream.)

Fortunately, the popular media are now drawing attention to a poor-quality diet as a strong contributing factor to fertility struggles, along with deficiencies in nutrients such as vitamin D and folate. As a result, many couples wanting to optimize their chances of successful ART/IVF are seeking dietary guidance. However, as the couples who meet with me demonstrate, it is the “Wild West” out there when it comes to trying to decipher which dietary information is most accurate. Couples are bombarded with messaging to eat a low-saturated-fat, plant-based diet to optimize fertility,⁴² yet Dr. Price’s research shows that this is exactly the wrong approach. One notable exception to the bad advice is the somewhat well-known recommendation for full-fat dairy from the Harvard School of Public Health, which found that the consumption of more than five servings of lowfat dairy foods per week increased the risk of anovulatory infertility, whereas high-fat dairy foods reduced the risk.^{43,44} The researchers hypothesized that the presence of a fat-soluble substance in the high-fat dairy improves ovarian function.

We know that dairy fat is an excellent source of both vitamin K₂ and vitamin A, especially if it is from animals on pasture, and it likely provides other less understood but important nutrients as well. We also know that the animal-sourced foods containing the fat-soluble vitamins—A, D, E and K₂—are instrumental for health and especially for healthy reproductive function. Dr. Price captured all the nutrition guidance we need in his studies of indigenous populations thriving on their traditional diets.⁴⁵ These populations did not know about vitamins as we now understand them but, when planning to have children, they knew that “sacred foods” rich in critical nutrients were important. Regarding vitamin A, according to Sally Fallon Morell and Mary Enig, “[Dr. Price’s] research demonstrated that generous amounts of vitamin A ensure healthy reproduction and offspring with attractive wide faces, straight teeth and

Couples are bombarded with messaging to eat a low-saturated-fat, plant-based diet to optimize fertility, yet Dr. Price’s research shows that this is exactly the wrong approach.

strong sturdy bodies”); in addition, Price noted, “the foods held sacred by the peoples he studied, such as spring butter, fish eggs and shark liver, were exceptionally rich in vitamin A.”⁴⁶

Today, couples who follow a nourishing Wise Traditions diet report having healthy babies even into their forties, despite their doctors labeling them as “geriatric pregnancies” because of their “advanced maternal age.”⁴⁷ They also understand the importance of proper pregnancy spacing, which avoids the known risks of adverse outcomes due to maternal depletion of nutrients.⁴⁰

VITAMIN A MECHANISMS ENABLING AND GOVERNING REPRODUCTION

As stated earlier, vitamin A affects just about every function in the body, so it is not surprising that it also exerts multiple effects on both female and male reproductive function. Early research revealed the basic necessity of vitamin A for reproduction and showed what can go wrong morphologically if it is deficient, depending on the timing and extent of deficiency. Subsequent research has revealed what is happening at the biochemical level. Vitamin A (through its physiologically active form, all-*trans* retinoic acid) is now considered a hormone due to the hormonal-like signaling of its specific nuclear receptors, which govern gene transcription. For this reason, tissue levels of retinoic acid are tightly regulated but ultimately are dependent on the supply, uptake, transport and storage of its vitamin A precursors.⁴⁸ A 2020 report explains, “In contrast to classical hormones, there is no endocrine gland that synthesizes retinoids, controlled via feedback by the hypothalamus and pituitary gland. Instead, the levels of the active form of vitamin A (all-*trans* retinoic acid; RA) are tightly regulated *via* local cellular enzymatic mechanisms; a regulation that is critical for correct signaling via the nuclear receptors.”⁴⁸

In the female, evidence indicates that vitamin A plays a role in the multiple stages of reproduction: hypothalamic-pituitary axis hormone secretion, ovarian steroid hormone synthesis and secretion, ovary development, selection of dominant follicles, oocyte maturation, fertilization, formation of the corpus lutea, blastocyst (fertilized egg) implantation,

fetal development and parturition. Vitamin A is required for the proper functioning of the ovaries, fallopian tubes, uterus and vaginal epithelium. In animals that are vitamin A-deficient, ovarian weight is significantly reduced over animals sufficient in vitamin A, providing further evidence that the reproductive function of the female is heavily dependent on vitamin A (p. 547).⁴⁹ A 2011 study identifies retinoic acid as a top activin-regulated pathway, with activin playing an important role in the synthesis and secretion of follicle-stimulating hormone (FSH).⁵⁰

Studies have shown that low serum levels of retinol (and vitamin E) are associated with anovulation (failure of the ovaries to release an egg during the menstrual cycle) in women and abnormal sperm parameters in men.⁵¹

From studies in animals, scientists have learned that the impact of vitamin A deficiency on reproductive outcomes depends both on the degree of the deficiency and when the deficiency occurs.⁵² When *severe* vitamin A deficiency is present prior to mating, females typically fail to enter estrous and ovulate. Vitamin A appears to be required for the selection of a dominant follicle via the hormone-dependent differentiation of a mature egg and release at ovulation. In animals that are sufficient in vitamin A, high concentrations of vitamin A have been detected in follicular fluid and much higher concentrations in developing follicles than in atretic (degenerating) follicles (p. 551).⁴⁹ In a study published in 2016, researchers observed that when they fed mice a retinol-deficient diet for three weeks, the mice ovulated fewer cumulus-oocyte complexes, and the oocytes within the ovulated complexes exhibited impaired development.⁵³ (The cumulus-oocyte complex “is ovulated during the ovulatory phase of the menstrual cycle and is just what it seems: an oocyte surrounded by specialized granulosa cells, called cumulus cells. The cumulus cells surrounding the oocyte ensure healthy oocyte and embryo development.”⁵⁴) Three weeks for mice equates to twenty-eight months for humans, so it is easy to see how quickly a diet low in vitamin A can impair a woman’s fertility, especially if she has depleted her body’s stores from the demands of one or more previous pregnancies and lactation(s).

In *less severe* vitamin A deficiency, ovulation may occur, but the oocytes (eggs) are likely to degenerate in the fallopian tubes. One or both fallopian tubes may also become cornified, resulting in a malfunction of the tubal cilia (little “hairs” that create “waves” of propulsion), which, along with a reduced quantity and quality of the mucus secretions, can prevent the sperm from effectively interacting with the egg. Traveling into the tubes requires that the sperm already have penetrated the uterine cavity, which becomes unlikely if the amount or quality of cervical mucus is compromised from lack of vitamin A. Lastly, the cornified reproductive tissues can prevent the implantation of the fertilized egg.⁵⁵

With *mild* vitamin A deficiency, fertilization and implantation occur, but the embryo will likely be resorbed or die early in gestation. This is not unexpected, given that the early phases of normal gestation (in vitamin A-sufficient animals) are marked by a high concentration of vitamin A accumulation in the conceptus (the embryo in the uterus). This could reflect a mechanism that prepares the conceptus to meet the presumably higher vitamin A requirements of the critical period of organ differentia-

tion.⁵⁶ Vitamin A is also needed for proper development of the placenta; even a mild vitamin A deficiency can lead to the death of the placenta, resulting in fetal loss. Vitamin A is necessary for the synthesis of progesterone by the corpus luteum (formed from the follicle after releasing the egg), followed by the placenta after the first trimester of pregnancy. Progesterone is essential to sustaining pregnancy. Many women with a history of miscarriages and low progesterone levels are now given prescription progesterone in the first trimester to support pregnancy; I have seen appropriate preconception supplementation with vitamin A to be as effective in many cases.

For a woman desiring pregnancy, there are also potential problems that vitamin A repletion will not be able to address. Consider that vitamin A is required during the initial stages of egg development (meiosis) that occur while a female fetus is developing in utero; this suggests the possibility that if a pregnant woman has insufficient vitamin A intake or levels, her daughter could be at risk for fewer viable eggs over her own reproductive lifespan.⁵²

A second problem involves Müllerian anomalies, which affect about 4 percent of women. Considered a congenital disorder, they can result in malformations (present at birth) to the fallopian tubes, uterus and other reproductive tissues.⁵⁷ When pregnant rats are fed a diet deficient in vitamin A, their fetuses exhibit incomplete Müllerian duct development, suggesting that vitamin A signaling is essential for this duct's development.⁵⁸

Finally, surviving offspring of animals mildly deficient in vitamin A display a variety of abnormalities that can affect just about every organ. These include congenital diaphragmatic hernia (a congenital anomaly that is on the rise⁵⁹), skeletal defects and, notably, “a less developed nasal region.”⁶⁰ This mirrors Dr. Price's findings that proper facial and skeletal development in children is critically dependent on the mother ingesting sufficient quantities of all the fat-soluble vitamins during the gestational period.⁶¹ Congenital diaphragmatic hernia remains the most life-threatening cause of severe respiratory failure in the term infant. Its incidence is one in twenty-five hundred births,⁶² and it accounts for about 8 percent of major congenital anomalies.

Vitamin A may support IVF success for couples who choose that option. A study of fifty women undergoing IVF had three important findings.⁶³ First, serum and follicular fluid levels of fat-soluble vitamins were very highly correlated. Second, the mean follicular fluid (FF) concentration of vitamin A was associated with a higher mean day two and day five (post-fertilization) embryo quality status. Third, higher FF vitamin A levels (along with vitamin E levels) *predicted the fertilization success* of each individual egg. Both vitamin A and vitamin E act as FF antioxidants that protect against excessive reactive oxygen species, which can cause damage to DNA and cell membranes, affecting the development of both the eggs and embryos. Conversely, this study found a negative correlation between serum vitamin D levels and the mean day five embryo score and no correlation with fertilization success. From this study, one can conclude that supplementing vitamin D without attention to adequate vitamin A intake—a typical protocol I have seen ART doc-

tors use—is inadvisable.

Because a handful of studies indicate benefit for IVF outcomes, some ART doctors recommend nutraceuticals such as CoQ10, inositol, acai berry and melatonin, with the stated goal of reducing damaging levels of reactive oxygen species and improving egg health. However, according to Chris Masterjohn, PhD, vitamin A is a superior antioxidant for both egg and sperm membranes. It also has a sparing effect on glutathione—the most important endogenous antioxidant—which is also crucial for fertility.^{64,65}

It will likely be some time before true vitamin A is no longer considered a risk factor for birth defects but correctly recognized as a “critical determinant in reproductive outcome that can lead to either a complete failure of reproduction prior to implantation or fetal resorption or malformation.”⁶² Interestingly, a September 2023 conference sponsored by FACTS about Fertility and the Institute of Restorative Reproductive Medicine of America is featuring a keynote presentation on the “Role of Vitamins A & D in Optimizing Sex Hormone Function, Pregnancy, and Breastfeeding.”⁶⁶

VITAMIN A AVOIDANCE

Why don't health care practitioners recommend sources of vitamin A to infertile couples? Modern medicine follows evidenced-based, quantitative protocols derived from peer-reviewed published studies. A group of scientists succinctly described the problem where vitamin A is concerned: “Convincing results in humans [as to teratogenicity in humans], which would allow clear-cut recommendations to females for the safe use of vitamin A [during pregnancy], are lacking.”⁶⁷ Because none currently exist for vitamin A during the periconception period, and a couple of influential peer-reviewed studies suggest harm,¹² it is no surprise that most health care practitioners choose to avoid the issue, especially since they blindly trust the formulations of any and all prenatal vitamins to correct nutrient shortfalls. As one group of researchers describes it, vitamin A supplementation during pregnancy is “a controversial issue [that] holds a lot of paradoxical facts.”⁶⁸

There are five prevailing but erroneous

beliefs about vitamin A. The first is that women should avoid the retinol form of vitamin A “as it can cause birth defects”; this belief is compounded by the lack of understanding that the converse is actually true: *inadequate vitamin A intake can cause birth defects*. Note that as late as 2005, the U.S. Food and Drug Administration (FDA) published a suggested daily value of 8,000 IU for supplements labeled for pregnant and lactating women; prior to that, I recall that prenatal vitamins generally supplied 5,000 IU in the retinyl ester form. Currently, a few provide 4,000 to 4,300 IU of a retinyl ester such as retinyl palmitate. In any case, studies indicate that it is only before the eighth week of gestation, while embryogenesis is still occurring, that excessive preformed vitamin A from supplements (greater than 10,000 IU) has been purportedly linked to fetal malformations.⁶⁹

The second prevailing belief among dietitians and other health care providers is that there is a low population risk of vitamin A deficiency in developed nations and that it is only in low-income countries that vitamin A deficiency during pregnancy is common.^{70,71} For example, the prominent clinical education site StatPearls states that in the U.S. general population, “vitamin A deficiency is rare, estimated at 0.3% in 2013” and that “the prevalence of vitamin A toxicity. . . is much greater than deficiency.”⁷² The view is that most diets contain sufficient amounts of vitamin A and that the most fat-soluble forms, retinyl esters, can be stored within the body in relatively high levels, thereby counteracting periods of low dietary intake.⁴⁸ Current nutrition textbooks, too, state that vitamin A deficiency is rarer in the U.S. than in developing countries, with the exception of children under five, considered the predominant age group suffering from inadequate vitamin A intake.⁷² However, the 2007–2010 NHANES studies in the U.S. contradict this belief, indicating that 51 percent of U.S. adults consume less than 621 mcg (or 2,068 IU) from their diets,⁷³ and that amount includes the often poorly utilized carotenoid forms. (One textbook author points out that carotenoids are embedded within plant cells and that cooking or extensive mechanical chewing is necessary to break down

the digestion-resistant plant cell walls.⁷²) Likewise, in the UK, 30 percent of women between nineteen and thirty-four years of age have reported vitamin A intakes below the recommended lower limit.⁷⁴ Vitamin A deficiency is considered a public health concern if 15 percent or more of the population has a plasma retinol concentration of less than 0.7 micromoles/liter,⁶⁹ but because testing of serum levels is limited in the U.S., the actual prevalence most certainly is unknown. Unfortunately, the concern for *excessive* vitamin A intake far exceeds any concern for *inadequate* intake, especially in pregnant women, even though studies have found that many women are deficient in vitamin A immediately after delivery,⁷⁵ placing them at higher risk for anemia and potentially lactation failure, and putting their babies at even higher risk for early childhood vitamin A deficiency.

Third, the upper limit of 10,000 IU per day for preformed vitamin A is not intended to apply to malnourished people or as a way to avert a vitamin A defect,^{76,77} yet a prevailing issue is that health care providers are not likely to try to correct a vitamin A deficiency in a woman trying to conceive.

Fourth, there is a belief that carotenoids (the plant forms of provitamin A) supply adequate vitamin A for the majority of the population, regardless of stage of life or pre-existing condition.

Liver is the best dietary source of vitamin A, but the fifth prevailing belief is that liver is unhealthy due to storing toxins and has too much vitamin A to recommend when a woman is pregnant. The UK National Health Service specifically lists liver as a food to avoid when pregnant.⁷⁸ Sadly, most younger women will not eat liver, as they did not eat it growing up, and they tell me that they cannot tolerate the taste. For those women, I suggest they try desiccated liver capsules.

MY APPROACH: COUPLES WHO WANT TO START A FAMILY

Since 2016, I have focused my practice on women’s reproductive health, combining traditional dietary principles with my clinical experience, training and ongoing literature reviews. I am experienced in interpreting the signs, symptoms and risk factors of nutrient shortfalls—this is one of the most important tools I use to help patients regain their health and reproductive functioning. Many of the shortfalls I uncover are fairly common in my patients: vitamins B₆, B₁₂, E, and D, magnesium, calcium, iodine, selenium, zinc, iron, glycine and choline. However, the most common and notable problem, hands down—occurring in at least two-thirds of my female patients who have cycling or fertility problems—is low vitamin A status.

What is even more remarkable is that many of these female patients appear to have had a long-standing vitamin A insufficiency—some for several years. You might suppose that I know this because my patients provide me with blood test results indicating that their vitamin A levels fall below the reference range, yet only a few patients have had a vitamin A blood test. In contrast, the vast majority have had one or more vitamin D blood tests. I would note that while blood testing is helpful in some cases, diagnosing vitamin A deficiency may require more than

WHY ARE SO MANY WOMEN DEFICIENT IN VITAMIN A? EIGHT REASONS

FEW OR NO SACRED FOODS EATEN: Due to erroneous messaging that sacred foods like organ meats (especially liver), deep-orange poultry eggs or fish eggs and pastured dairy are to be avoided, intake of these foods is often low or nonexistent. When women do consume eggs or dairy, the foods often come from animals that lack access to pasture, so these animals' intake of carotenoids (which the animals can efficiently convert to retinol) is low.

LOST TRADITION OF CONSUMING HIGH-VITAMIN COD LIVER OIL: This tradition has been largely replaced by fish oils to supply DHA during pregnancy. In addition, many cod liver oils have vitamin A removed or reduced.

PREVALENT PROBLEM OF LOW INTAKES: In the U.S., according to NHANES data, four out of five women have vitamin A intakes below the U.S. RDA of 700 to 770 mcg (~2,300 to 2,500 IU). In the Netherlands, a study found that women who did not consume liver or liver products had average vitamin A intakes below the recommended daily amounts (with the recommended amounts generally equating to 2,665 IU and 3,300 IU for non-pregnant and pregnant Dutch women, respectively, which is higher than the U.S. RDA).¹⁹ About 70 percent of the women who consumed no liver had vitamin A intakes below the RDA.

RELIANCE ON BETA-CAROTENE: Preformed vitamin A (retinol) is efficiently absorbed (70 to 90 percent), but the absorption of beta-carotene appears to be highly variable (5 to 65 percent), depending on food- and diet-related factors and the individual's age and health status.⁵ This can be compounded by poor conversion of beta-carotene to retinol, due to common (but typically undetected) genetic characteristics prevalent in individuals of European ancestry, or pre-existing disease states such as hypothyroidism and heavy metal toxicity, or co-existing deficiencies in nutrients such as zinc and iron. The prevalence of hypothyroidism is estimated at 2 to 4 percent in women of reproductive age and is likely higher due to subclinical or undiagnosed cases. In women with diagnosed infertility, the prevalence is over 20 percent.⁸²

ZINC DEFICIENCY: This can lead to an apparent vitamin A deficiency even in the presence of seemingly adequate vitamin A intake. Zinc is required for both the absorption and conversion of beta-carotene to retinol. The subsequent conversion of retinol to the more active retinoic acid requires sufficient zinc levels within the cells lining the gut. Zinc is required for the retinol binding protein that transports stored vitamin A from the liver to the tissues of the body; retinol-binding protein is also the most important transporter of vitamin A to the fetus from the mother.⁶ Conversely, there is also evidence that adequate vitamin A governs zinc absorption and utilization.⁸³ Zinc deficiency is much more likely with high intake of plant foods (especially grains, legumes and nuts) that not only do not provide adequate zinc but are high in phytates that significantly block zinc absorption. Soils have become very depleted in zinc, which translates to lower zinc in the crops grown on them.

EXCESSIVE SUPPLEMENTATION WITH VITAMIN D: This becomes a problem when dosed for more than a few months, as it leads to the enhanced utilization of vitamin A, effectively depleting it even further.⁸⁴ Obstetricians and fertility specialists are now quite aware that many women have low vitamin D status, and some will treat it with an ongoing dose of 4,000 IU or more per day.

OBESITY: Obesity appears to cause a "silent" vitamin A deficiency,⁸⁵ marked by reductions in vitamin A levels in the liver and signaling in multiple organs. Even with adequate intake from the diet, there is a drastic reduction in vitamin A concentrations and an impaired ability to use vitamin A correctly. With weight loss, vitamin A levels and signaling normalize. This could partially explain why weight loss, for some, does improve fertility.

EXCESSIVE INTAKE OF VEGETABLE OILS HIGH IN POLYUNSATURATED OMEGA-6 FATTY ACIDS: According to Martin Grootveld, PhD, industrial oils introduce toxic by-products into the body, notably toxic aldehydes and lipid peroxides, which cause widespread oxidative stress and create cellular-level deficiencies of critical micronutrients, including vitamins A, B1, B6, B9 and zinc along with glutathione. Consumption of commercial fried foods is a principal dietary culprit,⁸⁶ but obesity and environmental toxins (such as lead, smoking) are also risk factors. Oxidative stress results from an imbalance of reactive oxygen species (ROS) to antioxidants. Low ROS levels have a regulatory role in oocyte maturation, while excessive levels are implicated in the pathology of infertility in both women and men. Sperm are extremely sensitive to attack by ROS, with a limited capacity to repair ROS-induced DNA damage. Retinol and vitamin E are natural antioxidants that inhibit lipid peroxidation and protect against cellular/gamete damage. Serum levels of malondialdehyde, another toxic by-product of oxidized fatty acids, are twice as high in women with anovulatory cycles compared to those who ovulate.⁵¹ I believe that at least half of the women I work with who have been diagnosed with polycystic ovary syndrome (PCOS) actually don't have PCOS. I suspect poor diets and obesity create high levels of ROS; studies of women with PCOS show ROS levels to be higher. These women are easy to help, but it takes some time to get destructive fatty acids out of the body. Vitamins A and E can help as chain-breaking antioxidants. As Dr. Chris Knobbe explained in *Wise Traditions* (Summer 2023), the modern diet filled with excessive omega-6 oils underlies the majority of chronic diseases, even when the oils are not subjected to frying temperatures.⁸⁷

Doctors' failure to screen for and treat "subclinical" vitamin A deficiency is one of the most critical yet completely unrecognized gaps in the conventional health care system. For couples wanting to have healthy children, it is a modern-day tragedy.

the standard serum vitamin A (retinol) test, and the signs of deficiency are easy to miss if you aren't trained to look for them.⁷⁹

I believe that doctors' failure to screen for and treat "subclinical" vitamin A deficiency is one of the most critical yet completely unrecognized gaps in the conventional health care system. For couples wanting to have healthy children, it is a modern-day tragedy. Even more unfortunate is the compromised health of the children born to parents who are vitamin A-insufficient for one reason or another (see sidebar, page 25). As mentioned, the increased health risks faced by children born through IVF may, in part, be attributable to unaddressed low vitamin A status (and other nutrient shortfalls) of the mothers during pregnancy and continuing during the breastfeeding period.

What signs of vitamin A deficiency do I see that doctors tend to overlook?

- Skin problems: Hyperkeratosis (mainly as hardened follicular "bumps" on the back of the arms); sometimes acne, eczema and/or dandruff; and very often, chronically dry skin.
- One or more eye problems: Reduced dim-light vision (often first noticed as increased sensitivity to glare, which can impede night driving); dry eyes; intolerance to sunlight.
- Frequent respiratory infections, allergies, asthma, hard-to-treat anemia, low energy levels in spite of taking thyroid medication and, in many cases, low output of fertile cervical mucus, irregular menstrual cycles, anovulatory cycles and low progesterone levels.

The natural progression of chronic vitamin A deficiency most commonly leads to the gradual development of night blindness; increased frequency of gastrointestinal, pulmonary and urinary infections; and development of xeroderma and phrynoderma (follicular hyperkeratosis often found on extensor surfaces, shoulders and buttocks).²

Most of these patients are taking poor-quality prenatal vitamins that supply only vitamin A in the form of hard-to-convert beta-carotene—or sometimes supply no vitamin A at all. None

are eating liver, taking cod liver oil or eating abundant amounts of pastured eggs or full-fat dairy. Many have European ancestry, which means they are much more likely to have one or more of the common genetic polymorphisms that reduce the conversion of carotenoids to retinol, the physiologically essential form of vitamin A. Upon inclusion of an adequate amount of preformed vitamin A in the diet, resolution of these symptoms can be seen in as little as one to two months, with vision improvements being among the earliest to occur. (For more details, see my other articles in *Wise Traditions*, "Vitamin A: The Scarlet Nutrient"¹⁸ and "Vitamin A-mazing,"⁸⁰ as well as other information about vitamin A on the WAPF website.⁸¹)

What results do I see when a woman who is having reproductive problems makes the recommended changes to ensure she is fully nourished in all nutrients, with special attention to vitamin A? Over two-thirds experience the restoration of regular ovulatory menstrual cycles; for those desiring pregnancy, over half realize natural conception, which results in a full-term pregnancy (without complications) and a healthy baby. For others who choose or need to undergo IVF, their doctors are surprised by their outcomes, which include a much greater number of high-quality embryos, followed by a successful transfer and pregnancy. Initial progress can occur in as little as two to three months.

Some patients are lost to follow-up, so I may not be seeing the full effects of these nutritional improvements over time, but the majority send me photos of their beautiful babies and share appreciation for my guidance, stating that it made all the difference. One woman, in particular, stands out. She had had three failed IVF cycles. Six months after our first appointment, she repeated the egg harvest and fertilization process and obtained eleven high-quality embryos; before, she had obtained four of uncertain quality. She was able to get pregnant from the transfer of one of these embryos and has had a normal pregnancy thus far. To what did her ART doctor attribute this remarkable improvement? He told her, "We did a really good protocol." My patient insisted, however, that the IVF protocol was the same and told me it was her nutrition that made the difference.

I am convinced that the human body, when provided with the right nourishment, will function as it was designed for the vast majority of people. Women who have been told they are infertile are no exception.



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Vitamin K₂ MK-4: Dr. Price's Activator X and Its Transformational Potential

By Elizabeth Schlinsog and David C. Schlinsog, DC

Our inquisitive two-year-old granddaughter, like most children her age, has discovered the word “why.” “Why” is one of the most powerful words in our language. “Why, grandma?” “Why?” She has become aware of the world and has a relentless curiosity to understand it. There is no agenda with her “why,” just a strong desire to learn and understand.

When she is given an answer, you can see her digesting the information. She will most likely follow it up with a few more “whys” before she is satisfied. We have to laugh. Sometimes, there isn't an easy answer to her simple “whys,” but she is learning a very important lesson: Asking the right questions in life leads to understanding.

Vitamin A, in the cod liver oil, signals the body to make specific proteins, and vitamin K₂ MK-4 activates them. Vitamin D also signals the body to make specific proteins activated by vitamin K₂ MK-4.

THE “WHY” THAT BEGAN A GLOBAL QUEST—AND THE MAN WHO ASKED IT

Dr. Weston A. Price was born in 1870 and was raised on a farm in Canada. He had just graduated from dental school and had opened up his first practice when he came down with typhoid fever. Price retreated into the Canadian wilderness, where he ate “milk, fish, and wild berries” to heal himself.¹ As he regained his health, Price noticed that the decay of his teeth had stopped. He began thinking that tooth decay might be tied to health and that nutrition could be key to both dental and overall health.

In 1931, he began a quest to answer the simple but inspirational question, “Why do all my patients have rampant tooth decay?” Price’s research on diet, nutrition and health—summarized in his masterful book, *Nutrition and Physical Degeneration*²—sets him apart from today’s researchers because his work was all based on food, not the synthetics that investigators commonly study now. In fact, he and some of his peers found that any time synthetics were used, there were abnormalities and unwanted calcification throughout the body.

DIET, DISEASE AND DECAY

Along with tooth decay, Price’s patients had narrow nasal passages, resulting in mouth breathing in many children. They also had narrow faces and palates, leaving inadequate room

for teeth. Children living on modern, processed foods were “growing taller, but the bones of the hips were getting narrower, leading to later complications in pregnancy for the girls.”³ Price called these improper formations “intercepted heredity.”

Dr. Price concluded from his field studies that physical degeneration was a byproduct of modern foods, namely, white flour, sugar, processed oils and other highly refined and processed foods. This was and still is a monumental discovery! Other physicians in his time were aware of cultures that had little or no dental decay, but none of them had made the connection between diet, decay and disease.

In short, the problems Price witnessed in his practice came from nutritionally deficient diets. He proved that when modern foods replaced traditional diets full of fat-soluble “activators” (vitamins), dental disease and physical degeneration occurred.

Surprisingly, this knowledge remains lost or hidden in our modern society. Has your dentist ever told you that you needed to get more grass-fed animal fat in your diet or that you needed more vitamin K₂ MK-4?

PRIMITIVE CULTURES AND SOPHISTICATED DIETS

The fourteen different cultures that Price traveled the world to study had strong bodies,

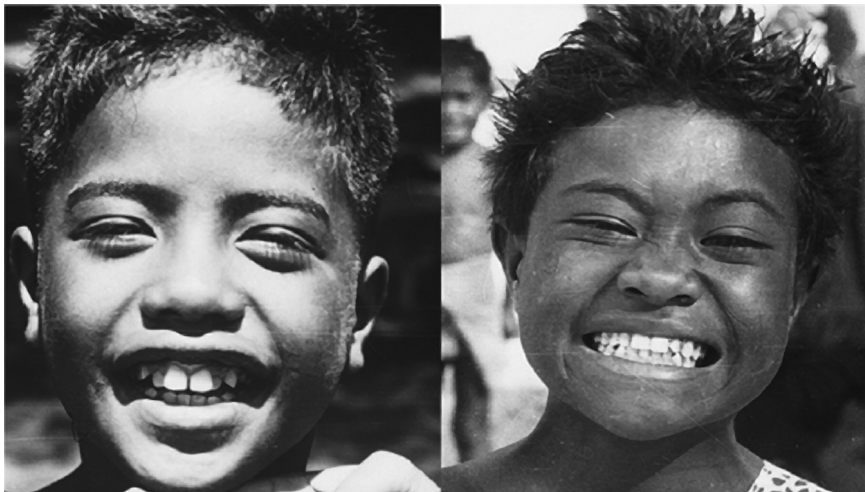


FIGURE 1: Price said, “Inadequate nutrition of the parents was responsible for the difference between the face and dental arch of the modernized Samoan youth, left, and a traditional Samoan, right.”



FIGURE 2: A young Melanesian male with perfect teeth: nary a toothbrush to be found but still very little tooth decay.

beautiful facial symmetry, negligible tooth decay and jaws broad enough to maintain straight teeth even after the wisdom teeth came in. These “primitive” people had a sophisticated understanding of the importance of food and a great respect for the nutritional needs of women and their developing babies. These cultures purposefully handed down their knowledge about food’s importance to future generations to ensure the health of their people and families.

Compared to the Western or modern or Standard American Diet, Price found that the native peoples he studied consumed ten times more of the fat-soluble vitamins. Foods containing these fat-soluble vitamins were especially generous parts of the diet during preconception, pregnancy, lactation and childhood growth and development, as well as a priority for the elderly.

Nutrient-dense foods, which included lots of healthy animal fats containing fat-soluble activators, maintained the physical integrity of people eating their traditional diets. They had no doctors, dentists or hospitals but instead maintained their health through the careful food choices they made. Fortunately for these cultures, they had no access to the empty calories that are so prevalent in our modern diet.

This ancestral knowledge of nutrient-dense foods is a legacy we need to learn, teach and instill in our children and grandchildren. At no

point in our history has it been more imperative. We are living in highly contaminated environments with food-like substances advertised and pushed on us through media, government and school systems from a young age. This carefully coordinated attempt to hook us on white flour, sugar, processed oils and addictive additives is good for the bottom line of big food businesses but horrible for our health.

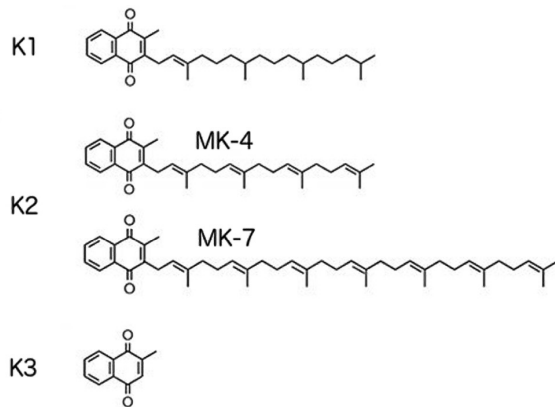
ACTIVATOR X = VITAMIN K₂ MK-4

Price carried out extensive experiments in both animals and humans with a fat-soluble vitamin that he called “Activator X,” which we now accept as vitamin K₂ MK-4. (Note: In 2015, the Weston A. Price Foundation sent samples of butter, butter oil and ghee to a lab to test for vitamin K₂ content. The only vitamin K₂ in these was MK-4. See Table 1)

In one of Price’s experiments, he fed eight groups of rats a deficiency diet with varying amounts of “butter vitamins” (the term he used for his source of vitamin K₂ MK-4) or, in two groups, cod liver oil. In his research, he found that the more butter vitamins given to the rats, the better the calcification and development of their bones and joints.³ Table 2 summarizes the amount of butter vitamins (and cod liver oil) given to each group.

From each group, Price chose one rat’s x-rays to summarize the group’s results (See Figure 4). Each group had an x-ray showing the forepaw, wrist, femur and tail. In the original photo from his experiment, you can see the

FIGURE 3: Structures of Vitamin K₁, K₂ and K₃



Vitamin K₁ (phyloquinone) is found in plants and some animal sources; it is involved in coagulation.

Vitamin K₂ has side chains that contain from four to thirteen “isoprenoids,” represented as MK-4 to MK-13. MK means menaquinone; the side chains are referred to as short- and long-chain menaquinones (MKs). Vitamin K₂ MK-5 through MK-13 are forms produced by bacterial synthesis. MK-7 is found in natto and supplements. Vitamin K₂ MK-4 is Dr. Price’s activator X and is unique, in that it is the only form that is not the product of bacterial synthesis, but comes from animal sources. (A synthetic MK-4 is made from tobacco or geranium leaves.)

Vitamin K₃ (menadione) is synthetic and water-soluble, and it has no side chain. The FDA banned its use for human consumption because of its high toxicity—although it still is allowed in animal feed, usually as menadione sodium bisulfate³ (a good reason to eat grass-fed animal products).

TABLE 1: Vitamin K₂ MK-4 in Common Foods

	ng/g	% MK-4
Australian Emu Oil	12,000	99.95%
Goose Liver Pâtè	3,700	100%
Duck Fat	1,117	100%
Ghee	316	100%
Butter Oil	221	100%
Butter (Land O’ Lakes)	216	100%
Chicken Liver (Grass Fed)	103	91%
Chicken Liver (Conventional)	35	56%
Cheddar Cheese	99	16%
Egg Yolk (Conventional)	317	100%
Egg Yolk (Pastured)	352	100%
Chicken Meat	9	100%
Tallow	70	100%
Lard	172	100%

progression of calcification and bone development comparing the eight groups of rats.

The rats in Group 1, the control group, received no butter vitamins or cod liver oil. The decreased bone density was noted and can be seen in the photo on page 33. Several bones are not completely formed or are absent, especially the carpal bones (the small bones that make up the wrist), which are largely missing.

In Group 2, the rats received 0.5 percent of their diet as butter vitamins. Even this small amount produced a marked difference in their skeletal development and also increased their bone density. In particular, a large change was noted in the carpal bones, whose formation was more complete. The relation of the epiphyses (the rounded ends or tips of long bones) to the diaphyses (the main or midsection of long bones) is also very easily seen in the bones of the tail.

In Groups 3 and 4, the rats received 1 and 2 percent of their diet, respectively, as butter vitamins. Group 5 rats received 4 percent of their diet as butter vitamins, and Group 6 received 8 percent of their diet as butter vitamins. The photo shows that as the amount of butter vitamins in the diet increased from Groups 2 through 6, the rats displayed an increased bone density.

The rats in Group 7 received 2 percent of their diet as cod liver oil instead of receiving butter vitamins. Cod liver oil is what Price used as his source of vitamin A. This group has several noted structural differences. First, Group 7's rats have an increased length of the shaft of the bones when compared with Groups 2 through 6 (which only received butter vitamins). Second, the calcification is not as extensive when compared to the Group 6 rats given 8 percent of their diet as butter vitamins. There is better calcification in the butter vitamin group than in the cod liver oil group. At the tail, the epiphyses at their junctions with the diaphysis are more advanced in the closure of the interspace in the cod liver oil group than in the butter vitamin group.

Finally, the Group 8 rats received 2 percent of their diet as butter vitamins and another 2 percent as cod liver oil. Notably, the bones are much larger and the development of the carpal bones are more complete in this group.

As the Group 8 results show, the best calcification and bone development in this experiment was present when Price used both the butter activators and cod liver oil. Why? Vitamin A, in the cod liver oil, signals the body to make specific proteins, and vitamin K₂ MK-4 activates them. Vitamin D also signals the body to make specific proteins activated by vitamin K₂ MK-4. Once activated, it directs calcium to where it should be in the body and pulls it from where it should not be.³

Vitamin K₂ MK-4 is strongly and directly linked to calcium homeostasis. Calcium is the most abundant mineral in our bodies, with 99 percent of it found in our bones and teeth, and the remaining 1 percent circulating in the blood, muscle and other tissues. Calcium has further importance in the circulatory system and is critical for mediating vascular contraction and vasodilation (the increase in the diameter of blood vessels, which, in turn, decreases blood pressure). Calcium also plays important roles in the brain, nerve transmission, muscles, extracellular fluid, intracellular signaling and hormonal secretion. Our bones release calcium for these critical metabolic functions through the process of bone remodeling and calcium homeostasis.

DEFICIENCY AND/OR INSUFFICIENCY

In his practice, Price began using diet and vitamin K₂ MK-4 (in the form of butter oil) to prevent and heal cavities, arthritis, rickets, fractures, failure to thrive, heart conditions, rheumatism, learning difficulties and cognition problems.² He especially emphasized the importance of pregnant women getting enough vitamin K₂ MK-4 in their diets.

A young boy who had received only dairy products rich in vitamin K₂ MK-4 was voted the healthiest child out of forty-one children (see Figure 5).³

Nowadays, it is estimated that 97 percent of people are deficient in vitamin K₂ MK-4.⁴ The best dietary sources of vitamin K₂ MK-4 come from animal products.

TWO FORMS OF VITAMIN K

Vitamin K exists in two natural forms, K₁ and K₂. Vitamin K₂ is made of menaquinones (MKs), with MK-4 unique among the MKs as it comes from animal foods. (See Figure 3.) The longer-chain MKs are of bacterial origin. Good sources of vitamin K₁ include leafy green

TABLE 2. Dr. Price's Experiment Giving Rats Varying Amounts of "Butter Vitamins" (Vitamin K₂ MK-4)

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
Butter Vitamins (% of diet)	0.0	0.5	1.0	2.0	4.0	8.0	0.0	2.0
Cod Liver Oil (% of diet)	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0

vegetables such as collard greens, spinach, kale and broccoli; however, the body absorbs less than 10 percent of vitamin K₁ from plants. So, how did cultures living in areas with no leafy green vegetables throughout the year get vitamin K₁ in their diet? Can vitamin K₂ perform the roles of vitamin K₁?

In U.S. hospitals, it is standard practice to administer a vitamin K₁ shot to newborns to prevent hemorrhagic disease of the newborn. Some believe newborns do not get sufficient vitamin K₁ from their diets until around six months of age when they start eating foods containing vitamin K₁. In theory, supplying the newborn with sufficient vitamin K₁ will allow normal blood clotting.

A 1997 study used an oral vitamin K₂ supplement (synthetic MK-4) at a Philippine general hospital, with a sample size of eighty healthy full-term breastfed babies, to determine the efficacy of multiple doses of oral vitamin K₂.⁵ When they compared the results of vitamin K₂ oral supplementation to those from a single-dose vitamin K₁ shot, they found, to their surprise, that oral vitamin K₂ supplementation was generally comparable in efficacy to the vitamin K₁ shot.

In a 2020 review published in *Nutrients*, Japanese researchers from the University of Occupational and Environmental Health at Kitakyushu looked at evidence from various countries on how Vitamin K Deficiency Bleeding (VKDB) could be prevented by oral administration of vitamin K₂ (MK-4).⁶ The review included consideration of five nationwide surveys done in Japan between 1981 and 2004, which showed that giving babies one to three doses of a syrup formulated with vitamin K₂ MK-4 reduced late-onset VKDB. Specifically, over the period of twenty-plus

years, VKDB in Japan dropped from 10.5 per hundred thousand births in the first survey (1981) to 1.9 per hundred thousand births in the fifth survey (2004). Following the introduction of new guidelines in 2011, the practice of weekly oral supplementation for infants until they are three months old has become common in much of Japan.⁶

In 2012, the Japanese pharmaceutical company Sannova received approval for a vitamin K₂ syrup for the prevention of VKDB in neonates and infants.

Many studies state that breastfed babies have a higher deficiency of vitamin K₂ MK-4 due to low placental transfer and low amounts of vitamin K₂ MK-4 in breast milk.⁷ Could this be explained by not having enough vitamin K₂ MK-4 in the mother's diet? After all, developing babies get their nutrition from their mother in the womb. After delivery, they get their nutrition from their mother's breast milk. If their mother is deficient in vitamin K₂, how can she give what she does not have to her baby? Questions lead to understanding.

In Price's field studies, he never reported any cases of VKDB in children. His studies showed only robust health of babies in these cultures. These issues deserve further research.

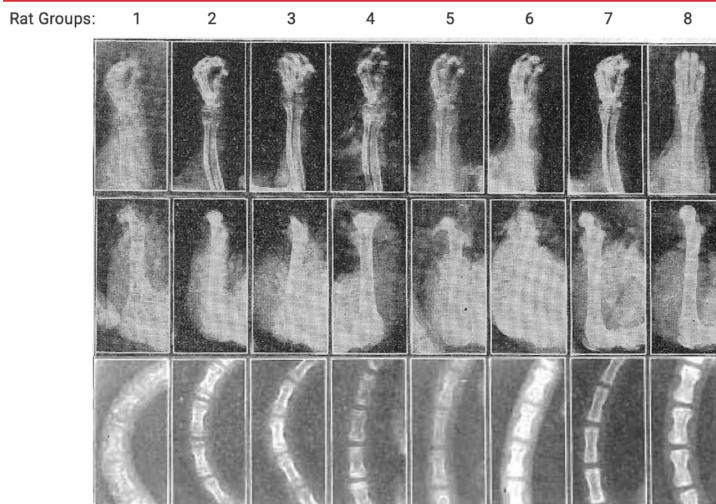


FIGURE 4: Progressive calcification with the amount of butter activators and a comparison with cod liver oil. Left to right: GROUP 1: No activators; GROUP 2: 0.5% butter activators; GROUP 3: 1% butter activators; GROUP 4: 2% butter activators; GROUP 5: 4% butter activators; GROUP 6: 8% butter activators; GROUP 7: 2% cod liver oil; GROUP 8: 2% each cod liver oil and butter activators. There is a marked change in calcification with different percentages of butter activators, and a striking difference in the last two of cod liver oil alone or with butter activators.

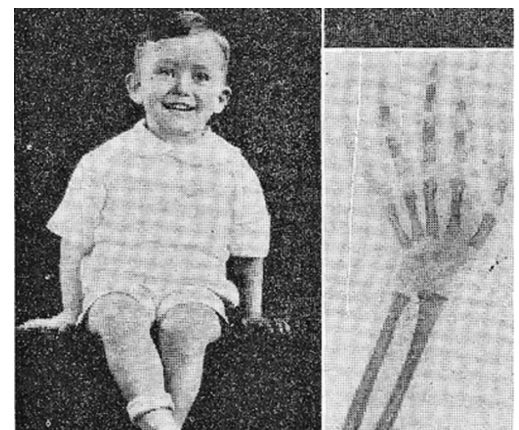


FIGURE 5: Butter-vitamin-fed boy who won a prize in a group of forty-one babies when they were ten days of age. Neither this child nor his mother received cod liver oil or viosterol. Their fat-soluble activators were provided from high-vitamin milk, cream and butter which were specifically selected by analysis.

VITAMIN K DEPENDENT PROTEINS

Vitamin K dependent proteins (VKDPs) provide life-giving functions for the brain and body. To date, researchers have identified between seventeen and nineteen VKDPs. The information on them is vast; for this reason, we are representing just a summary of this information

The first seven VKDPs are involved with coagulation and anti-coagulation. The only VKDPs that use vitamin K₁ are the coagulation factors: Factor II, Factor VII, Factor IX and Factor X. The other VKDPs require vitamin K₂ MK-4 as a cofactor for the enzyme γ -glutamyl carboxylase (GGCX) to become bioactive. GGCX modifies the glutamic acid residues (Gla) in these proteins, promoting calcium binding and inducing conformational changes.

There are many other functions of vitamin K₂ MK-4 outside the activation of the VKDPs, however. Vitamin K₂ MK-4 is present in virtually every tissue, including the brain, heart, bone, sternum, reproductive organs, salivary glands, pancreas, kidney, placenta, vasculature, cartilage, skin, breastmilk, other body organs and cells. Vitamin K₂ MK-4 is important for mitochondrial health, protection against oxidative stress, cancer prevention, relief of menopausal symptoms, protection of nerve cells, bone mineralization and protection against arterial calcification.⁸ It is also involved in cellular actions, including nerve transduction, growth regulation, cell migration/chemotaxis, adhesion, apoptosis (programmed cell death), phagocytosis (whereby cells ingest or engulf other cells or particles), senescence, inflammatory responses and sphingolipid synthesis,⁹⁻¹⁰ but those topics are for another article.

Understanding vitamin K₂ MK-4's multiple roles in prevention and maintenance of our bodies grows more important each day, as it directly or indirectly regulates hundreds of physiological and pathological processes.

COAGULATION PROTEINS

Whenever the integrity of a blood vessel is compromised, VKDPs are there to start the healing process of blood clot formation. This is called the "coagulation cascade" and is critical for hemostasis (the stopping of bleeding). As mentioned, these VKDPs include Factor II,

Factor VII, Factor IX and Factor X. There are also VKDPs involved in hemostasis that ensure that clotting does not become excessive; these anticoagulant proteins are Protein C, Protein Z and Protein S.

In the intrinsic pathway, a cascade of reactions starts with damage to vessel walls leading to Factor IX being activated.¹¹ This pathway continues on with further reactions and leads into the final common pathway that starts with the activation of Factor X.

The extrinsic pathway starts through a series of reactions involving tissue factor (TF), which is exposed on damaged endothelial cells, activating Factor VII that also leads into the final common pathway.¹²

Once Factor X is activated to Factor Xa (the "a" means it is activated), this protein bridges the gap between the initiation and amplification phases of clotting by converting prothrombin into thrombin.¹³ Thrombin then converts fibrinogen into fibrin, and fibrin forms a web of insoluble fibers that trap more platelets and red blood cells, forming a stable blood clot.¹⁴

To ensure that blood clots do not spiral out of control leading to full-body coagulation, anticoagulant proteins are activated. When Protein C is activated by the thrombin-thrombomodulin complex on the surface of endothelial cells lining blood vessels, it joins together with Protein S as its cofactor to inactivate Factor Va and Factor VIIIa.¹⁵ This slows clotting and prevents overproduction of blood clots. Protein Z also slows coagulation as a cofactor to Z-dependent protease inhibitor (ZPI) that inactivates Factor Xa.¹⁶

AUSTRALIAN EMU OIL RICH IN VITAMIN K₂ MK-4 AND DR. PRICE'S LEGACY

Price retired from his dental practice in 1943. He then moved to Riverside, California, where he continued to lecture and teach people about a lifestyle more in touch with Nature and the foods she provides us. Toward the end of his life, his health was declining and he had taken to his bed, when a friend sent him butter oil rich in vitamin K₂ MK-4. He started eating the butter oil and got well enough to get back out of bed and begin lecturing again. Price died in 1948, leaving behind a tremendous legacy.

Through our company, Walkabout Health Products, we have been working with the synergistic power of emu oil that includes vitamin K₂ MK-4 for more than a decade, and we have seen how it changes people's lives. Our emu oil is separate and distinct from other emu oils due to the unrivaled husbandry of the birds. Our latest testing results prove this point. This past year, most of our emu oil has tested at 12,000 ng/g of vitamin K₂ MK-4. Our emu oil is a unique source for this vitamin essential to life. We believe that Dr. Price would have been in awe of this tremendous resource.

Our ancestors' DNA evolved with the nourishment of grass-fed animal fats, rich in vitamin K₂ MK-4. It kept them free of cavities and gave them strong bones, beautiful faces and healthy hearts. It produced robust men and women who gave birth to healthy, happy children. This is our God-given birthright.

It was not luck that gave us a remarkable inquisitive grandchild; it was proper nutrition with lots of fat-soluble nutrients. Our family is indebted to Dr. Price's work, to his inspirational "Why" and to the path that asking

OTHER ROLES FOR THE CLOTTING VITAMIN K-DEPENDENT PROTEINS

The role that seven VKDPs—Factor II, Factor VII, Factor IX, Factor X, Protein C, Protein S and Protein Z—play in forming a stable blood clot is by far the most well-known and studied aspect of these proteins. However, further research has revealed that they play further roles in human physiology.

FACTOR II/PROTHROMBIN: Research suggests that prothrombin, specifically thrombin, contributes to cellular functions such as cell migration and cell signaling; tissue repair, inflammation and wound healing; and immune responses.¹⁷ Additionally, prothrombin's activation has been linked to intricate signaling pathways that affect inflammation and gene expression.

FACTOR VII/PROCONVERTIN: Research suggests that this protein may contribute to modulation of inflammatory responses, immune system regulation and the body's overall homeostasis.^{18,19} Additionally, Factor VII is synthesized in the liver, and its levels can be influenced by factors such as diet and certain medical conditions.¹⁹

FACTOR IX/CHRISTMAS FACTOR: A deficiency or dysfunction in this protein leads to a genetic disorder called hemophilia B, or Christmas disease.²⁰ Individuals with hemophilia B experience prolonged bleeding after injuries and can suffer from spontaneous bleeding into joints and muscles.¹¹ The development of Factor IX replacement therapies has revolutionized the management of hemophilia B, improving the quality of life for those affected by this disorder.


FACTOR X/STUART-PROWER FACTOR: Factor X deficiency can lead to a bleeding disorder known as Stuart-Prower factor deficiency, known for impaired blood clotting and prolonged bleeding after injuries.²¹

PROTEIN C: Research suggests that Protein C may have anti-inflammatory properties, immune modulatory activity, anti-angiogenic activity, anti-apoptotic activity and cytoprotective effects.⁹ Protein C's protective properties extend to its potential involvement in sepsis. Activated Protein C (APC) has been studied for its potential to mitigate the harmful effects of sepsis by counteracting inflammation, improving blood flow and promoting cell survival.²² Protein C is also involved in cell signaling actions in neurons and glia.⁹ In animals, it is neuroprotective in stroke, neonatal hypoxia, brain ischemia, spinal cord ischemia and amyotrophic lateral sclerosis-like diseases.⁹

PROTEIN S: Protein S serves as a modulator of the body's immune response and inflammation, potentially influencing the activation of white blood cells and the release of inflammatory mediators.²³ Protein S is also implicated in processes related to cell growth, apoptosis and tissue repair.²⁴ It has also been known to protect neurons from glutamate-induced toxicity and cell death through the Tyro3-PK3-K-Akt pathway. Vitamin K₂ MK-4 also plays a key role in subventricular development during critical neural developmental stages via its control over Protein S availability.²⁵ This is intriguing because subventricular abnormalities are often seen as critical in the development of autism,²⁵ which suggests a potential role for vitamin K-dependent processes in developmental brain pathology as seen in cases similar to autism.

Dysfunctional Protein S levels or mutations can lead to increased clotting risk, emphasizing its importance in preventing thrombotic disorders.²⁶

PROTEIN Z: Research suggests Protein Z may play a role in modulating inflammatory pathways and even in broader physiological processes. Additionally, Protein Z may be implicated in developing some cardiovascular conditions, although more research is needed to understand this connection fully.

“why” took him down. We encourage you to read Price's articles and book, where you can find additional pictures, insights, field studies and conclusions. The knowledge that he gained from his work and travels is a gift to be passed on. Please spread the word. 

Elizabeth Schlinsog is the owner of Walkabout Health Products, the exclusive distributor of Walkabout Emu Oil in the United States. Walkabout Emu Oil is the highest naturally occurring whole-food source of vitamin K₂ MK-4. Elizabeth is a board member of the Price-Pottenger Nutrition Foundation, which holds all the archives of Dr. Price's monu-

mental studies. David Schlinsog, DC is a successful practicing chiropractor in his hometown of Marshfield, Wisconsin. He graduated from University of Wisconsin-La Crosse with a bachelor's of science in biochemistry and from Logan University with a master's of science in nutrition and a doctorate of chiropractic.

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OTHER VITAMIN K DEPENDENT PROTEINS

OSTEOCALCIN (OCN): Involved in bone mineralization and calcium ion regulation, promoting healthy bone formation; crosses the brain-blood barrier, binds to neurons; enhances synthesis of neurotransmitters, prevents anxiety and depression, necessary for brain development and function, spatial learning and memory; insulin release and beta cell protection from high glucose production; testosterone stimulation.

MATRIX Gla PROTEIN (MGP): Helps prevent calcification of vascular, cartilage and other soft tissue calcification. Plays a role in bone organization, protective for the kidney, necessary for proper mid and lower facial development (as described by Dr. Price in *Nutrition and Physical Degeneration*); contributes to overall cardiovascular health by inhibiting arterial calcification.

Gla-RICH PROTEIN (GRP): GRP is found in cartilage, bone, skin, thyroid and the vascular system; potent inhibitor of calcification of vascular, cartilage and other soft tissue; protective for the kidney.

GROWTH ARREST-SPECIFIC 6 (Gas6): Abundantly expressed in fibroblasts; is involved in cell survival, proliferation and immune response regulation. It is the sole ligand of the AXL tyrosine kinase receptor, Gas6/AXL pathway regulates angiogenesis, immune-related molecular markers, the secretion of certain cytokines in the tumor microenvironment, modulates the functions of a variety of immune cells, role in remyelination.

PERIOSTIN: Acts on a metabolic and genetic level. It is secreted from fibroblasts that make connective tissue; plays a role in repair and remodeling of bone, tooth and heart valves, immune response and wound healing. Important for tissue repair and myocardial remodeling of heart following injury. Expressed in periodontal ligament, placenta, cardiac valve, adrenal gland, embryonic periosteum and thyroid tissue.

TRANSTHYRETIN (TTR): Functions as a carrier protein for thyroid hormones and retinol, contributing to their transport and distribution throughout the body.

PROLINE-RICH GLA PROTEIN 1 (PRG1)

PROLINE-RICH GLA PROTEIN 2 (PRG2)

TRANSMEMBRANE GLA PROTEIN 3 (TMG3)

TRANSMEMBRANE GLA PROTEIN 4 (TMG4)

These four VKDPs are a group of integral membrane Gla proteins; they are found in fetal and adult tissues, and are thought to be involved in diverse cellular functions such as signal transduction, cell cycle progression and protein turnover.

INTER-ALPHA-TRYPSIN INHIBITOR HEAVY CHAIN H2 (ITIH2): Acts as an acute phase protein, that is down- and upregulated, respectively, during an inflammatory response.

It is clear that vitamin K dependent proteins—and hence vitamin K₂ itself—are involved in virtually all bodily processes, including building bones and tendons, creating a healthy nervous system, hormone production and protection from cancer. Modern research on vitamin K dependent proteins shows us the folly of avoiding animal fats, organ meats and other nutrient-dense foods. All these life-giving functions and processes depend on having adequate amounts of vitamin K in our diets.

Dr. Price was very concerned for the health of his nieces and nephews. In a letter Dr. Price told them, “One of our greatest struggles is to get sufficient amounts of the vitamins, particularly the fat-soluble vitamins. There is a great tendency toward trying to supply these with synthetic products which are not a substitute. The amount of minerals that are in the food that we eat, that will be utilized by the body, will be largely determined by these activating substances.”

For references and further information, visit walkabouthealthproducts.com.

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IN MEMORY OF PEG BEALS, RN

Condolences to the family of Margaret “Peggy” Catherine Dillinger Beals, RN, of Waterloo Township, Michigan, age ninety-one, who passed away August 13, 2023. Peg and her late husband Ted were great activists for the cause of raw milk. She is survived by four children, five grandchildren and one great-grandchild.

Peg and Ted met at a square dance, and that shared interest was a continuous theme throughout their sixty-six-year marriage. They danced several times a week for nearly fifty years, taking private lessons and participating in many square and ballroom dance clubs.

Peg was a pioneer in childbirth education, founding a local organization, the Family Life Forum, to provide education for the childbearing years, writing books for courses and teacher training, traveling throughout the US and Canada to train teachers and serving as co-president of the International Childbirth Association for two terms in the 1960s. She studied homeopathy in the 1980s, attending the National Center for Homeopathy's summer school for many years and teaching introductory courses in Ann Arbor.



She was a chapter leader for the Weston A. Price Foundation for many years, and wrote a book, *Caring for Fresh Milk*, which continues to be very popular with dairy farmers and consumers of whole, fresh, unprocessed milk. She served on the board of the Farm-to-Consumer Foundation, working to support small dairy farms and farmers. She also participated in a work group that brought together representatives of small and industrial dairy farmers with state officials in Lansing, Michigan, and resulted in a *Report*, which she published and sold through her company, Spring House Press.

In lieu of flowers, memorial contributions may be made to the Farm-to-Consumer Foundation or the National Center for Homeopathy.

Dr. Price's Remedy

By Sally Fallon Morell

Many people have dipped into Dr. Weston Price's book *Nutrition and Physical Degeneration* without actually making it to chapter 22, "A New Vitamin-Like Activator." There, he summarizes his findings about "activator X," a fat-soluble vitamin he discovered in butter (especially butter from cows eating rapidly growing green grass), fish eggs and the organs and fats of animals.

In studies with humans and poultry, he found that giving cod liver oil alone was not as effective in promoting growth and recovery from bone loss or tooth decay as the combination of what he called "high-vitamin natural cod liver oil (a source of vitamins A and D)" and "high-vitamin butter oil (a source of vitamin A and activator X)." He made the butter oil by centrifuging slightly heated butter to separate it into an oil and hard portion; the vitamins concentrated in the oil. Today, we know that activator X is vitamin K₂ MK-4, the animal form of vitamin K.

In chapter 22, Price described a Depression-era study involving schoolchildren of mill workers suffering from rampant tooth decay and many other health problems. Their diets usually consisted of “highly sweetened coffee and white bread, vegetable fat, pancakes made of white flour and eaten with syrup and doughnuts fried in vegetable fat.” Price and his researchers provided the children with one meal per day at school. The meal consisted of marrow stew with meat and vegetables, fish stew or organ meats; cooked fruit with very little sweetening; rolls made of freshly ground wheat and spread with high-vitamin butter; and two glasses of fresh whole milk. Most importantly, each child received one teaspoon of a mixture of high-vitamin cod liver oil and high-vitamin butter oil. Price reported, “The clinical effect was apparent: complete control of dental caries for the entire group, as shown in the x-ray films.” One hundred percent of the cavities in these children filled in! Moreover, the health of the children improved in many other ways, including overall energy and performance at school.

EMERGENCY APPLICATIONS

Price did not describe the way he used the combination of high-vitamin butter oil and high-vitamin cod liver oil in emergency situations. Pat Connolly (Price-Pottenger Nutrition Foundation) introduced me to “Dr. Price’s Remedy,” namely alternating drops of high-vitamin cod liver oil and high-vitamin butter oil under the tongue. “This brought many people back from the brink of death,” she told me.

One person brought back from the brink of

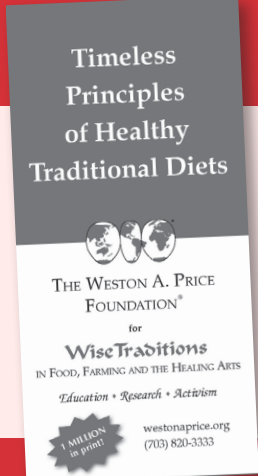
death was Donald Price, Dr. Price’s nephew. I had the privilege of speaking with Donald by phone in the late 1990s, shortly before he died. Donald had traveled with Dr. Price and operated his lantern slides during lectures—he was probably the last surviving person who had known Dr. Price. When I mentioned the remedy, he told me that his uncle had given him the alternating drops when he was close to death from pneumonia. The remedy quickly revived him and he was out of bed the next day.

I used the remedy on my husband (age ninety-five) after he had a bad fall while working on the farm. I gave him the drops five or six times before he went to bed—followed up by bone broth and a good dinner—and he was up and about the next day.

The remedy seems to work for mental as well as physical ailments. A friend of ours came to visit—normally cheerful and upbeat, she was in a deep depression, unable even to smile. We sat her down and gave her the drops, several times over the hour. Soon she was smiling again, the depression having lifted.

Use only a natural cod liver oil containing natural vitamins A and D (see “Cod Liver Oil Basics and Recommendations” at the Weston A. Price Foundation website.¹) High-vitamin (“concentrated”) butter oil is produced by Green Pasture Products.² Many products claim to be “butter oil” but are actually just ghee (clarified butter); these may be very rich in fat-soluble activators and are good for daily use, but they are not the true butter oil as described by Price. You can also use Australian emu oil,³ which is very rich in vitamin K₂.


Situations that cry out for Dr. Price’s remedy include accidents; after insect/animal bites; before/after surgery; during recovery from addiction; and before/after injections (in situations where a person feels coerced into getting a vaccine).



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A BETTER WAY

I was reminded of Dr. Price's remedy when viewing the film *Medicating Normal* about the catastrophic addictive effects of psychiatric drugs. The film presents three stories: a soldier who suffers post-traumatic stress disorder after the death of a friend in combat; a naval officer who goes into burnout and depression working long hours; and a waitress who has trouble sleeping. After a psychiatrist prescribes pills, all three become addicted. The film shows their heroic efforts to return to a normal life.

I kept thinking: what about Dr. Price's remedy? What about good nutrition? After any trauma, stress or accident—any shock that disrupts homeostasis and makes normal life impossible—alternating drops of high-vitamin cod liver and butter oil (or Australian emu oil) should be the go-to remedy, followed by a nutrient-dense diet that includes liver, other organ meats, shellfish, fish eggs, fermented foods, bone broth, butter and raw dairy products. Good

nutrition sustains us, but sometimes the body needs a kick-starter. The fat-soluble vitamins can help us snap out of a desperate situation; under the tongue, they are rapidly absorbed, requiring no digestion, which may be compromised in situations of trauma.

Situations that cry out for Dr. Price's remedy include accidents; after insect/animal bites; before/after surgery; during recovery from addiction; and before/after injections (in situations where a person feels coerced into getting a vaccine). I recommend six to eight drops of each, with applications spaced about an hour apart, using an eye dropper. After you have recovered with the remedy and a diet of nutrient-dense food, it's still a good idea to take a combination of high-vitamin cod liver oil and high-vitamin butter oil (or emu oil) on a regular basis. The best way is to put about one teaspoon cod liver oil and one-fourth to one-half teaspoon high-vitamin butter oil (or emu oil) in a small glass. Add a little hot water, stir and then gulp it down the hatch. 

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DANGERS OF VITAMIN D SUPPLEMENTATION

The Weston A. Price Foundation does not recommend vitamin D supplements—only vitamin D from food, such as cod liver oil, egg yolks, animal fats like lard, organ meats, fish eggs and shellfish, where it is balanced by its cofactors vitamin A and K₂. Vitamin D taken on its own can rapidly deplete vitamins A and K₂ stores. Taking large doses of vitamin D can also induce severe depletion of magnesium, as magnesium is essential to the metabolism of vitamin D.¹ Vitamin D enhances mineral absorption and can lead to hypercalcemia (dangerously high levels of calcium in the blood), and higher levels of vitamin D also have been linked to enhanced absorption of toxic elements such as aluminum, cadmium, cobalt and lead.² Unfortunately, during the Covid pandemic, many were taking very high doses of vitamin D from supplements, even up to 10,000 IU per day or more.

Symptoms of vitamin D overdose include vomiting, nausea, poor appetite, excessive thirst, excessive urine production, loss of weight, abdominal pain, dehydration, constipation, diarrhea, itchy skin, severe headache, irritability and nervousness. Heart rhythm irregularities, increased risk of heart disease and high blood pressure as well as renal failure are also symptoms of vitamin D overdose.

Kidney stones are another danger of excess vitamin D. Lifeguards in Israel³ have twenty times the rate of kidney stones as the general population. According to Chris Masterjohn, “Kidney stones may be the most sensitive indicator of vitamin D toxicity and are a symptom of vitamin A and K₂ deficiency.”⁴

In partial recognition of the need to balance high doses of vitamin D with cofactors, many practitioners are now recommending taking vitamin K along with vitamin D. This practice is likely to deplete vitamin A even faster! Worse, the form of vitamin K in most supplements is not Dr. Price's X Factor—vitamin K₂ MK-4.

One teaspoon of cod liver oil can supply about 1000 IU vitamin D; that plus vitamin D ingested from other foods, such as egg yolks, lard, seafood, poultry liver, poultry fat and organ meats, is plenty. These foods also supply vitamin K₂ MK-4. Vitamin D supplements are unnecessary and can put us at risk.

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Reading Between the Lines

By Merinda Teller

Weight Loss Medical Mayhem: Decades of Harm and Hype

Americans are fat—and getting fatter. According to national survey data, the first two decades of the twenty-first century saw levels of adult obesity rise from an already worrying 30.5 percent to more than four in ten American adults (42.4 percent), with the proportion of “severely obese” adults nearly doubling, going from 4.7 to 9.2 percent.¹ Since 1988, obesity prevalence in children and adolescents (ages two to nineteen years) also has roughly doubled.

In his 2005 book, *A Life Unburdened: Getting Over Weight and Getting On With My Life*,² author Richard Morris provides a powerful first-hand description of what “a day in the life of a fat man” is like. During the period described, Morris weighed over four hundred pounds and “was a dead man walking,” suffering “from a toxic mix of obesity-related ills that included shortness of breath, sleep apnea, hypertension, aches and pains in [his] joints, depression, a frail immune system, asthma and other ailments too numerous to list.” The details Morris shares about the daily grind in a four-hundred-pound body are not unlike the description of the obese offered by Galen, the second-century Roman philosopher-physician, who wrote that such a person “cannot walk without sweating, cannot reach when sitting at the table because of the mass of his stomach, cannot breathe easily. . . cannot clean himself.”³

In Galen’s time and up until the twentieth century, people in most places “would probably have experienced overweight and obesity as exceptional rather than normal.”³ When Morris, in his early forties, embarked on a quest to understand the sudden normalization of obesity and how—as an exercise enthusiast and endless dieter—he had ended up not just overweight but morbidly obese, one of his most profound insights was to recognize “the folly of a medical industry that expends immense resources on the treatment of obesity-related symptoms,

but adopts a hands-off approach when it comes to treating the source of those symptoms: poor nutrition.” The National Institutes of Health (NIH) helped consolidate the myopic focus on aggressive medical intervention at “Consensus Development Conferences” held in 1985 and 1991, respectively, where the gathered experts not only solidified the view of obesity as a chronic disease⁴ but “concluded that surgery is the only effective treatment for severe obesity.”⁵ The Institute of Medicine followed up in 1994 with the suggestion “that the condition be treated as doctors treat other genetic and biological diseases—with extended drug therapy or surgery.”⁶

Morris shares a sobering observation in that first chapter: “the reality of being fat is so unlike anything else that fat people live in an entirely different world.” That world, both he and the media tell us, is sometimes punctuated by desperation. Fortunately for Morris, his investigations led him to the Weston A. Price Foundation and to other resources and authors willing to contradict standard nutrition dogma; these gave him the courage to “ignore the experts” and return to eating the real and unprocessed foods of his childhood, whereupon he not only rapidly shed one hundred fifty pounds but regained his agility and zest for life.

Many other miserably overweight Americans take a different approach, however, lured by the promise of quick results from whatever weight loss gimmicks are in vogue at the time.⁷ As one writer puts it, “Being fat in America means you are a problem to be solved and a rich market to reap.”⁸ The fact that medical/pharmaceutical weight loss interventions virtually never deliver on their long-term promises only makes the market that much more lucrative—what’s not to like about a business model in which the industry’s target audience is “losing and gaining the same pounds over and over”?⁸ As new

Trade magazines are eagerly prophesying that obesity will be “the next blockbuster pharma category.”

generations of overweight adults and children succumb to the hype—perhaps oblivious to the fact that “the experience with obesity medications is littered with many unintended adverse events that have resulted in the withdrawal of many drugs from the market”⁹—trade magazines are eagerly prophesying that obesity will be “the next blockbuster pharma category.”¹⁰

FROM DONKEY MILK TO RAINBOW-COLORED PILLS

In ancient Greek and Roman times, physicians’ weight loss recommendations revolved around moderating one’s eating, occasionally fasting, performing “regular” or even “strenuous” exercise and doing more physical work.³ If further intervention seemed necessary, additional recommendations might include taking substances designed to promote elimination, either through vomiting (emetics) or via the bowels (cathartics). Emetics of the era included “hellebore plants and honey water,” while cathartics might include “juice of scammony (bindweed), Cnidian berry and sea spurge” or laxatives such as “donkey milk with honey, wild parsley, dodder of thyme. . . and honey water or sweet wine.”³

Fast-forwarding through time to the late 1920s, the landscape for weight loss intervention changed dramatically when a biochemist named Gordon Alles discovered some interesting properties of beta-phenyl-isopropylamine—otherwise known as amphetamine.¹¹ Smith, Kline and French (SKF) (later, SmithKline Beecham, and still later, after numerous mergers and acquisitions, GlaxoSmithKline¹²) patented the chemical’s base form in 1933 and began making an amphetamine vapor product, Benzedrine, initially marketing it as a decongestant.¹¹ By 1937, the drug (in tablet form) had segued into becoming America’s first “antidepressant.”

During the war years, the pharmaceutical industry and consumers became enamored by another nifty amphetamine application—its use as a tool for weight loss. A 2008 discussion of “America’s first amphetamine epidemic” in the *American Journal of Public Health* estimates that by 1945, U.S. civilians’ consumption of amphetamine products made by SKF (Benzedrine and also Dexedrine) and another manufacturer,

often for weight loss, “conservatively” amounted to thirty million tablets per month—enough to supply the standard dosage of two tablets per day to half a million Americans.¹¹ Although the drugs’ easy availability soon began to lead to widespread “misuse and abuse,” these and other dangers—such as elevated blood pressure and stimulant-induced psychosis¹³—received little attention.^{11,14}

In 1947, the American Medical Association (AMA) formally greenlighted the advertising of amphetamine drugs for weight loss, and in the early 1950s, sales of amphetamine (as well as methamphetamine) products skyrocketed to new heights. However, because amphetamines caused many users to experience “unpleasant agitation,” companies introduced a “simple and terrifying” solution: combination diet pills that included “amphetamines, diuretics, laxatives and thyroid hormones to send the body into weight-loss overdrive, as well as benzodiazepines, barbiturates, corticosteroids and antidepressants to deal with nuances like insomnia and anxiety.”¹⁵ These untested combination products “proliferated throughout the 1950s,”¹¹ and by the 1960s, thousands of “fly-by-night” clinics across America were peddling fancy new iterations of the diet pills—rainbow-colored stimulants “combined with other medications to counteract the side effects of stimulants”—that promised a “pleasingly uniform reduction in weight.”¹⁴

As Erin Blakemore wrote in *Smithsonian Magazine* in 2017, the pills’ colorfulness was a con—and a deception in which doctors willingly participated. Blakemore explains:

“For decades, diet pill companies marketed their wares directly to doctors—and told them that by prescribing a rainbow of pills, they could sell the illusion of personalization. ‘You should have more than one color of every medication,’ said one brochure, warning doctors never to prescribe the same combination twice. ‘That’s a little psychology and is well worth it.’”¹⁴

The diet pills were highly profitable. One doctor, Blakemore recounts, purchased a lot of one hundred thousand pills for \$0.00071 apiece and sold them for \$0.12 each—a one hundred sixty-nine-fold markup.

Eventually, the potentially fatal “side effects” and frank addictiveness of amphetamine-based weight-loss drugs began to tarnish the drugs’ innocuous reputation, forcing complacent regulators to take action. After the Food and Drug Administration (FDA) restricted “all approved amphetamine-derived anti-obesity drugs. . . to short-term use” and made the drugs “subject to label warnings regarding the risk of addiction” in 1977,³ pharmaceutical companies slacked off for a while on developing new amphetamine drugs for weight loss, but in the early 1990s, Wyeth (then American Home Products) launched a new boom with a widely prescribed and immediately disastrous product popularly known as “fen-phen,” which combined serotonin-boosting fenfluramine with the “mother’s little helper” stimulant phentermine.⁶ Soon, researchers were reporting serious heart-valve disease in people who had taken fen-phen for as little as one month,^{16,17} and—two hundred million dollars in profits later—Wyeth withdrew both fenfluramine and fen-phen from the market.⁶

THE NEW CASH COWS

Ever in search of cash cows in the weight loss space, drug companies have, in recent years, discovered new chemical pathways for suppressing appetite. The latest wonder drug on the U.S. market, as of 2021, is semaglutide, the “foundational molecule” (in the words of its manufacturer, the Danish multinational Novo Nordisk) of Wegovy,¹⁸ an FDA-approved, prescription-only injectable medication for “chronic weight management” in adults. Semaglutide is a “GLP-1 agonist,” meaning that it mimics “the action of GLP-1, a naturally occurring [gut] hormone that helps to regulate blood glucose levels.”¹⁹ Simply stated, semaglutide results in “dramatically slowed digestion” and thereby reduces “hunger, appetite and cravings.”^{20,21}

Novo Nordisk also makes an injectable drug for “long-term weight loss” in individuals as young as twelve (“Saxenda for teens”), featuring another GLP-1 agonist called liraglutide.²² And, as it happens, three other similar Novo Nordisk drugs—FDA-approved for type 2 diabetes—also result in weight loss: Ozempic (a semaglutide injectable for adults), Rybelsus (semaglutide tablets for adults) and Victoza (a liraglutide injectable for anyone age ten years and up).^{23,24} Wegovy contains a somewhat higher dose of semaglutide than Ozempic, but other than that, there is little difference between the two drugs.

Despite uncertainty about insurance coverage and a monthly cost of one thousand to fifteen hundred dollars,²⁵ Wegovy came out of the gate with a bang, with the co-director of NIH’s office of obesity research telling the press that it is “a very exciting time in the field.”²⁶ In 2022, Novo Nordisk experienced some temporary “supply stumbles,” but it was able to relaunch Wegovy in the U.S. in 2023, and as of the first quarter, the company was happily giving credit to Wegovy for a meteoric 124 percent year-over-year increase in “obesity care sales.”²⁷ By the second quarter, Wegovy sales were up 543 percent, prompting Novo to upgrade its profit expectations for 2023.²⁸ Describing the situation as “Wegovy takes all,” the trade rag *FiercePharma* dubbed Novo the king of “the burgeoning obesity scene.”¹⁰

Wegovy is far from the whole story for

Novo, however. Even with the supply reset, “huge demand” for the drug reportedly made it difficult for the company to keep up, with Novo even putting its Wegovy advertising “on hold” while a company spokeswoman complained, “We can’t make enough.”²⁶ Fortunately (and probably not coincidentally), Novo had Ozempic waiting in the wings. In a February 2023 blog titled “What happens when a drug goes viral?,” Harvard professor Robert H. Shmerling, MD, described how social media posts by influencers and celebrities sharing their successful weight loss with Ozempic turned “a side effect into a selling point,” triggering an explosion in off-label prescribing,²³ notably via telehealth.²⁹ By March, CNN reported, sales of Ozempic were at “an all-time high,” and Novo was recording the same magnitude of sales spike for Ozempic (a year-over-year increase of 111 percent) as for Wegovy.²⁹

Both sales surges ended up in the same place—with shortages—leading Shmerling to scold health care practitioners sternly about “priorities” and “irresponsible prescribing.” He also pointed out, however, that Novo’s advertising for Ozempic had not been shy about publicizing the drug’s supposedly inadvertent impact on weight. In fact, using the marketing phrase “the Ozempic ‘Tri-Zone,’” Novo openly touts its drug’s triple benefits of “improved blood sugar control, lower cardiovascular risk, and weight loss”; moreover, the company does not list weight loss as a possible side effect but instead relegates the statement “Ozempic is not a weight loss drug” to easy-to-miss fine print.²³ At the same time, the company virtuously asserts that its products “are not interchangeable and should not be used outside of their FDA-approved indications.”³⁰

Nonetheless, the media routinely refer to Ozempic as a “weight loss drug,” without undue protest from Novo. In July 2023, the public radio station WBUR reported that “Novo Nordisk spent millions for doctors to promote Ozempic [and] other weight loss drugs”; in 2022 alone, the company shelled out eleven million dollars on “travel and meals for thousands of doctors,” with WBUR querying the ethics and legality of the company “spending so much to talk to doctors about this type of drug.”³¹ An endocri-

Simply stated, semaglutide results in “dramatically slowed digestion.”

The list of side effects admitted to by Novo for semaglutide is daunting.

nologist interviewed by CNN, who agreed that “advertising around Ozempic took off in 2022,” likewise commented, “I think we really need to start questioning our ethics around this.”²⁹

LIFE-CHANGING “SIDE EFFECTS”

According to an obesity medicine specialist interviewed by *Forbes*, semaglutide and liraglutide drugs “are designed to be taken long-term”; in fact, when individuals stop taking the drugs, they typically—and rapidly—regain most or all of the lost weight.²¹ However, an insurance industry analysis of U.S. pharmacy claims showed that only one-third of those who started taking one of Novo’s semaglutide or liraglutide drugs for weight loss were still taking it a year later, representing “a substantial drop in adherence compared to what was reported in clinical trials.”³² A clinical trial of Saxenda in obese teens (ages twelve to seventeen) found that one in ten adolescents taking liraglutide dropped out of the study due to adverse events (versus zero discontinuations in the placebo group); two-thirds of

the liraglutide group versus roughly one-third of the placebo group (65 vs. 36 percent) reported gastrointestinal adverse events.³³

Indeed, the insurance analyst who examined pharmacy claims speculated that one reason for the dropoff in adherence at one year might be the severity of side effects. The list admitted to by Novo for semaglutide is daunting; it includes nausea, low blood sugar, dizziness, flu symptoms, a pounding heartbeat, vision changes, mood changes (including thoughts of self-harm), gallbladder and kidney problems, symptoms of pancreatitis and serious thyroid problems.³⁴ Ozempic has a “boxed warning” (formerly known as a “black box warning”) about thyroid tumor and thyroid cancer risks.³⁵ The liraglutide drugs come with similar risks.³⁶

Anecdotal information is starting to seep out about other serious life-changing effects from both short-term and longer-term use. Disillusioned consumers report dramatic impacts from both Wegovy and Ozempic, including a side effect not specifically mentioned in the

BUMMER BARIATRIC SURGERY

Although drugs like Wegovy have been hogging the weight loss headlines, many overweight individuals choose to go the bariatric surgery route. According to the American Society for Metabolic and Bariatric Surgery (ASMBS), there are a lot of weight-loss surgery options to choose from! The most common (59 percent of all weight-loss surgeries)⁵⁴ is the gastric sleeve procedure (“sleeve gastrectomy”), which permanently removes about 80 percent of the stomach, “leaving a tube-shaped stomach about the size and shape of a banana”⁵⁵ so the person can only eat one-half cup of food at a time.⁵⁶ According to the ASMBS, five and a half times more gastric sleeve procedures were performed in 2021 versus 2011.⁵⁷

Other less sought-after procedures include Roux-en-Y gastric bypass (RYGB), one anastomosis gastric bypass (OAGB), single anastomosis duodenal switch (SADI), biliopancreatic diversion with duodenal switch (BPD/DS), endoscopic sleeve gastroplasty (ESG), gastric band surgery, gastric balloons and finally, revisional bariatric surgery (RBS) to “repair or change a previous weight loss surgery.”⁵⁸ RBS—representing about 11 percent of bariatric surgeries⁵⁴—itself is increasingly common but introduces further complications in at least one in ten patients; researchers also report that the “durability” of its effects “remains questionable.”⁵⁹

Gastric sleeve surgery is associated with a high rate of “recidivism” (weight regain).⁶⁰ It’s estimated that 20 percent of sleeve recipients also experience other long-term complications, including ongoing nausea and indigestion, “food intolerance,” gallstones, stomach ulcers, acid reflux, sagging skin, abdominal scarring and malnutrition resulting from a reduced ability to absorb nutrients and calories. Some of these problems then require additional interventions.⁶¹ Evidence points to other alarming long-term or fatal outcomes from various types of bariatric surgery⁶²: gut leakage⁶³ and fistulas⁶⁴ that can lead to sepsis⁶⁵; permanent colostomy (an opening in the abdominal wall “for poop to come out”⁶⁶); dependence on daily intravenous nutrition⁶⁷; liver damage⁶⁸; and premature death.⁶⁹

Interestingly, studies also point to a higher risk of new-onset substance use or abuse (both alcohol and other substances) in those who have undergone bariatric surgery, with researchers describing it as an “overlooked” iatrogenic (doctor-caused) complication.⁷⁰ They point out that gastric bypass alters the way the body absorbs substances like alcohol, and some suggest that some form of “addiction transfer” may also be occurring.⁷¹

Worryingly, bariatric surgeries have also trended upward in the teen and young adult population, and a recent study suggests that they can end up with weakened bones.⁷² As reported by Children’s Health Defense (CHD), the researchers found that the young people had “reduced vertebral bone strength and density.”⁷³ Integrative pediatrician Dr. Michelle Perro told CHD that the research constitutes “yet another reason to call for an immediate cessation of barbaric bariatric surgery in children and address the real root causes of childhood obesity, and abandon Band-Aid solutions.”

drugs' inserts: severe gastroparesis. Popularly referred to as "stomach paralysis," severe gastroparesis is defined as 35 percent or more of food still being present in the stomach four hours after a meal, when ordinarily, less than 10 percent should remain by then. The FDA concedes that the agency has received reports of gastroparesis associated with both semaglutide and liraglutide, "some of which documented the adverse event as not recovered after discontinuation of the respective product at the time of the report."²⁰

In a July news account, a thirty-seven year-old woman suffering from severe gastroparesis stated that she "stayed nauseated all the time, no matter how little she ate," and had resorted to taking a prescription anti-nausea drug "like it was candy."²⁰ When her stomach problems first surfaced, it took months for doctors to connect the discomfort to Ozempic and take her off the medication. She lamented:

"I wish I never touched it. I wish I'd never heard of it in my life. This medicine made my life hell. . . . It has cost me money. It cost me a lot of stress; it cost me days and nights and trips with my family. It's cost me a lot, and it's not worth it. The price is too high."²⁰

Even a year after discontinuation, another woman described how she now vomits multiple times a day (so-called "cyclic vomiting syndrome"), a condition so uncomfortable that she had to take a hiatus from her job.²⁰

According to some reports, anesthesiologists are concerned about the rise in stomach paralysis because it can increase the risk of regurgitation during surgery, even if the patient has fasted according to pre-op instructions. This, in turn, can send stomach acid into fragile lung tissue, which is not designed to handle acidic digestive juices. In one instance, an anesthesiologist discovered "a 'massive amount' of undigested food in [the] stomach" of a forty-two year-old who had had nothing to eat for eighteen hours but who had started taking Ozempic two months earlier.³⁷ According to the alarmed physician: "We had to stop the procedure, put a breathing tube in and another instrument into his lungs to clean the lungs from the food that he inhaled and aspirated. . . . [T]his was a potentially serious, potentially fatal complication."

For its part, the FDA maintains that the drugs' benefits generally outweigh the risks, while a gastroenterologist funded by NIH to study liraglutide unsympathetically suggests that the women experiencing severe gastroparesis "may just be really unlucky."²⁰

As bad as gastroparesis is, suicidal ideation may lead to an even worse outcome. Reuters reported in July 2023 that the European Medicines Agency (EMA) is investigating both Ozempic and Saxenda due to "reported thoughts of self-injury."³⁸ Although the EU product inserts do not list suicidal thoughts as a possible side effect, the U.S. insert for the similar drug Wegovy includes instructions to prescribers to keep an eye out for such thoughts. The FDA's adverse event reporting system includes, according to Reuters, at least sixty semaglutide-related reports of suicidal ideation since 2018 and at least seventy liraglutide-related reports since 2010. A portfolio manager and Novo Nordisk shareholder quoted by Reuters comments, "a low incidence of suicidal thoughts might be

acceptable for a drug against Type 2 diabetes but not for a weight-loss drug." The Saxenda clinical trial with teens (published by a group of authors with significant Novo Nordisk conflicts of interest) reported one suicide in the liraglutide group but assessed it "as unlikely to be related" to the drug.³³

Other slightly more humorous—but not really—side effects reported for Ozempic (and also Wegovy) are "Ozempic face"³⁹ (described as a "gaunt and skeletonized" face that can "make someone look older than they are"), "Ozempic finger" (shrinking fingers that no longer hold rings) and "Ozempic butt" (a "saggier-than-normal" rear end). A news story notes that "when weight loss is fast, it can make it tough for your skin to keep up"; a dermatologist explains, "Rapid weight loss does not allow collagen and elastic fibers to adjust to this lack of support and results in severely sagging skin."⁴⁰ As a *Forbes* writer flippantly puts it, "such rapid weight loss can throw you a curve ball of sorts by making you lose some of your curves."³⁰ The medical community's recommendations to deal with the embarrassing sagginess include skin-tightening procedures and plastic surgery.

WHAT'S NEXT?

Recognizing that the nausea experienced by 44 percent of Wegovy users deters many from sticking with the drug on a long-term basis, biotech firms are hot to develop a "Wegovy-like" drug "without the downside of nausea."⁴¹ One firm is tinkering with an approach that would disrupt the body's mitochondria. (What could possibly go wrong?) As various companies indicated to Reuters, "the huge amount of attention the obesity market is receiving due to Wegovy's success could be a game-changer for their own drug development prospects," including opening the door to massive infusions of venture capital.⁴¹ An investment banker excitedly stated, "It's absolutely possible that in 5 to 10 years we'll see over a hundred biotechs working in this area."

Nothing daunted, Novo Nordisk is now plugging the cardiovascular benefits of semaglutide and liraglutide. The announcement of "positive data" from a clinical trial triggered a 17 percent jump in Novo's share price, with

the financial press explicitly attributing this “upside” to Wegovy.²⁸ Novo and its fleet of beholden researchers are also enthusiastic about other potential applications of the drugs for conditions ranging from polycystic ovary syndrome to addiction and dementia, and numerous clinical trials are underway.⁴² One researcher states, “In some ways there is a sense that some of this might be too good to be true. But. . . any potential benefits should be investigated.”⁴²

Lost in all the excitement about “game-changers” and “drug development prospects” is (as Morris noted in his 2005 book) any meaningful discussion of food and nutrition. This was not always so. Historians observe that the famed Banting Diet⁴³ conceived of by William Banting (1796–1878) was the first high-fat, low-carb diet, with a booklet that was “so popular” it went through ten editions over four decades.⁹ However, when contemporary South African scientist Tim Noakes updated the Banting Diet in his book *The Real Meal Revolution*, his country’s “diet dictocrats” persecuted him for his common-sense (but to them, contrarian) view that “what you eat has a bigger impact on your weight than how much you eat.”^{44,45}

On the Wise Traditions Podcast, Dr. Guillermo Navarrete has argued for the importance of context when educating people about weight and nutrition, stating: “The only way to get people to a safe place where they lose that weight and keep that weight out forever is that you teach them first what’s the problem and why it is a problem. . . . If you identify that whole industry, not just that food or the cookie. . . and why is that industry powerful, you will understand why.”⁴⁶ He emphasizes, “Modern diseases are caused by modern food and modern habits.”

Over the years, the Weston A. Price Foundation has often adopted a similar big-picture lens when discussing the food industry favorites that are contributing to weight gain in America and around the world: monosodium glutamate (MSG),⁴⁷ soy (used to “fatten fish, poultry and animals quickly and profitably for market”),⁴⁸ sodas (including “diet” sodas),⁴⁹ reduced-fat milk⁵⁰ and industrial seed oils.⁵¹

Discussing her weight-loss “formula” (“Purge, Splurge, Fast and Last”), Sally Fallon Morell also emphasizes personal responsibility:

“Long-term, permanent weight loss requires a complete change in lifestyle, including rejection of all processed foods, adopting a schedule of regular meals and, above all, dedication to nutrient-dense foods. If your diet is not supplying all the vitamins and minerals your body needs, the urge to eat will eventually overcome the best of intentions and the strongest willpower.”⁵²

Real, nutrient-dense foods include healthy fats like butter, olive oil, lard, coconut oil and duck fat; pastured meats, organ meats and eggs, fish and artisan cured meat products such as bacon, salami and paté; bone broth; raw milk and other high-quality dairy products such as raw aged cheese, kefir and yogurt; whole grains (properly soaked, sprouted or fermented); genuine sourdough bread; natural sweeteners; and fermented vegetables, condiments and beverages. Ultimately, one of the strongest advantages of this type of diet is that it is satisfying. Bone broth, for example, “improves the digestibility and assimilation of food, giving the body the critical message that it is deeply nourished, happy and full.”⁵³ As Navarrete observes, “When you do the right thing, what the body needs, deserves and is willing to absorb and use, the body will say ‘thank you.’ The way your body says ‘thank you’ is by getting healed from diseases or getting to the right weight.”⁴⁶

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Homeopathy Journal

HOMEOPATHY AND WEIGHT LOSS

By Anke Zimmermann, BSc, FCAH

Disclaimer: This article is not intended to diagnose or treat any disease or condition. It is for educational purposes only. The author advises readers to consult with a qualified health care professional prior to taking any homeopathic remedies.

Losing weight is not always easy. Can homeopathic remedies help you to lose weight? The answer is—possibly yes—depending on the reasons for the excess pounds. Perhaps homeopathy can provide a little boost for success.

Obesity is a serious problem in the U.S. as well as in many other countries around the world, and the obesity rate continues to surge. Nearly 42 percent of American adults are obese, with 9.2 percent deemed severely obese.¹

Children are not faring much better. Nearly 20 percent of U.S. children and youth aged two to nineteen were obese as of 2020.² Worldwide, thirty-nine million children under age five were overweight or obese in 2020, as were (as of 2016) over three hundred forty million children and adolescents (18 percent) aged five through nineteen—a dramatic change from just 4 percent in 1975 (only 1 percent of whom were obese).³

According to the World Health Organization (WHO), four million people die each year due to overweight or obesity.⁴ Overweight and obesity also add greatly to the burden of type 2 diabetes, cardiovascular disease and cancer.

Modern medicine considers the main causes of obesity to be greater caloric intake than use due to sedentary lifestyles and excessive consumption of high-calorie foods and drinks. It also acknowledges some metabolic impairments, especially low thyroid function, as contributors to weight gain.

Research also points to the contribution of environmental risk factors—toxins and pharmaceuticals, in particular.⁵ This article will

examine the use of homeopathy as an aid for some of these circumstances.

HYPOTHYROIDISM AND THYROIDINUM

Metabolism refers to chemical processes that convert calories from food and drink into energy, which then fuels the many different functions of our bodies. This process is finely tuned and involves many different organs as well as the individual cells of our body. Multiple factors can affect metabolism, including hypothyroidism. Hypothyroidism affects about 5 percent of Americans and is very common in women who have had more than one child. Hypothyroidism can lead to weight gain and make it difficult to lose excess weight.

A homeopathic remedy made from healthy thyroid tissue called *Thyroidinum* (in a 3X potency) may be helpful to support and heal an underactive thyroid. It is traditionally prepared from the healthy thyroid of a sheep, but don't worry, it won't turn you into a sheeple!

Consider the results of a six- to nine-month study from India, which enrolled thirty patients with diagnosed hypothyroidism who were already taking the synthetic drug levothyroxine (one hundred micrograms a day) as a mainstream therapy.⁶ Despite taking the medication, many of the cases still had various hypothyroid-related symptoms, such as weight gain (40 percent) and hair loss (20 percent). In the study's treatment group, fifteen patients took *Thyroidinum* 3X twice a day in addition to the levothyroxine; the control group continued on levothyroxine only. The researchers monitored thyroid-stimulating hormone (TSH) levels throughout the study. Almost 73 percent (eleven of the cases) in the treatment group were able to reduce their levothyroxine dosage to as little as twenty-five micrograms a day; in addition, TSH levels improved, and those taking *Thyroidinum* lost from one to four and a half kilograms (about two to ten pounds) of body weight. In the control group, in contrast, weight loss ranged from zero to one kilo only. The researchers concluded, "Thyroidinum 3X hastens the curative process in primary Hypothyroidism." None of the participants reported adverse effects from the combined treatment of *Thyroidinum* 3X with levothyroxine.

GLYPHOSATE AS AN OBESOGEN

Many everyday chemicals have the potential to cause endocrine disruption, which can tamper with the body's fat cell metabolism and endocrine balance, derailing homeostatic mechanisms important to weight control. These chemicals have been tagged as "obesogens." Obesogens can cause fat cells to accumulate extra fat, as well as interfere with appetite and satiety; they may even lead to transgenerational

obesity.⁵ Obesogenic chemicals may also disrupt the delicate balance of the microbiome, altering the signals of friendly microbes, which tell the brain that enough food has been eaten.⁷ Studies have shown that exposure to these toxins in early life can predispose both animals and children to hormone disruption and obesity.⁷

For this article, I will focus my discussion of obesogens on glyphosate, the wide-spectrum herbicide. In use since 1974, glyphosate is the most used herbicide in human history, used by farmers as well as consumers. There are more than seven hundred fifty glyphosate-containing products for sale in the U.S., Roundup being one of the most popular.⁸ In addition, glyphosate has been used since 2007 on crops as a drying agent, administered about seven to ten days before harvest. As a result, almost all of the wheat, corn and soy grown in the U.S. is contaminated.

Glyphosate's massive use has led to widespread environmental diffusion, including groundwater contamination and human consumption through food products. It is now detectable in urine, serum and breast milk samples.^{9,10}

Glyphosate is a known endocrine disruptor. It can also damage DNA and interfere with many metabolic processes in microbes, plants, animals and humans.⁹ In addition to harming human health by fueling obesity, glyphosate has been linked to cancer, type 2 diabetes and infertility as well as decreased IQ, learning disabilities, autism, allergies and asthma in children, among many other documented harms.^{9,10}

GLYPHOSATE AND HOMEOPATHY

Naturally, it is advisable to avoid glyphosate as much as possible by eating organic, non-GMO grains and grass-fed, pastured meats and eggs, but in addition it may be helpful to supplement these foods with various nutrients and use homeopathic remedies to help with detoxification. Nutrients could include binders such as activated charcoal as well as vitamin C, cod liver oil and chlorella.

There is some interesting research examining the ability of homeopathic remedies prepared from various toxins to aid in the removal of

those toxins from the body. Most of this research has been done with arsenic poisoning,¹¹⁻²⁰ but some has also addressed mercury, cadmium and lead toxicity.²¹⁻²⁸ It stands to reason that the same approach would work with glyphosate and other environmental chemicals. From a clinical perspective, this seems to be correct. Homeopath Kate Birch has written a comprehensive book about glyphosate toxicity and detoxification, which I can recommend.²⁹

Homeopathic remedies prepared from glyphosate as well as from mixtures of common herbicides are available for purchase from some homeopathic pharmacies. The usual course is to buy 30C, 200C, 1M and 10M potencies and to take each potency twice a week for two weeks—or possibly for four weeks, depending on the individual's response—starting with the 30C and increasing to 10M. Ideally, this should be done under the care of a knowledgeable practitioner.

I&E Organics Apothecary in the U.S. carries homeopathic glyphosate under the name CEASE-Allopathic-GLYPH. They also carry a remedy prepared from a mix of herbicides under the name CEASE-Allopathic-POLY-HERB. This may or may not help with weight loss, but I think it is worthy of consideration.

MEDICATIONS AND OBESITY

A number of common medications are known to cause or contribute to weight gain, including various antibiotics, antidepressants,

HOMEOPATHIC REMEDIES THAT MAY SUPPORT WEIGHT LOSS

THYROIDINUM 3X: Potentially helpful for weight gain due to hypothyroid symptoms.

HOMEOPATHIC GLYPHOSATE: Potentially helpful for toxicity from glyphosate, which may contribute to weight gain.

POLY-ANTIBIOTICUM: Potentially helpful for weight gain associated with antibiotic use.

REMEDIES MADE FROM ANTIDEPRESSANTS, ANTIPSYCHOTICS AND OTHER MEDICATIONS: Remedies made from medications that contribute to weight gain may be potentially helpful to mitigate such weight gain.

IGNATIA AMARA: May be helpful for emotional and binge eating after sudden shock, grief, betrayal or feeling “shattered.”

NATRUM MURIATICUM: May be helpful for sensitive, introverted people who don't heal well from grief and who may “eat” their grief.

LAC MATERNUM: This remedy made from mother's milk may be helpful for emotional eating in people who are not in touch with their body's needs.

SACCHARUM OFFICINALE: This remedy made from cane sugar may help with excessive cravings for sweets; person may feel abandoned and isolated.

PULSATILLA: May be helpful for individuals who eat or binge to console themselves out of loneliness or depression; person often craves ice cream and other sweet and creamy foods.

antipsychotics, the contraceptive injection Depo-Provera and prednisone.³⁰

Since 1948, antibiotics have been known to cause weight gain, when researchers found that the new antibiotic aureomycin boosted the growth of chickens when added to their feed. Some of the chickens reportedly grew to twice the weight of their unmedicated brethren.³¹ This was the beginning of the widespread use of antibiotics as feed additives for chickens, hogs and cattle, which then allowed for the development of large factory farms where animals could be kept in crowded and dirty conditions thanks to a steady diet of antibiotics.³¹

Apparently, researchers also conducted antibiotic feeding experiments on humans, including developmentally disabled children living in an institution in Florida. The force-medicated children averaged six and a half pounds of weight gain per year, compared to just under two pounds for the unmedicated kids.³¹

The average American child takes eighteen courses of antibiotics by age eighteen; there is significant research to support a correlation between early-life antibiotics and an increased risk of subsequent obesity.³²⁻³⁴ A cohort study of nearly sixty-five thousand American children using records spanning the period between 2001 and 2013 found that 69 percent were exposed to antibiotics before two years of age and by that age had received an average of 2.3 prescriptions.³⁴ The more often they were exposed to the drugs, the more likely they were to be overweight or obese by age five. The researchers concluded that antibiotic use was a risk factor for obesity.

Another cohort study that looked at over three hundred thousand children born between fall 2006 and fall 2013 produced similar results; 72 percent of the children had been prescribed an antibiotic in their first two years of life.³⁵ The researchers also examined the effects of acid-suppressing medications given for reflux. They concluded, “Antibiotics, acid suppressants and the combination of multiple medications in the first 2 years of life are associated with a diagnosis of childhood obesity. Microbiota-altering medications administered in early childhood may influence weight gain.”

MICROBES AND MITOCHONDRIA

The weight gain associated with antibiotics may be due to several factors. For example, among their many functions, the beneficial microbes in our gut influence the secretion of ghrelin, a peptide associated with hunger. Research has shown that antibiotic use can increase the amount of ghrelin secreted, contributing to increased appetite. Moreover, changes in ghrelin levels after antibiotic use can last for months.³⁶

Antibiotics are also known to damage or even kill mitochondria,^{37,38} the multifunctional organelles within our cells that create all the energy and power in our body. Without enough active mitochondria, calories are not converted as easily to energy but are stored instead in fat cells, leading to weight gain.

Perhaps even more troubling, antibiotics have been linked to the development of anxiety and depression in children,³⁹ as well as the development of severe mental disorders, including schizophrenia and affective disorders, in adults.⁴⁰ This suggests yet another pathway to weight gain—that ice cream in the freezer can look pretty tempting when one is feeling depressed!

To restore microbial balance, some obvious measures involve the use of fermented foods and good probiotics, among others. In addition, homeopathic remedies made from antibiotics might be helpful. In my practice, I use homeopathic remedies from many different antibiotics as well as from a special mixture of antibiotics called *Poly-antibioticum*. I’m not sure how much this would help with weight loss, but it might be worth a try for someone with a history of antibiotic use who is struggling to lose weight. *Poly-antibioticum* can be purchased from Helios Homeopathic Pharmacy in the UK. (You would need to send them a message about it, as it is not listed on their regular index.) As with a glyphosate clearing, the most commonly used potencies are 30C, 200C, 1M and 10M, with each potency taken twice a week for two to four weeks. A few rounds of this may be needed.

ANTIDEPRESSANTS’ DEPRESSING EFFECTS ON WEIGHT

As mentioned, research has shown that antibiotics may cause anxiety and depression in children and potentially severe mental health problems in adults,^{39,40} and contribute to weight gain via mechanisms that include mitochondrial damage. To make matters worse, several antidepressants, like antibiotics, are linked to weight gain. So, someone who becomes depressed and gains weight as a result of taking antibiotics could be told to take antidepressants that add to the burden and cause even more weight gain. (Oh, the joys of pharmaceutical medicine!)

Does homeopathy have something to offer in this situation? As with the remedies made from antibiotics, homeopathic remedies made from antidepressants are also available for purchase and may help to reset the body after the use of such medications. In addition, homeopathy can be very helpful for people suffering from depression and anxiety, particularly when caused by stress and emotional trauma.

ANTIPSYCHOTICS, TOO

Nowadays, antipsychotics are routinely given to children with be-

havioral challenges such as aggression—something quite easily helped with homeopathy. Antipsychotics are known to cause damage to mitochondria and stimulate appetite,³⁷ and so they, too, are a recognized cause of weight gain. Experts report rapid increases in weight “in the initial period after starting antipsychotics” but also continued weight gain “in the long term,” with children “particularly vulnerable” to those effects.⁴¹ In fact, in Vancouver, Canada, close to where I live, a special clinic was founded just to help children with weight gain caused by antipsychotics!⁴²

Antipsychotic medications also impair glucose metabolism, increase cholesterol and triglyceride levels and cause arterial hypertension, leading to metabolic syndrome and weight gain that can continue or remain even after discontinuation.⁴¹ As with homeopathic remedies made from antidepressants, remedies made from antipsychotics (and, in fact, any kind of medication) are available for purchase and may help to reset the body.

HOMEOPATHIC OPTIONS FOR EMOTIONAL EATING

Eating can certainly provide comfort for most of us, but sometimes, extremes can happen. Emotional trauma and stress may lead to emotional eating and obesity. Several common homeopathic remedies may be helpful for emotional eating that is a response to stress and trauma. (Remember that ideally, remedies are carefully selected for the individual.)

About twenty years ago, I saw a client who complained about strange neurological symptoms in his arms and chest. He also wrestled with weight issues. During the intake interview, he shared that his mother had suffered from bipolar disorder and had attempted to kill him in his sleep on several occasions. He had decided as a child to become very big and strong to survive such attacks, including gaining a lot of weight. The neurological symptoms greatly improved with the homeopathic remedy *Rhus toxicodendron*, which can be useful when someone has been victimized by close family members.

Another client was aware of having decided as a child to become overweight and unattractive due to a history of child sexual abuse. She did not want to attract the attention of men and never married.

Ignatia amara is a wonderful remedy for emotional shocks and grief, especially if associated with disappointment and betrayal. This remedy may be indicated in cases of romantic disappointments, especially in young, refined women. The person feels shattered, and may either cry hysterically or just shut down and not be able to cry at all. Some indulge in comfort eating or develop bulimia. Everyone should have this remedy on hand because as human beings, we are all vulnerable to sudden shocks, grief and disappointment.

Natrum muriaticum (*Nat. mur.*) is a famous remedy for ailments that develop after long-unresolved grief and is one of homeopaths’ top remedies for eating disorders. People who may benefit from *Nat. mur.* tend to be emotionally closed, introverted and reserved. They don’t talk much and don’t like consolation. They are sensitive and tend to dwell on insults, finding it hard to forgive. They may eat instead!


Lac maternum, made from mother’s milk, could be a good remedy for overeating, especially if the relationship with the mother was strained or disrupted, if there was birth trauma or if the person was not breast-

fed. Mother’s milk helps infants come into the world, supporting incarnation. A child or adult who needs this remedy may be ungrounded, foggy and not really in touch with their body or deeper needs. After taking the remedy, they may become more aware of boundaries and needs.

Saccharum officinale, made from cane sugar, might be helpful for those addicted to sugars and sweets. Over the past one hundred years, annual U.S. sugar consumption has increased from around ten kilos in 1800 to nearly eighty-two kilos by 2009.⁴³ It stands to reason that a remedy made from cane sugar—and probably remedies made from other sugars—might be helpful in curbing an excessive sweet tooth. *Saccharum officinale* also can be associated with a lack of self-love and a fear of being abandoned, with fear of being unloved and abandoned also serving as potential indications for the remedy *Pulsatilla*. Individuals who may benefit from *Pulsatilla* may eat and binge to console themselves out of loneliness or depression and may go for ice cream, whipped cream, butter, cookies and other sweet and creamy foods.

CONCLUSION

Many different factors can play a role in obesity and difficulties with losing weight, including lifestyle, environmental and pharmaceutical toxicity, hypothyroidism and emotional stress and trauma. Homeopathic remedies made from healthy tissues (such as *Thyroidinum*) or from environmental toxins and pharmaceuticals (such as glyphosate and antibiotics) offer novel and possibly promising approaches to help with weight loss in indicated cases.

Homeopathy has a long history of use with emotional trauma, which may lead to emotional or binge eating. Individual remedy selection is important for cases of emotional abuse and trauma. As always, it is advisable to work with a qualified homeopathic practitioner for serious health conditions. 

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Wise Traditions Podcast Interviews

INTERVIEW WITH KRISTEN FILES

ADDRESSING ADRENAL FATIGUE

HILDA LABRADA GORE: Many of us walk around feeling drained, tired and depleted. What would it look like if we had the energy we longed for? No more afternoon crashes? No more brain fog? Kristen Files, a functional nutritional therapy practitioner and master restorative wellness practitioner, discusses adrenal fatigue—what leads to it, some of its symptoms and how to address it. She also tells her own story and describes the shifts she noticed as she addressed the root causes of adrenal fatigue. Finally, she offers ideas for how to help heal and regulate one's physiology.

Kristen, I've heard you say that you were "born exhausted." Tell me about that.

KRISTEN FILES: I was! I define my life in three eras: "exhausted," "surviving exhausted" and now "surpassing exhausted." As a kid, I would get up in the morning for school and brush my teeth and then nap, eat and then nap, pack my bag and then nap, and sleep all the way to school—and sometimes I would even fall asleep during my tests in school. School was so exhausting, I had to come home and nap. That's how my life was for about fifteen years.

HG: Did your parents find anything unusual about this?

KF: They did, but when they took me to doctors, there were no answers for me. When I was younger, I went to a gastrointestinal (GI) doctor, who gave me things like the fiber supplement Metamucil. Doctors never counseled my family on how to eat properly or about things that might be detrimental to my health, or food allergies.

When I hit the magical teenage years, it was antidepressants. They would try one after another. Nothing worked because that wasn't the problem for me. When I was in my early twenties, I even had a doctor recommend the sedative Ambien to me. I thought that was funny; my

complaint was that I couldn't wake up, and so she gives me some sleeping medicine! That's when I was done with the conventional model.

HG: When did you realize that your state of exhaustion was related to the adrenals?

KF: It was after my childbearing years. I have four children, and I had them in my twenties and thirties. When I had my fourth child, a friend recommended a natural practitioner. They figured out that I had a systemic candida infection. Once I cleared that up, I would experience "two steps forward, one step back," still digging deeper. I would call myself "half a person." I never felt like a full person until I stumbled upon the adrenal issue and started tackling that. That made a huge difference in my health.

HG: I've heard the term "adrenal fatigue" or we hear people say, "I have an issue with my adrenals," but I'm not sure we all understand what it means. What are our adrenal glands?

KF: It's interesting because "adrenal fatigue" is a term that conventional doctors will laugh at. It's not localized to your adrenal glands, and they don't wear out. It's like the term "leaky gut"—it's a layperson's term, and a doctor will laugh at you if you use it—but if you go to them and say, "I have intestinal permeability," then they'll take you seriously. Adrenal fatigue is very similar. It's not your adrenals wearing out even though it's actually a great term. I like it because it describes how you feel—but a doctor won't take you seriously. "HPA axis dysregulation" is a term that a progressive doctor may acknowledge.

Your adrenal glands are part of the endocrine system and govern your fight-or-flight response. The adrenals are two little triangular organs that sit just on top of your kidneys. If you think of "adrenal," that tells you that they're next



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If you think of Pottenger's cats, we are passing down our dysfunction or environment to our children.

to your kidneys (renal). They have different sections or layers in them. The outer layer produces your mineralocorticoids, which regulate things like sodium, electrolytes and blood pressure. You also have your glucocorticoids, which are involved in things like blood sugar regulation. You have cortisol, for which the adrenal glands are best known, and you have your sex hormones (DHEA, estrogen and testosterone). Those are all regulated by the outer layer.

In addition, you have the inner layer, the medulla, which regulates your adrenaline response. That's the thing we refer to when we talk about someone lifting the proverbial car off the baby.

HG: Let's go back to the HPA axis. What does that stand for?

KF: "H" is for the hypothalamus, "P" is the pituitary and "A" is the adrenal glands.¹ You have several different axes throughout the body. In addition to the HPA axis, you have the HPT (hypothalamus-pituitary-thyroid) and the HPG (hypothalamus-pituitary-gonads) axes. You have to look at what is common across all of them—and that's the hypothalamus and the pituitary. They are responsible for the regulation or the output of the adrenal glands. The hypothalamus is like the watchman or the thermostat of the body—monitoring what is going on. If there is a situation where there's an alarm, then it will signal the pituitary to produce hormones to signal the adrenal glands to fire. That's their normal function, and it can be upregulated or downregulated based on the situation.

That normal function can be bypassed whenever you're in a fight-or-flight situation. It doesn't even have to be an actual fight-or-flight; it could be something that you perceive as fight-or-flight. It could be actual trauma—a situation of abuse, or something that puts you in extreme fear—but it could also be something that's perceived as trauma. The body's treating these things the same way. When that happens, it signals the amygdala, which is like our emotional center. That bypasses normal function and goes straight to the adrenal glands and causes the adrenal glands to fire. When that happens often and consistently, then your hypothalamus and

pituitary can downregulate. That's where HPA axis dysregulation comes from.

HG: A lot of us are under chronic stress. It doesn't need to be someone hitting me over the head with a baseball bat. It could be something like a boss who is extremely demanding; every time I go into the office, my body automatically responds as if I were being chased by a saber-tooth tiger. This will naturally cause dysfunction in the HPA axis or in the adrenals because it's like they're constantly turned on. Is that right?

KF: That's a good synopsis of it. There are lots of stressful situations. The boss is a good example, but it can even be something like driving in traffic or the demanding schedules many of us have for our kids. There are a lot of day-to-day situations that can cause this to be dysregulated.

HG: How is it that you were born with this dysregulation, if your body wasn't under any particular stress or trauma?

KF: I don't know that it was necessarily adrenal dysregulation straight from the get-go, but if you think of Pottenger's cats, we are passing down our dysfunction or environment to our children. (For those who are not familiar with Pottenger's cats, it's worth watching a short fifteen-minute video on YouTube.²) If my mother, who is extremely dysregulated and always in fight-or-flight and stressed out, experienced a lot of unresolved traumas when she was young, she's passing her deficiency down to me. It takes less for me to be in that fight-or-flight state because I was already born deficient. I also had a lot of gut health problems, which I had to work on as well.

It is more commonplace for people to recognize the gut health piece, but for me, it wasn't the only piece. If you are in this fight-or-flight or what we call "sympathetic" state all the time, then you're not going to digest your food. If you're running from a lion, you don't need to digest a hamburger. Digestion is put on the back burner when you're in this stress state. So, which is the root cause? Is it your gut health, or is it your adrenal regulation? You have to work on both of them.

HG: I can't help but think that this is the world we're in now. I know a lot of young people who are even losing their hair. Again, the hair is not important to the body as it's trying to survive. The body wants to make the most of its energy, so it's not going to put it into keeping the hair luscious, shiny and full when it feels like it is being chased by a tiger or lion. Are most people now in a state of adrenal dysfunction?

KF: It's becoming more commonplace certainly, especially because we have so many things coming at us. We have environmental toxins, EMFs and non-native electricity. We're born more deficient, and then we have terrible food. Our soil's not up to snuff. We also have the last few years of chaos, so that puts us in dysregulation. Some people are able to handle it better than others. I like the "thermostat" comparison. If you start out with a rundown system, you're going to have to address it or replace it sooner. If you're constantly taking care of it and doing the maintenance, then maybe you won't have as many issues.

HG: I want to talk about the symptoms. We've already talked about how people might have issues with their gut, or their hair might fall out. What are some ways that we can easily detect what's happening with our HPA axis or our adrenals?

KF: The hallmark symptoms of adrenal dysfunction are exhaustion and feeling overwhelmed. If you are constantly feeling exhausted, even if you're eating a great diet—if you're doing all the right things and you still feel that inside—that's

a sign to dig deeper into the adrenal dysfunction. But it can be all kinds of things. Vision issues are a big deal. Having to wear sunglasses a lot or being sensitive to bright light is an adrenal issue. If you look back at pictures in the 1970s of people on the beach, nobody had sunglasses on. That's a modern-day issue. Another issue is dizziness, especially when you're going from sitting to standing. Alignment issues and things like plantar fasciitis or shin splints are related to adrenal dysregulation. Other signs include cravings (especially if you have a craving for salt), constant sicknesses and any sexual dysfunction. Fertility is a big issue for people. There's a lot of overlap there.

HG: You have three easy categories for people to understand themselves. Can you give us that framework?

KF: There's some debate about this framework, and some functional nutritionists want to toss it all out the window, but a lot of it is still valid. The concepts were developed by Hans Selye, the "father of stress research,"³ in the 1900s. I believe he was a contemporary of Dr. Price.

The first category is "wired." This is a person who is "go, go, go," always wanting to get things done and active all the time but prone to anxiety or insomnia. They can't turn it off at night. They have weight gain, heart palpitations and ADD [attention-deficit disorder] symptoms—they can't focus on one thing at the time. I have a little saying for each of these categories. This is the slogan for the wired types: "rosé all day." I especially see this with some moms. You're "going" all day and then you al-

The first category is "wired." This is a person who is "go, go, go," always wanting to get things done and active all the time but prone to anxiety or insomnia. They can't turn it off at night.

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“Wired and tired” is when you are relying on willpower. You feel sick, but nobody around you knows that because you’re powering through it.

most need something to help you calm down at night, because you’re always in this high output.

The second one, “wired and tired,” is when you are relying on willpower. I like a term I heard called “vertically ill,” which is where you feel sick but nobody around you knows that because you’re powering through it, even though you’re not feeling it. This could be where you’re perhaps experiencing depressive episodes, lack of motivation, thyroid issues or procrastination. That is something that I would do—I would procrastinate. It’s having that deadline right there in front of you that gets you fired up, gets you going and makes you function. But then you don’t have the ability to see the project through or finish it because you lose the motivation once you get three-quarters of the way there. There are addictions and an inability to concentrate. My little saying for this one is, “But first, coffee.” You’ve seen those T-shirts. I have one, so I’m not judging! You are relying on this outside energy so that you can keep going. It could be coffee, caffeinated drinks, or carbs all day long.

HG: Both of these so far sound like a lot of people I encounter and maybe even myself at times. Talk to us about the third type of adrenal fatigue or dysfunction.

KF: The third category would be “just tired” or maybe “burnout.” I hate to use the word “burnout” because then people say, “The adrenals don’t actually ‘burn out’ because they technically could still keep producing.” In this situation, you’re not describing the adrenals—you’re describing the person or the symptoms. That’s someone who can’t leave the house. I had gotten to this point. If I went to the grocery store, I would have to take a three-hour nap. My mom would have to prepare herself mentally for an hour to take a shower and things like that. That’s a pretty advanced case. You’re apathetic. You’re not as interested in things. You don’t want to go out anymore. You’re extra sensitive—not just to environmental things but also your feelings. This one, the saying is, “I like to party,” and by “party,” I mean “take naps.”

HG: I overheard someone saying, “My idea of a great birthday is just napping and having some-

one feed me.” She might fall into this category.

KF: Some people want to toss this framework because they think of it as, “You’re describing the adrenals,” but as I said earlier, you’re describing the person’s symptoms. Also, the framework is not progressive—you don’t go to “one,” then “two,” then “three.” You could go “one to three,” or you could be in a state where you’re tired and maybe you nourish yourself and get enough rest and your body can recuperate. You can move in and out of these categories at any given time. I personally have identified with all three.

HG: You say that our hormones are the lens through which we see the world. What do you mean by that?

KF: Your emotions are made up of many different things, and your physical body influences your emotions. Your cortisol is a stress hormone. If you are always in a hyper cortisol state, is it because your situation is stressful or because this particular hormone is circulating that causes you to perceive the world as more stressful? It can be the same thing with adrenaline. If you’re constantly outputting that, you might be a more fearful person, or you could dig into the neurotransmitters, such as GABA. If your GABA is out of function, then you could constantly be lethargic. Your personality is also part of your physical biology.

HG: I’m glad you’re shedding light on this because sometimes with friends I think, “They just need to change their mindset. They need to be more positive, and it’s how they perceive things.” What if it’s not their state of mind that is affecting how they see the world but these hormones?

KF: I was like that. I was a negative, glass-half-empty person. As I started getting healthier, I started having positive thoughts. I distinctly remember the first time that happened. I was sitting and thought, “Is this what it feels like to think positively?” I was in a situation with friends, and the friend was complaining about something, and I put a positive spin on it. He

stopped and looked at me. He said, “Did you just say that?” I said, “I did just say that!” Your personality is not always who you are. As you get healthier, that can change.

HG: That is super encouraging. Now, let’s say you’ve identified your symptoms. You’ve decided that you are “wired and tired” or perhaps “just tired.” What’s next?

KF: You don’t want to go out and take the first adrenal thing that you find on the shelf. It is important to work with someone who is knowledgeable. If you’re someone who’s overproducing, and you take a supplement that gives you more energy, then you’re going to be exacerbating that dysfunction. Likewise, if you’re someone who’s downregulated and tired, and you’re taking something that’s calming you down, then you’re going to feel worse, not better. You can make the dysfunction worse.

The first thing is to stop fueling the fire, not go straight to the supplements. Work on the things that are broad and help your health in general. Remove the toxins from your physical environment. Work on a good whole-food, properly prepared, nutrient-dense diet. Deal with the stress in your life. Once those things are done, then I would recommend testing and not guessing where you are in the spectrum. You could do an adrenal salivary test, which would show you your cortisol rhythm throughout the day—because it’s not static. You should have higher cortisol in the morning and lower in the evening, and that can be dysregulated. In the context of a good clinical history and any issues that you’re having, you can take a targeted approach in how you add supplements.

There are some basic supplements that I do like. If you are in the “wired” category, things like ashwagandha, reishi and vitamin C are all good for helping you to calm down and nourish your adrenal glands. If you’re in the “wired and tired” category, you’re looking for primarily adaptogenic things. “Adaptogenic” means if you’re upregulated, it will calm you down. If you’re downregulated, it will pick you up. That would be things like rhodiola, crossandra, licorice and maca, which I like a lot. If you’re in the “just tired” category, you’re going to focus on nourishing your adrenal glands. That would be where organ meats come in handy. I’ll do glandular supplements for the hypothalamus and pituitary to work on the axis as a whole, and then stuff like ginseng and cordyceps.

HG: What about making some lifestyle changes? I was in the “wired” category for a long time. I would keep going and going, and then when I started getting morning sunlight, it helped me shift my rhythm. I became more tired earlier in the evening. I know my sleep became more profound. That helped me shift. Are there lifestyle changes you would recommend to move people from these categories into having a healthier HPA axis?

KF: It depends on the person. If someone’s so exhausted, then it might be prudent to start with supplementation or something to get the “oomph” to make those lifestyle changes. If they are in a place where they can make those changes, those changes are going to be important.

Number one is making sure that you have balanced blood sugar. If

you have dysregulated blood sugar—not necessarily even diabetes, but insulin resistance or hypoglycemia—if you have any dysregulation, then the adrenal glands are not going to be able to recover because blood sugar and adrenal function are very closely related. Again, that would be number one.

Second, make sure your elimination pathways are open. Make sure that you’re going to the bathroom at least once a day. If you’re not, then that would be an important point.

You mentioned restorative sleep which is where you’re repairing and detoxifying. That’s very important, too. I also have a list of restorative practices that are beneficial, not just for this but for many things. That would include breath work, vagal massage, detox baths, Epsom salt baths, grounding, spending time outside (as you said, exposure to daylight helps the circadian rhythm), journaling and emotional awareness.

You’ve had people on the show who have talked about German New Medicine and being aware of your emotions. We talked about



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perceived stress. That's profound, and getting a jump on that would be helpful.

HG: What would you say to the skeptic? You may be able to detect issues with their adrenal function, but they say, "I'm doing fine. I take many trips to Starbucks during the day and pop my little candy when I'm feeling low on energy. I'm functioning great!"

KF: That's tough. I used to be that person, so I'm trying to think what changed me. You come to a point where the pain of staying where you are is greater than the pain of change. A person has to get to that point first. I don't know that you can convince someone who believes that they're fine. I used to be that person who thought I was fine, but deep down, you know you're not fine. To me, it's not nagging a person but being there for them and having the information for them when they're ready.

HG: Can you tell us one more story of a client you've worked with who was able to move out of one of those stages, "wired and tired" or "just tired," using some of these supports you've been talking about?

KF: Specifically for adrenal issues, that's a little bit hard because I practice a little bit differently than most people. Even though I specialize in the adrenal area, I'm also working on gut health and other things. My clients will consistently come to me tired. This is a topic for a different talk, but I do muscle testing to determine what area we're going to go into when we do the supplementation piece. It's cool every time to see how muscle testing reveals to someone what is wrong and their eyes light up. They say, "I knew this was the answer for what I've been dealing with."

The clients with fertility issues are the ones who feel like I "get" them. You'll have women who have not been able to conceive for years. You find that one right thing, that one little missing piece in their overall person—whether that's gut, adrenal or both—and then, a few months later, they're pregnant! That's my favorite.

HG: As you're talking, I can't help but think

about how I've never seen this sense of exhaustion before, especially in young people. It's only happened in the past few years.

KF: We display it. Those three sayings that I ascribe—the three stages—those are printed on T-shirts. You see women posting them on their bios for Facebook or Instagram. They almost become our identity, which is a little bit scary, too, because it doesn't have to be that way. You don't have to live needing your rosé every evening.

HG: If readers could do one other thing to improve their health, whether related to adrenal function or not, what would you recommend?

KF: I've thought about this for a long time, especially listening to other podcast guest's answers. When I hear other answers, I've thought, "That's so good. Sleep is good and getting outside is good. Eating organ meats, those are all good things." But I've asked, "What is the thing that gets you there?" I think it's taking ownership and responsibility for your health and not outsourcing that to someone else. You're the one who has the power to change your life and that takes acknowledging where you're at and being truly honest and authentic with yourself. Moving that a step forward and saying, "Now I know where I am. I'm going to do something about it because I have a purpose and a mission on this earth that I need to accomplish." You cannot accomplish that if you're sick. ☯☯

This was Wise Traditions Podcast episode 427 (July 3, 2023).

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All Thumbs Book Reviews

Gut and Physiology Syndrome: Natural Treatment for Allergies, Arthritis, Autoimmune Illness, Fatigue, Gut Problems, Neurological Disease

By Natasha Campbell-McBride, MD, MmedSci(neurology), MmedSci(nutrition)
Medinform Publishing

In today's world of fast-food, drive-through "convenience" and near-instant gratification via Amazon's doorstep delivery, you couldn't pay most people to read this hefty book of over five hundred pages, much less spend two years diligently following the GAPS nutritional protocol. But don't miss it! It's no coincidence that this same world is filled with suffering from epidemic levels of chronic disease. In *Gut and Physiology Syndrome*, Dr. Natasha Campbell-McBride builds on the foundation she laid in her seminal 2004 book, *Gut and Psychology Syndrome (GAPS)*, which focused on rebuilding gut function to restore psychological health. Chances are, you already know her as an icon in the world of healing through traditional, nourishing foods and as a perennial favorite at Wise Traditions conferences. Once again, she delivers a thoroughly referenced, practical and inspiring book, now informed by an additional two decades of clinical success, and this time focused on the plethora of chronic physiological diseases that are largely classified as "incurable" by the medical establishment.

As a practitioner, educator and consultant in Holistic Management, I especially appreciate Campbell-McBride's holistic perspective and the connections she makes in relating the human gut microbiome to the soil microbiome and regenerative agriculture. The twenty-two-page chapter "Good Health Begins in the Soil Inside Us!" explains how the main players in soil biology work together in a cooperative web of life that supports plant health, and how these same

kinds of microbial life forms interact in similar ways in the human gut. I share her awe and respect for the amazing, intricate and complex workings of nature, and I appreciate the humility she expresses that there's so much more we don't know! She makes an important point that current microbiome research is limited because it focuses on the output of our gut (the stool) rather than on the living, working, growing and changing environment within.

To help us think more holistically, Campbell-McBride offers a number of semantic and conceptual shifts that can encourage us to see the intelligent design of the human body. For example, in the chapter "Toxins and Parasites," she suggests that while our typical view of parasites is based on the concept of "survival of the fittest," healthy natural environments work within an atmosphere of "cooperation" instead. In addition to fungi like *Candida*, she says, "all worms ever found in the body have been called 'parasites.' Yet we now know that they are essential for keeping our immune system healthy and well-balanced," and we might do better to think of them as "the cleaning company." She attributes rising issues with parasites to the rising levels of toxins that are basically unavoidable in today's world: "To date, more than 100,000 new chemicals have been invented by humanity, chemicals which do not exist in Nature." She argues that what we call parasites are actually "neutralising and absorbing" these toxins for us. And while there's no doubt that an overabundance of parasites creates health problems, many people have success balancing parasite load by just following the GAPS diet.

Campbell-McBride looks at the root causes of today's chronic diseases, clearly explaining how lack or inaccessibility of nutrients, impaired toxin elimination and an additional toxic load from an imbalanced gut microbiome have an impact on the chronic illnesses she discusses.



I was surprised to learn that “unhealthy gut flora is by far the main source of toxicity in our bodies.” No wonder the most important thing we can do is promote healthy gut flora!

“Every morsel of food you put into your mouth changes everything in your body: your metabolism, your hormonal balance, your electrolyte balance, your sympathetic/parasympathetic nervous system balance and much more,” she states. With this book, she puts power firmly back into our hands. We either nourish our gut or move closer to a state of disease with what we put in our mouth (typically three or even more times a day); this book provides both the how and why for restoring healthy gut function.

The most common physiological issues Campbell-McBride has seen in her GAPS patients are organized into chapters on bodily systems, where she discusses interactions with the gut, specific sources of toxins and their impact, which foods are most helpful and why, foods that are particularly damaging, the most common diseases that result and practical self-care practices that support and nourish the body’s natural healing process. Interspersed are real-life stories that inspire hope.

My favorite chapters are “Immune System” and “The Liver and the Lungs.” In “Immune System,” I was surprised to learn that “unhealthy gut flora is by far the main source of toxicity in our bodies.” No wonder the most important thing we can do is promote healthy gut flora! She also suggests that the term “contamination disease” more aptly describes what modern medicine calls “autoimmune disease” and challenges the idea that our bodies are attacking our own organs (which would not be intelligent); more likely, the body is addressing contamination from toxins in our environment and working hard to clean out disease-causing debris. What if instead of blaming our immune system, we could “reduce our exposure to toxicity and assist our immune system in removing it?”

In “The Liver and the Lungs,” Campbell-McBride discusses the important need for healthy saturated fats as well as offering a common-sense approach to asthma. Most of you may know that the liver needs saturated fats to stimulate bile production for proper fat digestion, and you probably even know that bile encapsulates toxins (heavy metals and parasites) and then flushes them out in the stool. But did you know that our lungs are the second most

important detoxifying organ? Not only do we expel gaseous toxins when we exhale, but immune cells in the lungs move debris up the breathing passages to be coughed out.

The book also has fascinating chapters on the endocrine system, the skeletal system, the brain and the urinary and reproductive systems. The fifty-page chapter titled “A-Z: GAPS Conditions in Alphabetic Order” addresses the most common chronic health conditions and how the GAPS nutrition protocol can help, providing a great reference. This is a value-packed volume that is well worth your time and attention! If you or someone you love is suffering, this book can provide life-changing hope and healing. A definite thumbs up!

Review by Kathy Frisch

For more information on Dr. Natasha Campbell-McBride’s first book, *Gut and Psychology Syndrome*, see the review on the WAPF website at westonaprice.org/book-reviews/gut-and-psychology-syndrome-by-natasha-campbell-mcbride/. You can also check out the review of her book, *GAPS Stories*, at westonaprice.org/book-reviews/gaps-stories-by-dr-natasha-campbell-mcbride/. For two interviews with Campbell-McBride, listen to *Wise Traditions* podcasts #5 (Jan. 17, 2016) and #391 (Oct. 31, 2022).

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All Thumbs Book Reviews

***Grow, Cook, Nourish:*
A Kitchen Garden Companion in 500 Recipes
By Darina Allen
Kyle Books**

This beautiful tome, worthy of display in even the most well-appointed farmhouse kitchen, is full of recipes (five hundred, to be exact) that manage to be exquisite and imaginative as well as richly nourishing. In fact, the word “nourish” is important enough to be in the title.

Grow, Cook, Nourish: A Kitchen Garden Companion in 500 Recipes is Darina Allen’s sixteenth book. She tells us in the introduction that it “may just be the most important one [she] ever write[s].” One gets a sense of the fierceness of her life’s passion when she divulges her message, “For God’s sake grow some of your own food and cook it.”

Allen has been compared to the likes of Alice Waters and Julia Child because of her immense talent for cooking dishes that spark the senses, as well as for inspiring others to do the same. With her husband she runs a world-renowned cooking school in Ireland, which is attached to a hundred-acre organic farm she has spent decades cultivating. Allen is committed to local organic produce and set up Ireland’s first farmers’ market. Apparently a prolific writer as well as an excellent cook and educator, she is the author of such books as *Forgotten Skills of Cooking* and *Irish Traditional Cooking*.

Allen recounts that as a child in Ireland in the 1950s and 1960s, gardens and orchards were common, and most people shopped at markets for fresh produce daily. After 1979, however, the surfeit of packaged foods at supermarkets meant that the quick-and-easy took precedence over the more involved (albeit more healthful and flavorful) recipes of past generations.

Allen wants to reverse this trend. She believes (as do WAPF members in general) that the modern diet is clearly connected to the rise

in chronic disease she has seen in her native country. A large part of her mission is carried out through a twelve-week course she conducts at her “Cookery School.” On day one, she shows her students the dark, rich, fragrant soil that has been enhanced by the compost made by the kitchen scraps and eggshells from happy hens. She shows that it is all connected—the eye-closing, tongue-tingling sensation that you get when fork meets mouth is not possible if the ground is not first tended with love, care and wisdom.

This hefty book, which includes luscious full-color photographs, is not just a list of ingredients and directions. It includes information on farm-to-table gardening and encourages even the apartment-dweller to get started with whatever space is available. We all have to start somewhere, we are reminded, and gardening is a lifetime pursuit. Even the most seasoned gardeners are learning with each passing year, with Mother Nature serving as the sometimes mercurial, often merciful, but always fascinating mentor of us all.

Examples of recipes in *Grow, Cook, Nourish* include: “Roasted Plums with Buffalo Mozzarella and Mint”; “Burmese Pork and Potato Curry”; “Carrot Marmalade”; “Corn and Scallion Pancakes with Roast Tomatoes, Bacon and Avocado Salsa”; “Lemon Verbena Marmalade”; and “Honey and Lavender Ice Cream.”

Thumbs up!

Review by Jennifer Grafiada



Allen almost called her magnum opus, “For God’s sake grow some of your own food and cook it.”

CORRECTION

In the Spring, 2023 journal article on the Mongolian eagle hunters by Hilda Labrada Gore, we stated that petroglyphs carved during the Bronze Age were 30,000-40,000 years old. The petroglyphs actually date from 3300 BC to 1200 BC.

All Thumbs Book Reviews



What Your Food Ate: How to Heal Our Land and Reclaim Our Health

By David R. Montgomery and Anne Biklé
W.W. Norton & Company

Montgomery and Biklé provide a tasteful foray into the history of “Where we got it wrong and how we could have gotten it right” with a review of Lady Eve Balfour’s 1943 book, *The Living Soil*. Lady Balfour saw a connection between agricultural practices and public health—a view at odds with most of the scientists of her day (this was before “scientific consensus”). She suspected that soil biology was a primary player in the health of the soil, and thus the plants, the animals, and yes, the people.

Amazingly, she turned her farm into the two-decades-long “Haughley Experiment.” Dividing the farm into three sections, she tested two independent variables—soil amendments and incorporation of animals—and compared organic and conventional farming. With attention to detail and twenty years of meticulous records, she contributed greatly to the science of soil health. Her initial suspicions were well-founded, with the pest resistance and superior food value of the organic sections with incorporated livestock providing compelling evidence. Fortunately, her contributions to understanding soil health and human health were recognized in her ninety-year lifetime. However, the persistent worldwide march to the bottom overran the solid evidence she produced.

Even before Lady Balfour, our founding farmers worried about the state of our country’s soil. Thomas Jefferson considered soil health to be an intergenerational trust belonging to all the people because “Civilization itself rests upon the soil.” *What Your Food Ate* provides abundant evidence to validate the statement that “Tillage directly kills soil life.” Again, this solid evidence goes against prevailing sentiment and has yet to “catch on.”

The authors provide extensive but interest-

ing reviews of literature. In the past, they show, researchers spent most of their efforts studying carbohydrates and proteins, while ignoring phytochemicals and the lifelong health-giving micronutrients.

Despite seeming to leave no stone unturned, the book reads like a gentle James Herriot account of insightful folks willing to swim against the tide to voice their observations and insights. For example, country doctor Lionel James Picton observed profound changes in the dietary habits of the people he served, and at age seventy-two, published his book, *Nutrition and the Soil: Thoughts on Feeding*. He was particularly concerned about white flour and the nutrient loss resulting from the milling process.

Mycorrhizal fungi were recognized at least as early as 1820 (though not named as such then) as a mysterious partnership of root and fungus. However, the prevailing “experts” shelved the findings about mycorrhizal fungi because. . . “What good could possibly come from germs?”

And what could possibly go wrong with making fertilizer from leftover ammunition? We may not have tossed the baby out with the bathwater, but we certainly “tossed out” vitamins, phytonutrients and vitamin C by subjecting plants to synthetic fertilizers. Plants make phenolic compounds in proportion to the carbon and nitrogen available to them. In other words, plants do more if we give them less! The “experts” are finally starting to realize that synthetic, nutrient-rich environments lead to decreased phytochemical production.

This was an enjoyable read and rich in content. It is also a must-read follow-up to Diana Rodgers’ and Robb Wolf’s book, *Sacred Cow: The Case for (Better) Meat*; Montgomery and Biklé unravel a plethora of science validating the superiority of grass-fed meat that seems not to have been available to Rodgers and Wolf. Two “thumbs up”.

Review by Mary Walkes

Thomas Jefferson considered soil health to be an intergenerational trust belonging to all the people.

All Thumbs Book Reviews

Fifty Years of Biodynamic Farming: Essays From the Field
Henning K. Sehmsdorf
S&S Homestead Press

Henning Sehmsdorf's *Fifty Years of Biodynamic Farming: Essays From the Field* is a delightful collection of essays written by Henning, his wife Elizabeth and various other authors who have worked or interned at their farm on Lopez Island in Washington state.

A native of Germany, Sehmsdorf grew up in post-WWI and lived through WWII. Despite this background, Sehmsdorf was, as he describes "seeded with experiences and impressions from which grew a deep sense of the irreducible goodness of life, and of the earth from which grow plants, animals, and nourishment, as sacred."

On moving to the United States at the age of nineteen, Sehmsdorf was appalled at the food system he found here. Working in a meat plant while attending community college, he was deeply affected by the conditions and the treatment of animals as well as the working conditions for the employees. Sehmsdorf resolved to eat only meat he grew ecologically himself. Ten years later, his dream became a reality. He and his wife now run S&S Homestead on Lopez Island, a self-sufficient and sustainable farm, managed using biodynamic practices, which not only feeds their family but their community as well.

Fifty Years of Biodynamic Farming is, you might say, a magnum opus of the experiences, knowledge and expertise they have gained along the way. The book is broken up into seven parts: Biodynamics, Living the Holistic High Life, Growing Plants, Growing Animals, Building Things, Economics and World View & Holistic Science.

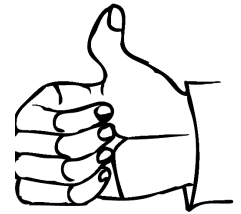
In Part I, Sehmsdorf explains biodynamics and its origins from the work of Rudolf Steiner. In 1924, Steiner gave eight lectures on agriculture, which would become the foundation for

biodynamics, as well as organic agriculture, regenerative agriculture and permaculture. In short, biodynamic farming is organic farming, but above and beyond organic as we know it. It encompasses: 1) the integration of animals to create a closed nutrient cycle; 2) the use of the astronomical calendar for planting, cultivating and harvesting; and 3) awareness of spiritual forces in nature. Sehmsdorf sums it up nicely by writing that biodynamics is "a practice of living and relating to nature in a way that focuses on the health of the bioregion, landscape, soil, plant, and human life and it promotes the inner development of each practitioner."

Throughout the succeeding sections, the author and other contributors expand upon the theory of biodynamics by showing the reader how it is put into practice through various areas of farming. In the essay, "Living the Holistic High Life," we are encouraged to eat whole foods as eaten by our ancestors, with principles that will be familiar to any WAPF member, including chemical-free whole foods, raw dairy, saturated fat from animal products, lactofermentation of dairy products and vegetables, and small amounts of raw meat.

In the essay, "Teach Your Children Well," Elizabeth Simpson (Sehmsdorf's wife) describes a delightful program they have undertaken at their homestead to introduce adolescents to agriculture and real food. Through this program they have been able to work with area public schools to get not only local produce in the school cafeteria, but even local grass-fed beef.

Part II of the book, "Growing Plants," covers such topics as pastoral versus industrial food production and advocates pasture-raised meats and animals raised well versus those raised in confinement. Simpson discusses the hazards industrial meat cause, not only for our own health but also the health of the animals



Simpson discusses the hazards industrial meat cause, not only for our own health but also the health of the animals and workers, as well as environmental, social and ethical concerns.

All Thumbs Book Reviews

and workers, as well as environmental, social and ethical concerns.

In another essay, “Medicinal Plants,” Sehmsdorf discusses various plants and herbs, along with their health benefits and preparation methods. There is an essay detailing starting up and managing a CSA, one on compost management, one on nutrient balancing in soil, another on seeds and one on starting up a garden-to-cafeteria program at the local elementary school. Another essay discusses the sacredness of sourdough bread.

In the section titled “Growing Animals,” various essays cover such topics as ecological livestock raising, biodynamic dairy and bee health. In “Ecological Livestock Raising,” Sehmsdorf presents the different breeds of animals they raise on their farm, and why. The essay explains why they choose heritage breeds versus more conventional breeds, such as passing on the ever popular Cornish Cross chicken and instead using a heritage breed chicken that perhaps produces less tender meat but that can free range and live life as a chicken should. He also compares and contrasts a conventional

industrial farm in Iowa with the well-known Polyface Farm in Virginia, where Joel Salatin and his family raise livestock using ecologically sound practices.

The section “Building Things” covers solo-powered irrigation, a strawbale house, and building a barn. In the essay titled “A Straw Bale House for a Sustainable Farm,” the author details building a house for the farm interns to live in that also encompasses the ideals of the S&S Homestead.

“Part VI; Economics” covers the ins and outs of maintaining a sustainable and viable family farm, with essays on home food security, marketing and stewardship.

And finally in the last section, “World View and Holistic Science,” Sehmsdorf discusses various theories of Steiner and Goethe, including plant morphology, color theory and teleology. Various essays evaluate the energy use of the S&S Homestead, its impact on the earth, as well as the spiritual aspects of farming, an often overlooked concept in agricultural circles.

If I must come up with any negative aspect to this collection of essays, it is one essay on food by Jenell Kvistad, where she seems to suggest that a vegetarian diet can provide all the necessary amino acids. WAPF members will likely be familiar with the fallacies of this idea.

By and large, this book is insightful and educational, a must-read for anyone wanting to farm or homestead, or looking to understand how farming, when done right, benefits us, the earth and the animals. I give it a very hearty thumbs up.

Review by Jacqueline Garcia

BOOK REVIEWS IN **Wise Traditions**

The Weston A. Price Foundation receives two or three books *per week*, all of course seeking a Thumbs Up review. What are the criteria we use for choosing a book to review, and for giving a Thumbs Up?

- First and foremost, we are looking for books that add to the WAPF message. Dietary advice should incorporate the WAPF guidelines while adding new insights, new discoveries and new therapies.
- We are especially interested in books on the fat-soluble vitamins, traditional food preparation methods and healing protocols based on the WAPF dietary principles.
- We look for consistency. If you talk about toxins in vaccines in one part of your book but say you are not against vaccines in another part of your book, or praise fat in your text but include recipes featuring lean meat, we are unlikely to review it.
- We do not like to give Thumbs Down reviews. If we do not agree with the major tenets expounded in a book sent to us, we will just not review it. However, we feel that we have an obligation to point out the problems in influential or bestselling books that peddle misinformation, and for these we will give a negative review. We also will give a negative review to any book that misrepresents the findings of Weston A. Price.
- If you want us to review your book, please do not send it as an email attachment. Have the courtesy to send us a hard copy book or a printout of your ebook or manuscript in a notebook or coil binding.

All Thumbs Book Reviews

Children's Books

***Farmhouse* (Ages 3–8)**

By Sophie Blackall
Little, Brown & Company

Bright and cheerful illustrations immediately capture the reader's attention in this recently published picture book by Sophie Blackall. An old farmhouse, well-loved by the family of fourteen who lives there, shows all the beautiful realities of family life: messes, meals together, disciplines, family chores, sicknesses and prayers. Blackall does a wonderful job of weaving a theme of hard work right alongside family love and support. One day, however, everyone grows up and leaves the farmhouse, which stands lonely and forgotten for a time, until a young woman unsuspectingly buys it. Finding the farmhouse still filled with pictures, wallpaper scraps, old chairs and an old stove, she feels compelled to honor it by creating a book about it: *Farmhouse*. In the back of the book, Blackall explains her story and how she purchased a farm in upstate New York that contained an old falling-down house. Upon discovering the relics of former days inside, she devoted time and effort to researching the family who had lived there and the area in which they lived. This combining of real-life events with a beautiful family story is the perfect blend for a family read.

***Christina Katerina & The Box* (Ages 3–8)**

By Patricia Lee Gauch
Illustrated by Doris Burn
Astra Publishing House

The amazing creativity of a child's imagination is the theme of this sweet book by Patricia Lee Gauch. One day, a refrigerator is delivered to Christina's mother, and immediately Christina begins to imagine what she can turn the great big cardboard box into, starting with a castle in which she and her neighbor friend play. After the box becomes worn down, Christina's

mother tries to throw it away. . . only to have Christina turn it into something else: a clubhouse. Throughout the book, the great big box continues to be transformed—played with and loved by Christina and her friend. Doris Burn's classic illustrations provide many details for the reader to look at and enjoy. Ultimately, Gauch captures the importance of allowing children to expand their imagination, conveying the fact that creative play is essential for their growth and development.

***Make Way For Ducklings* (Ages 3–8)**

By Robert McCloskey
The Viking Press

Robert McCloskey is the well-known author of many beautiful children's books, and his stories and illustrations don't disappoint! This particular book starts out with two mallard ducks who are searching for a place to live and nest. They fly all over busy parts of Boston but cannot find anywhere suitable until they spy an island in the middle of the Charles River. When the ducklings hatch, the family makes its way from their island home to the city in search of food. Naturally, they encounter many alarming things like cars and horns and people bustling about. However, when they capture the heart of a local policeman, he generously stops traffic for them so that they can safely return to their home on the river. McCloskey's sketch-type illustrations are breathtaking, and he does a fabulous job of showing not only respect for nature, but the importance for all of us to stop in the midst of our busyness to watch the beauty of nature around us.

Reviews by Katy Vander Woude



Tim's Video Reviews

***The Unseen Crisis:
Vaccine Stories You Were Never Told***
Epoch TV

https://www.theepochtimes.com/the-unseen-crisis-vaccine-stories-you-were-never-told-documentary_5240019.html

Brook Jackson was a clinical trial auditor for Ventavia, a contractor that managed trial data for Pfizer. In the course of her work, she noticed numerous examples of improper procedures and handling of data. This was supposed to be a blind trial, but it prematurely became very unblinded. She further discovered a large number of adverse event data being thrown out. When she tried to alert Pfizer to the problems, she got no response. Eventually she sent her information to the FDA. About six hours later, she was fired.

Doctor and Lt. Colonel Pete Chambers saw one heart attack during his military career up through 2020. Now he sees them all the time. As is often the case for those who notice awkward problems with vaccines, Dr. Chambers was fired by a man who later admitted that he was just “following orders” and Chambers was right. Chambers correctly pointed out that we are all in trouble if good men don’t start disobeying unlawful orders.

Brianne Dressen was an AstraZeneca clinical trial participant who was seriously injured by the vaccine. After being ignored by AstraZeneca and others, she received a call from the National Institutes of Health (NIH) and was flown to a facility where they knew exactly what was going on and how to treat it. They knew all about the microclotting and other adverse effects of the vaccines. Their treatment was completely effective, and she is now symptom-free and back to full health. Brianne is still not sure how she got so lucky as to get this treatment, but if you want it too, good luck.

The FDA has said it can’t possibly find a sign that something is wrong. Other agencies

act like they don’t know what you are talking about when you complain of adverse symptoms. They were able to spot the much smaller safety signals during Covid, but now the historically huge signals are invisible. Perhaps there is some lack of oxygen to the brain due to too much masking up? Or indulging in their own pharmaceutical products too enthusiastically? There are many possible explanations for the sudden descent into drooling stupidity. If Brianne is to be believed, this is not stupidity; this is part of a plan. There are other sources not covered in this video that confirm this to be the case.

But the Pfizer and Moderna jabs are effective, right? So, it’s worth the terrible risk? There is a clip of Pfizer representative Janine Small clearly saying there was no testing or verification of the vaccine’s ability to stop transmission before it went on the market. The claims of “95 percent effectiveness” refer to relative effectiveness, which means nothing. Absolute effectiveness, which is the number to look at, would never have passed FDA standards.

I know many consider *Epoch Times* to be the fount of all misinformation, but what I have covered in this review comes from videos of qualified people explaining what they know from firsthand experience. The thumb is UP.

Plandemic 3: The Great Awakening
Written and directed by Mikki Willis

I recently learned that a lot of people have never read George Orwell’s *1984*. A quote from Orwell appears at the beginning of *Plandemic 3: The Great Awakening*: “The most effective way to destroy people is to deny and obliterate their own understanding of their history.” I have joked in the past about growing up and being educated in the dark ages of the twentieth century, but to be slightly more serious, I really think the twenty-first century is shaping up to be the darker age, at least so far. Back in the day, history and civics were taught—not very well, but we did have to read *1984*. The quality of education seems to be just getting worse.

What is your most prized possession? Your home? Your car? A family heirloom? Your coin collection? What if I come along and say, “Nope. That’s all mine now.” Is that OK? Do you want to travel? What if I say you can only move about in the unlikely event that I give you permission? Is that OK? Do you like a good steak from time to time? Nope, you can eat bugs. Do you take some satisfaction in knowing that your people made life better for millions over the last century? What if I say you and your people have done nothing but evil and now you must pay? Is that OK? What if you have a healthy new child and I take *it* from you, telling you *it* is mine now, and I will indoctrinate, abuse and force medical treatment on *it* as I see fit. I use the pronoun *it* deliberately. That

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is the only pronoun you will need now. Is that OK? There is a word for all this—it's called communism. Who am I in this example? I am one of a small number of reptiles with no soul who run this communist government. I own everything, including you.

Plandemic 3 includes numerous excerpts from a talk given by G. Edward Griffin, who toured a communist bookstore when he was young and learned all about communist theory and strategies. His information is based on their own manuals and textbooks. What is their strategy? A first step is to isolate people. Social contact is a basic human necessity, not just a right. Lonely people will desperately accept stupid solutions if there is a hope of reconnection. Next steps include destroying religion and the traditional family. Chairman Mao tried to erase the distinction between male and female.

Communism so blatantly ignores human nature that it requires enormous power and complete control over the population if it is to have the slightest chance of being tolerated. It can't stand any competition from religions that might place a supreme being over government or from families that might take precedence over government edicts. Chapter two of the *Communist Manifesto* talks about the abolition of the family. Marx summed up the theory of communism in a single sentence—the abolition of private property. In 1943, a directive was put out to all communists in the U.S.—when “obstructionists” become too irritating, resort to name-calling (fascist, racist, Nazi, antisemite, hate group, etc.).

If these strategies sound familiar, they should. If you have stuck your head out of your cave in the last few years, you have seen all facets of these strategies in play. If you still don't get it, talk to older immigrants from formerly communist countries. They know what a communist take-down looks like, and they see it happening here. Several are interviewed in this video. If you stop by the World Economic Forum (WEF) website and check out Klaus Schwab's publicly displayed plans for the world, you will see that we are all scheduled to own nothing and be happy. Instead, the WEF promotes synthetic biology, artificial intelligence and technical manipulation of people. The Chinese social credit system is the role model for the world.

Why are governments jumping on board with this? Martin Armstrong explains in this video that most of them are broke. They know that when their people start losing their pensions along with everything else, they will storm the castles with pitchforks or whatever is handy. Schwab and his flying monkeys offer a solution that will at least temporarily placate the angry masses.

Among the younger crowd, Bernie Sanders has been one of the most popular politicians. Young people have been educated (conned) into believing socialism (the gateway drug to communism) is the perfect answer. It is all based on the big lie that everything can be free. Nothing is free. Pro-

ducing anything involves work, often hard work.

In a quick review of suppressed communist history, we see millions slaughtered and survivors so miserable they envied the dead. Why do Ukrainians hate Russians? During Soviet rule, the Soviets were desperate to prove to the world that communist countries could feed themselves. When they couldn't, they took Ukraine's food. Seven million Ukrainians starved.

Why should the Weston A. Price Foundation care about any of this? We care about health. Good health doesn't happen without good nutrition. Growing food is hard work and not for dummies. It does not and never will happen for free. The WEF dietary plan involves lab meat, bugs and kale. They can eat all the kale they want, I don't care. I will not be joining them. The only use I might possibly have for kale is the one suggested by JP Sears in his video of what to do when you run out of toilet paper. If you care about good health and nutrition, you will care about this.

If you haven't seen this information elsewhere, we see in the video that the second largest food producer in the world (the Netherlands) is essentially being shut down by overregulation, ostensibly motivated by climate concerns. Martin Armstrong doesn't say this in the film but has said elsewhere: “The push toward net zero emissions contains a sinister undertone—depleting our food supply. Ireland announced that they will murder 200,000 cows to adhere to Agenda 2030, ultimately reducing cattle by 10% in the coming years. This plan will cost Irish taxpayers \$213 million annually. The government claims it is voluntary *for now*, but that will depend on how many farmers adhere to this plan and abandon their livelihoods.” This is happening in many other Western countries, too. When they say “reduce emissions,” what they really mean is “reduce the food supply.” That's OK. We didn't need all that food anyway, right? We'll just eat bugs. This is all part of Agenda 2030, also known as communism.

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Some will say communism isn't really that bad or that we really aren't seeing the rise of communism. How do you know? Have you read *1984*? Have you read the *Communist Manifesto*? Have you read Solzhenitsyn? Have you talked to people from formerly communist countries? Do you think you know what you are talking about because you listen to lamestream media all the time?

Americans in general have been asleep. In a way, the crises (fake as they may be) have disrupted the great American slumber party, and many are beginning to tune in. This is the first step toward solving a problem. Wakey, wakey. You have to know about something before you can do anything about it. The more people know about it, the less likely it will happen. That is the goal of *The Great Awakening*. Thumbs UP.

A Good Death? The Midazolam Murders

Produced by Jacqui Deevoy

Ickonic

<https://rumble.com/v1dq083-a-good-death-documentary-about-involuntary-euthanasia-with-midazolam.html>

Assisted death, according to this documentary, is decided by the patient. Euthanasia is assisted death, but the decision is made by the doctor, sometimes over the strong objections of the patient or next of kin. Euthanasia—which has been legalized and is being promoted quite aggressively—is happening more and more frequently in the UK, especially if you are over age sixty. (If you are under age sixty, you are not necessarily safe, however; children with autism are also targets.) You may remember the movie *Logan's Run*, which was about a culture that ceremoniously executed everyone on their thirtieth birthday based on the belief that life was not worth living once you were that old. The apparent cutoff for tolerable quality of life may be sixty for now, but how long will it be until *Logan's Run* is not fiction? As I write this,

I'm sixty-three. Maybe I'm just lucky, but the last three years haven't been *that* bad.

Euthanasia used to be considered a crime, but the value of life has seen considerable deflation over the last hundred years, particularly in the medical/pharmaceutical industry. They have been putting out deadly potions for many years, but at least they were trying to be sneaky about it. They usually didn't kill you instantly. They could take a long time. And big pharma would get away with it. Nobody went to jail. Murder is legal if you do it slowly enough.

Just to spike the evil-meter a little more, this film shows that the UK's preferred method of giving someone the bum's rush out of this world is essentially prolonged torture. The drug cocktail includes midazolam and morphine. Midazolam creates a slow respiratory depression, which is not an easy death.

Why would hospitals be pushing euthanasia? Money. I know—shocking, right? Older, possibly terminal patients are expensive. They take up valuable room space, time and treatments. In countries with socialized medicine like the UK, Canada and others, their medical systems are overloaded. As Margaret Thatcher once said, the problem with socialism is that, sooner or later, you run out of other people's money.

I've heard that euthanasia is also becoming much more popular in Canada, and it has started creeping into the United States, with Oregon being the first state to decriminalize doctor-assisted deaths. I wonder if medical schools are offering courses on how to judge when it is appropriate to whack your patient. Just one more reason to add to the growing list of reasons to stay as far away from doctors and hospitals as much as you can. The thumb is UP for this video.

High Cholesterol is Healthy

Ken Berry, MD interview with David Diamond, PhD

https://www.youtube.com/watch?v=XfJNUbJE_V0&pp=ygUbaGlnaCBjaG9sZXN0ZXJvbCBpcyBoZWZsdGh5

Call the thought police! Someone is violating the sacred narrative again. This video contains several violations. Big pharma would probably like to give Dr. David Diamond a voice-ectomy for telling people that high LDL-cholesterol is not a threat to your health and familial hypercholesterolemia does not shorten life.

Statin drugs do lower cholesterol but increase coronary calcium. There is no evidence that the drugs extend life by more than a few days. That might be OK if there weren't serious side effects like cognitive impairment, muscle pain, diabetes and more. As Diamond notes, dying with lower cholesterol is not a successful outcome.

Statins have made a lot of money for the pharmaceutical industry.

Tim's Video Reviews

They are handing the drugs out like candy to children now. They have spent a lot of money on fake studies that crow about the relative risk reduction (which means nothing) and ignore the much more meaningful absolute risk figures, which show no significant benefit.

This is a good video to watch if you want to support your good health and not the health of the drug companies. The thumb is UP.

The Inside Effects: How the Body Heals Itself

Produced and directed by Keith Leon S.

<https://rumble.com/v2z833g-the-inside-effects-how-the-body-heals-itself.html>

There is a heresy out there which claims that drugs don't heal the body. The body heals itself! How does it do that? No one really knows, but we get some pointers on how to get the best results. Pharmaceutical companies keep people sick for profit. They would like to keep doing that indefinitely, so if you don't help them out, they will not be your friends, but you will live longer.

Another piece of advice we hear is never to let anyone tell you how long you have to live, even if he wears a white coat. Many people have been known to live up (or down) to their diagnosis. Tom Cowan wisely states that the best way to avoid a medical diagnosis is not to go to the doctor. That works 98 percent of the time. In cases of traumatic injury, our medical system usually works well.

We are also advised to be careful what we put in our mouths. We dig our own graves with our teeth. Food produced in a lab is not really food. If you eat something produced by people in white coats, it will probably lead you back to people in white coats.

Do viruses exist? Dr. Cowan answers that no virus particle has ever been found in tissue, fluid, feces, urine, spit, semen, plant, animal or human without first mixing it with other genetically rich material. Dr. Stefan Lanka demonstrated clearly that the widely accepted methods of isolating viruses do not work and prove nothing.

Many doctors have observed that people who, as a group, enjoy the best health results are those who are spiritually connected and at peace spiritually. Some say spiritual matters are outside the scope of science. I'm not sure I agree with that. Science might understand a lot more if so many scientists were not biased against all things spiritual. This video is not afraid to dive into the subject, and I give it a thumbs UP. ☺☺

Breast is Best.

But for those who can't, we recommend:

WAPF Homemade Baby Formulas

Developed by Dr. Mary Enig, with a PhD in nutritional sciences, and used successfully for twenty years.

- Safe and nutrient-dense.
- Raw Milk-Based formula developed to mimic human milk.
- Liver-based formula for those unable to consume milk.

<https://www.westonaprice.org/health-topics/childrens-health/formula-homemade-baby-formula>



Vaccination Updates

IF VACCINES ARE REALLY “SAFE AND EFFECTIVE,”
WHY WON’T EXPERTS ENGAGE IN A DEBATE?

By Kendall Nelson, Director, *The Greater Good*

In the not-too-distant past, notable proponents of vaccination willingly (albeit infrequently) engaged in public debates with critics of vaccination. These debates, typically between medical professionals and parents of vaccine-injured children, even took place on mainstream news platforms. Doctors would participate, perhaps because they assumed that parents’ limited scientific understanding would not pose a substantial challenge to their veneer of authority.

The landscape has since undergone a significant transformation. When advocates for vaccine awareness started bolstering their arguments with substantial evidence rather than relying solely on anecdotes, vaccine enthusiasts began steadfastly refusing to engage in public debates with any individual holding an opposing viewpoint.

In June 2023, podcast host Joe Rogan issued an invitation to Dr. Peter Hotez to debate Robert F. Kennedy, Jr. on his popular show. Predictably, Hotez refused. In April 2023, Kennedy—an environmental lawyer, writer and founder of Waterkeeper Alliance and Children’s Health Defense—had announced his candidacy as a Democratic candidate for the 2024 U.S. presidential election, and on June 15, he made a three-hour appearance on *The Joe Rogan Experience*.¹ Hotez, who serves as dean of the National School of Tropical Medicine at Baylor College of Medicine and as a professor of pediatrics and molecular virology and microbiology, has also been a guest on Rogan’s show as well as making frequent “expert” appearances on CNN and NBC during the Covid-19 events. Drawing from his experiences as a vaccine scientist and father of an autistic child, Hotez wrote the book *Vaccines Did Not Cause Rachel’s Autism* in 2018.

The topics of discussion proposed by Rogan would have encompassed vaccine safety and

Covid-related policies and protocols. To incentivize Hotez’s participation, Rogan even pledged to donate one hundred thousand dollars to a charity of Hotez’s choice.² The challenge gained significant traction on Twitter, with many pledging additional contributions; as of June 26, the total amount pledged had reached an impressive \$2.62 million. Despite this opportunity to channel funds toward charity, Hotez declined the debate, citing concerns about the format and the potential for Kennedy’s involvement to turn the conversation into a sensationalized spectacle like “the *Jerry Springer Show*.”³

Why do experts like Hotez, reportedly committed to educating the public about vaccination’s benefits and importance, consistently reject opportunities to engage with opponents? If the scientific foundation of vaccination were as firmly established and evidence-based as they allege, we would expect them to embrace public debates as a means of communicating their message to vaccine-hesitant parents and a broader audience. However, the mastery of facts and science on display in Kennedy’s conversation with Rogan demonstrated that figures like Hotez and vaccine enthusiast Paul Offit might have a tough time convincing the public of the merits of their soundbite claims if put to the test.

Let’s take a deeper look at some of the elements of Kennedy’s wide-ranging conversation, in which he emphasized the importance of conducting thorough and scientifically valid safety testing for vaccines and the need for increased transparency from the agencies that approve and recommend vaccines.⁴

MERCURY LAUNCHES A JOURNEY

Kennedy began by describing his transition from successful litigator against environmental polluters to his involvement in challenging the pharmaceutical industry and regulatory agencies on the issue of mercury in vaccines. His interest in the vaccine topic emerged when a group of “respectful but vaguely scolding” mothers urged him to delve into the scientific research surrounding the impact of mercury-containing vaccines on children’s neurological health. One particular mother, Sarah Bridges, whose son had suffered a severe vaccine reaction that resulted in autism, arrived at Kennedy’s doorstep with an eighteen-inch thick stack of scientific papers and refused to leave until he read them. Intrigued, Kennedy put his analytical skills to use and discovered a significant disparity between what public health agencies were proclaiming about vaccines and mercury safety and what peer-reviewed studies actually revealed. This raised serious questions in his mind about the transparency and accuracy of the information disseminated to the public.

After examining the evidence, he found that the concerns of mothers

of vaccine-injured children were well-founded, despite attempts by public health authorities to dismiss the women as “crazy.”

Compelled to address the issue further, Kennedy sought an audience with top regulators and, to his dismay, found them ill-informed about the science. When they could not answer his questions, they directed him to Dr. Paul Offit—director of the Vaccine Education Center at Children’s Hospital of Philadelphia and a vaccine co-inventor and pharmaceutical industry insider. In a candid and unsettling phone conversation, Offit attempted to persuade Kennedy that the type of mercury used in vaccines, ethylmercury, was not harmful (while acknowledging the dangers of methylmercury, the form of mercury found in fish), but Kennedy was already aware that “there is no such thing as a good mercury” and that mercury is about one thousand times more neurotoxic than lead. Over time, Kennedy’s careful reading of the science made him an expert on the subject of mercury and vaccines, culminating in the publication of his 2015 book, *Thimerosal: Let the Science Speak*.⁵

During his interview with Rogan, Kennedy provided some historical context about Eli Lilly’s 1932 decision to use thimerosal in vaccines.⁶ Thimerosal is approximately 50 percent ethylmercury by weight, and when the company introduced it as a vaccine preservative, mercury’s dangers already were well-known. In his conversation with Kennedy, Offit defended the use of ethylmercury in vaccines by referring to a 2002 study conducted by Michael Pichichero and colleagues.⁷ Estimating that ethylmercury has a shorter half-life (approximately seven days) than methylmercury, Pichichero claimed that there was no evidence of ethylmercury accumulation from repeated exposures to thimerosal; other researchers subsequently observed that Pichichero had left “no margin of safety if there were other sources of mercury exposure as well.”⁸ Kennedy handily disputed Offit’s assertions by pointing to a National Institutes of Health (NIH) study published in 2005 by Thomas Burbacher and colleagues.⁹

That study provided clear evidence that while thimerosal may leave the bloodstream within a week, it can then enter the brain—contrary to what vaccine promoters assert—leading to serious inflammation.

THE CONSEQUENTIAL 1986 ACT

During the Rogan podcast, Kennedy demonstrated his in-depth understanding of the significance of the 1986 National Childhood Vaccine Injury Act, a law that acknowledges the reality of vaccine-related injuries and fatalities.¹⁰ At least some of those involved in the Act’s passage had good intentions and established a modest mechanism to compensate victims of vaccine injuries, called the National Vaccine Injury Compensation Program (NVICP).¹¹ However, the Act’s principal outcome—complete immunity from legal responsibility for the pharmaceutical industry—was consequential. The Act and a subsequent U.S. Supreme Court decision (*Bruesewitz v. Wyeth*) shield vaccine manufacturers from legal liability for any harm resulting from their products, even in cases where instances of negligence are proven; nor can individuals harmed by vaccines hold pharmaceutical companies accountable for design flaws or their failure to enhance the safety of approved vaccines.¹² As Kennedy articulated, the Act constituted a “gift” to the vaccine in-

HEALTH FREEDOM DEFENSE FUND

Health freedom is one of our most sacred and cherished rights but threats to that freedom have occurred with increasing frequency over the past few years. Health Freedom Defense Fund was founded to protect those fundamental rights and is honored to have the Weston A. Price Foundation’s support in pursuing our mission.

HFDF furthers the cause of health freedom through litigation and to that end we have filed many lawsuits strategically focused on resisting infringements of our rights by government, businesses, schools and other organizations. Our biggest success was a lawsuit striking down the federal travel mask mandate but the Department of Justice is appealing as the CDC wants the right to mask you again, absent scientific justification.

Any funds donated will go to advancing the litigation underway. Some of the critical lawsuits your donation will support would be:

- DOJ’s appeal of HFDF’s federal travel mask mandate lawsuit
- HFDF’s lawsuit challenging the Los Angeles Unified School District vaccine mandate
- In process lawsuits against Pfizer and FDA

Donate to HFDF at: healthfreedomdefense.org/

Each time the CDC adds a vaccine to the child and adolescent vaccine schedule, it is akin to “printing a billion dollars.”

dustry. “No matter how negligent you are, no matter how reckless your conduct, no matter how toxic the ingredients, or shoddily tested or manufactured the product, no matter how grievous the injury. . . you cannot be sued,” he told Rogan.

Kennedy also shed light on the significant shortcomings of the Vaccine Adverse Event Reporting System (VAERS), a passive surveillance system, pointing to a Harvard study commissioned by the Department of Health and Human Services (HHS), which estimated that VAERS captures 1 percent or less of adverse reactions and deaths related to vaccines.¹³ This stands in sharp contrast to official assertions that vaccine injuries are exceedingly rare. Reporting systems like VAERS depend heavily on voluntary submissions from health care practitioners or individuals, creating a database that is both fragmentary and biased. Underreporting erodes the possibility of accurately gauging the frequency and severity of vaccine adverse events after a vaccine goes to market.

As of August 2023, the NVICP had disbursed approximately five billion dollars to individuals harmed by vaccines.¹⁴ Even so, these figures represent a fraction of the actual damage caused by vaccines, as only one out of every three petitioners eventually receives any compensation.¹⁵

DOLLARS OVER SAFETY

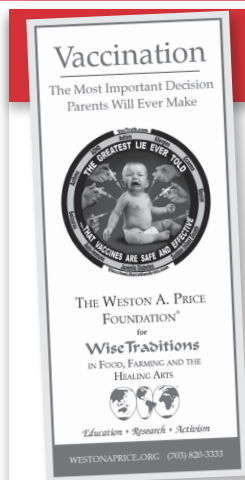
After effectively highlighting the vaccine industry’s lack of incentive to prioritize safety, Kennedy told Rogan that a staggering seventy-

six million American children are compelled to receive the industry’s products annually, with many vaccines mandated for daycare and school attendance. According to Kennedy, each time the Centers for Disease Control and Prevention (CDC) adds a vaccine to the child and adolescent vaccine schedule, it is akin to “printing a billion dollars.”

He also pointed out that no childhood vaccine has ever undergone testing against an inert placebo; instead, the comparison is with another vaccine or vaccine compound.¹⁶ Moreover, manufacturers, not the government, conduct vaccine clinical trials. This makes it valid to inquire about the fairness and autonomy of the trials and raises legitimate doubts about the credibility of individuals like Hotez who claim proven safety and effectiveness. Moreover, no studies have ever appraised the cumulative impact of the childhood vaccine schedule.¹⁷ What happens when a child receives nine injections targeting thirteen diseases by the age of fifteen months?¹⁸ Although the studies have not been done, research has, in fact, demonstrated a dose-dependent relationship between the number of vaccines administered concurrently and the likelihood of subsequent hospitalization or death.¹⁷

TOTALITARIAN LIES

One of Kennedy’s key take-home messages is that “Trusting the experts is a function of religion and totalitarianism; it’s not a function of science or democracy.” Nowhere has this been more apparent than in the inconsistent



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positions and lies of top officials regarding Covid. Notably, Dr. Anthony Fauci, as Chief Medical Advisor to the President, initially—and inaccurately—assured the public that the vaccines would prevent illness and that a single dose would be adequate. To this day, the CDC still recommends the Covid-19 injections, even though its own underreported VAERS database had documented, by mid-August 2023, over one and one half million adverse reactions related to the shots, including almost thirty-six thousand deaths.¹⁹

Speaking before the Arizona State Legislature in May 2023, cardiologist Dr. Peter McCullough stated that the Covid injections may, in fact, have been responsible for as many as two hundred seventy-eight thousand American deaths in 2021 alone.²⁰ The CDC’s reported figure for deaths associated with receiving a Covid-19 shot during the same time frame is nine thousand. In a Substack article from early July 2023,²¹ McCullough also discussed a systematic review he co-authored with Hulscher and other colleagues, reviewing the autopsy findings of individuals who died subsequent to Covid-19 injection.²² Out of three hundred twenty-five cases studied, they determined that the vaccine was the cause of death for about 74 percent, predominantly due to injuries to the cardiovascular system such as myocarditis (heart muscle inflammation) and pericarditis (inflammation of the outer lining of the heart).

The CDC knew early on of the myocarditis risk in young males following Covid injections but intentionally withheld this information from the public for several months.²³ The CDC now concedes that both the Pfizer/BioNTech and Moderna/NIAID injections have led to myocarditis and pericarditis among “vaccinated” adolescents and young adults,²⁴ with the heart problems commonly arising after the second dose and within a week of injection.²⁵ A bombshell study published in January 2022 by authors from the CDC, FDA and several prominent U.S. universities and hospitals revealed that the risk of heart disease was 13,200 percent higher in “vaccinated” individuals compared to those who had not received the shot, equating to a risk of myocarditis approximately one hundred thirty-three times greater than the baseline risk

for the general population.^{26,27} A whistleblower from the U.S. Department of Defense provided similar information to Republican Senator Ron Johnson from Wisconsin, describing significant injuries among American military personnel due to Covid-19 injections and a notable 130 percent rise in cases of myocarditis.²⁸

Nevertheless, officials continue to make misleading statements about the shots’ side effects. As described in the *Epoch Times*, prominent CDC official Dr. Tom Shimabukuro falsely stated in April 2023 that his agency had not identified an ischemic stroke safety signal for the original Pfizer and Moderna Covid-19 shots, even though documents from May 2022 showed the contrary as well as pointing to other safety signals.²⁹ The CDC has also disregarded a 2023 study suggesting that repeated Covid-19 injections may have a detrimental effect on the immune system and make recipients vulnerable to cancer.³⁰

The likelihood of transparency from the CDC about the injections’ ineffectiveness and dangers appears low. Responding to the House Select Subcommittee on the Coronavirus Pandemic on June 13, 2023, Dr. Rochelle Walensky skillfully evaded numerous inquiries regarding the federal government’s handling of Covid-19.³¹ Walensky, whose tenure as CDC director concluded two weeks later, defended federal actions across the board, including those related to school closures, media censorship, masking, and nursing home protocols. In her opening testimony, Walensky not only emphasized CDC and Covid-19 “vaccine” successes but advocated for increased funding and expanded CDC powers.

For his part, Rep. Brad Wenstrup (R-Ohio), chairman of the subcommittee, reminded attendees of Walensky’s March 2021 comment that “Our data from the CDC today suggests. . . that vaccinated people. . . don’t get sick,” noting that a CDC spokesperson had to retract those remarks three days later.³² Moreover, emails acquired through a Freedom of Information Act (FOIA) request confirmed that Walensky and other top officials knew by January 2021 that injected individuals were becoming sick but said nothing to the public.³³

Dr. Mandy Cohen, Walensky’s successor as CDC director, has shown that she is fully aligned with the agency’s contentious Covid policies. As the Health Secretary for North Carolina from 2017 to 2021, she ardently supported the stringent Covid lockdown measures, mask mandates and other restrictions.³⁴

In a June 2023 Brownstone Institute article titled “Pandemic Leaders Were Biodefense Puppets and Profiteers,” Debbie Lerman explains why it doesn’t really matter who is in charge at the agency level.³⁵ Emphasizing that the “military-intelligence-biodefense leadership”—and not public health experts—was in charge of Covid policies, Lerman argues that public health officials acted in lockstep because they were doing what they were told to do: “They were performing the role that the leaders of the national security/biodefense response gave them: to be the trusted public face that made people believe quarantine-until-vaccine was a legitimate public health response.”

At the actual helm of pandemic policy and planning were the National Security Council and the Department of Homeland Security, operating under the “auspices” of the White House Task Force. According to

His findings pointed to a significant association between thimerosal and autism and other neurological disorders, with a staggering 1,135 percent elevated risk of autism in babies who received the hepatitis B shot within the first thirty days of life versus babies who received it later or not at all.

Lerman, the Covid “catastrophe” must be understood as “an international counterterrorism effort focused myopically on lockdowns and vaccines, to the exclusion of all traditional and time-tested public health protocols.” She further warns, “This ‘public-private partnership’ of bioterrorism experts and vaccine developers is not interested in public health at all, except as a cover for their very secret and very lucrative biowarfare research and countermeasure development.”³⁵

CENSORSHIP THEN AND NOW

During Kennedy’s appearance on Rogan’s show, Rogan inquired about the issue of censorship, and Kennedy reminded him that governments have withheld critical information from the public throughout history. A notable example occurred twenty-three years ago when prominent public health officials from the CDC, FDA and World Health Organization (WHO), along with vaccine manufacturers and scientific experts, discreetly convened at the secluded Simpsonwood Retreat and Conference Center in Georgia. The gathering’s ostensible purpose was to analyze and deliberate on vaccine safety data, and specifically to examine data on the potential link between thimerosal and pediatric neurological disorders. At the time, the nation was witnessing a dramatic fifteenfold increase in childhood autism rates, with autism affecting one in one hundred sixty-six children.³⁶

As recounted by Kennedy, a CDC epidemiologist named Thomas Verstraeten undertook a meticulous analysis of the agency’s extensive database, which encompassed the medical records of one hundred thousand children. His findings pointed to a significant association between thimerosal and autism and other neurological disorders, with a staggering 1,135 percent elevated risk of autism in babies who received the hepatitis B shot within the first thirty days of life versus babies who received it later or not at all. According to Kennedy, “they knew,” but the CDC opted to “embargo” this information and keep it hidden from parents.

In 2014, the CDC suppressed its own data and ensured retraction of a reanalysis identifying a plausible connection between timely measles,

mumps and rubella (MMR) vaccination and an escalated risk of autism, particularly in African American boys, who exhibited a 336 percent higher likelihood of developing autism.³⁷ As a result of its suppression and inaction, the CDC now reports an autism rate of one in thirty-six American children—and, in some states, one in twenty-two boys.³⁸ As an indicator of the rapid surge in autism, demand has increased by more than 4,000 percent for Applied Behavior Analysis services (an autism therapy) since 2010.³⁹ Delving into the correlation between autism and the increasing number of vaccines on the CDC’s childhood schedule, Kennedy observed that autism essentially did not exist during his own childhood. “I bet that you’ve never met anybody with full-blown autism your age,” he said to Rogan. “You know, head banging, football helmet on, non-toilet-trained, nonverbal. I mean, I’ve never met anybody like that my age.”

After the fabricated 1976 swine flu outbreak—when an expedited vaccine led to four thousand Americans claiming three and a half billion dollars in compensation for neurological damage and death—the television show *60 Minutes* aired a scathing exposé.⁴⁰ In 1982, NBC ran the Emmy-Award-winning documentary *DTP: Vaccine Roulette*, which shed light on forty years of harm experienced by children who received the diphtheria, tetanus and whole-cell pertussis vaccine.⁴¹ Sadly, that type of mainstream reporting has long since ceased to occur, and such films are no longer permitted on U.S. television. The norm has shifted toward pervasive censorship across mainstream and social media platforms.

Kennedy is all too aware of this problem, having not just been banned from numerous platforms but also subjected to character assassination, with the media only too ready to label him a “conspiracy theorist.”⁴² Examples of this media tactic include NBC’s “The conspiracy candidate: What RFK Jr.’s anti-vaccine crusade could look like in the White House”⁴³ and the *New York Times*’ mischaracterization of Kennedy’s comments on Capitol Hill after he was invited to testify about the government’s campaign to suppress contrarian speech on Covid, vaccines and other topics.⁴⁴

Kennedy recognizes the fact that in addition to the media, censorship involves a complex network of influential entities—big money, big tech, the pharmaceutical industry and government institutions, among others—all collaborating to suppress what they call, in Orwellian manner, “misinformation.” He is challenging censorship in one of two lawsuits that recently were consolidated: *Kennedy et al. v. Biden et al.*, a class action suit,⁴⁵ and *Missouri et al. v. Biden et al.*, brought by former Missouri Attorney General Eric Schmitt and Louisiana Attorney General Jeff Landry.⁴⁶ These lawsuits allege that the government collaborated with social media platforms to censor online speech, a violation of the First Amendment.⁴⁷ The allegations involve a significant number of federal agencies and officials, including high-ranking individuals in the White House. The lawsuits’ primary objective is to address the censorship of information related to Covid-19, measures against Covid and election integrity.⁴⁸ Remarkably, Mark Zuckerberg, chairman of Facebook and Meta, admits that government officials asked him to censor accurate Covid information on his platforms.⁴⁹

Even artificial intelligence (AI) has been programmed to censor information. It also blatantly lies, as proven in an exchange with Harvey Risch, a senior scholar at the Brownstone Institute. When Risch asked “rebbe.io” about studies that showed hydroxychloroquine was beneficial for the treatment of Covid, the AI gave false information. After Risch challenged the program with a series of follow-up questions, the AI finally “apologized” and gave the correct study details.⁵⁰

Censorship poses significant dangers to a free and democratic society, hampering the free flow of ideas, stifling intellectual discourse and restricting individuals’ ability to access diverse perspectives—limiting their ability to make informed decisions and form independent opinions. Censorship can also lead to the manipulation and distortion of scientific information, with those in power controlling and shaping narratives to serve their own interests. Fundamentally, censorship undermines transparency, accountability and freedom of expression—the pillars of a thriving democracy—threatening individual liberty, societal progress and the pursuit of truth.

WHAT ABOUT THE CHILDREN?

In the interview with Rogan, Kennedy observed that America spends a colossal 4.3 trillion dollars on health care each year yet finds itself saddled with one of the highest disease burdens globally, trailing behind nations like Cuba and Mongolia. He warned that this is leading us to the brink of bankruptcy. Displaying his long-standing and deep concern for the health of American children, he highlighted the disconcerting rise in chronic illness concurrent with the increased number of vaccines on the CDC schedule—from an already high 12.8 percent of children with chronic diseases in 1994 to a staggering 54 percent of children by 2011.⁵¹ A 2023 study revealed that in developed countries—which administer the highest number of vaccine doses to infants—there is a significant correlation between number of doses received and childhood mortality.⁵²

Rogan asked Kennedy why he was running for President. Kennedy replied, “I’m going to try to help these children.” Speaking of the parents of vaccine-injured children, he added, “I’m here for those parents,” and movingly described friends whose children are vaccine-damaged. “They’ll never hold a job or pay taxes. They’ll never write a poem. They’ll never throw a baseball. They’ll never go out on a date with a girl or a boy. And they’ll never serve in the military.” He also expressed his goal to “unify” the people and “save this country.”

Discussing the pharmaceutical industry’s influence over the regulatory bodies tasked with safeguarding public health, Kennedy confidently stated, “I know how to unravel corporate capture.” He emphasized the necessity of severing financial ties, pointing out that a significant portion of the FDA budget comes from industry user fees and noting that the CDC allocates nearly five billion dollars annually to purchase and promote vaccines.⁵³ He also shed light on NIH policies that allow employees who develop vaccines to “pocket” sizable royalties—up to one hundred fifty thousand dollars annually and indefinitely. Indeed, records obtained through a FOIA request indicate that pharmaceutical companies paid NIH scientists, including Fauci, three hundred twenty-five million dollars in roy-


Censorship can lead to the manipulation and distortion of scientific information, with those in power controlling and shaping narratives to serve their own interests.

alties from September 2009 to October 2020.⁵⁴

Kennedy frequently points out that well-known pharmaceutical companies like Merck and GlaxoSmithKline are “serial felons” that have paid criminal penalties and settlements amounting to billions of dollars; their offenses include committing research fraud, manipulating drug safety studies, not disclosing safety concerns, engaging in bribery and kickbacks and putting forth false advertising.⁵⁵ Noting that the U.S. is one of only two countries to allow direct-to-consumer pharmaceutical advertising on television, Kennedy told Rogan that on his first day in office as President, he would issue an executive order to prevent big pharma from dictating media content.

VULNERABLE TO DEFEAT

Regarding the prospect of a debate with Hotez, Kennedy has expressed his full willingness to participate, recognizing the reality that scientific debate can nurture an atmosphere where critical thinking flourishes. It can also motivate researchers to meticulously scrutinize their evidence and theories. Genuine innovations and advances cannot arise without the exchange of contrasting perspectives and the willingness to challenge established beliefs. This process of rigorous debate and assessment can help pinpoint shortcomings, inaccuracies or gaps in existing knowledge while minimizing potential biases.

As proponents of vaccination repeatedly turn down invitations to debate and instead engage in censorship and condemnation, they display their blatant disregard for open dialogue and truth. Their actions also make plain the fact that they dare not engage in scientific discourse because their confident assertions of safety and efficacy are not grounded in genuine science—and the fragility of their evidence base renders them vulnerable to defeat in any debate. Ultimately, their actions will lead to their own undoing. 

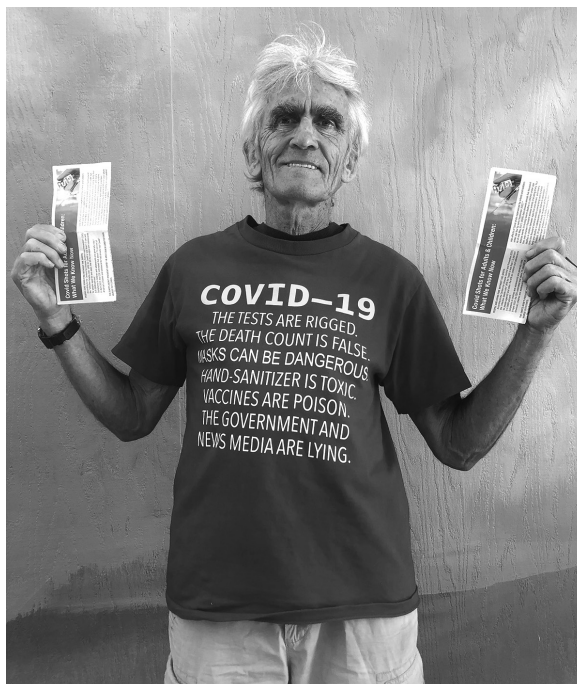
Kendall Nelson is a documentary filmmaker actively engaged in directing, producing and distributing media that matter. With over twenty years of television and film experience, Nelson's lifelong commitment is to bring about

awareness through her work, including advocating health freedom, simple living and real food. She is an Idaho chapter board member of the International Women's Forum.

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Courageous WAPF member Dudley went on a run with sixteen thousand other runners while handing out WAPF's leaflets about the Covid shots and wearing a specially made T-shirt that said: “Covid-19: The tests are rigged. The death count is false. Masks can be dangerous. Hand sanitizer is toxic. Vaccines are poison. The government and news media are lying.”

Lab Report

VALUES FOR THE FAT-SOLUBLE ACTIVATORS

By Sally Fallon Morell

In order to add to our knowledge about the fat-soluble activators, vitamins A, D and K₂, the Weston A. Price Foundation submitted thirty samples of animal fats or fatty animal foods for analysis. Eurofins analyzed the samples for vitamins A and K₂ (MK-4) and Heartland Assays analyzed the samples for vitamin D.

In addition to butter and egg yolks from several sources, plus various meat and bird fats, we tested four brands of cod liver oil: Green Pasture, Nutrapro, Rosita and Vassberg.

In many ways, the results confirmed our general knowledge about the food sources of these activators, but there were some surprises.

VITAMIN A

Eurofins reported the results to us as micrograms per gram as well as International Units (IU) per gram. We tested for retinol only. Here we report the values in IU per gram as well as the amounts per average serving (in grams), which is probably a more useful value for planning nutrient-dense diets. See Table 1.

It is clear that liver is our best source of vitamin A, with pastured chicken livers a clear winner. Conventional chicken livers contained one-third the value of pastured livers. But liver (including foie gras) and cod liver oil head the list, followed by butter.

Values for butter ranged from 288 to 486 grams per fifteen-gram serving (one tablespoon). Irish butter (Kerrygold brand) headed the list followed by grass-fed from a small farm in New Zealand. Surprisingly, conventional Food Lion butter

TABLE 1: VITAMIN A FOOD	Vit A IU/g	Serving Size (g)	IU/ Serving
Chicken livers, pastured	444	30	13,320
Cod liver oil, V	2610	5	13,050
Cod liver oil, NP	1130	5	5650
Chicken livers, conventional	154	30	4620
Foie gras	57.4	30	1722
Cod liver oil, GP	280	5	1400
Cod liver oil, R	244	5	1220
Butter, Irish	32.4	15	486
Butter, raw grass-fed	29.6	15	444
Butter, New Zealand	27.5	15	413
Butter, Food Lion	24.4	15	366
Ghee	19.3	15	290
Butter, organic	19.2	15	288
Egg yolks, pastured	17.9	15	269
Egg yolks, Vital Farms	17.4	15	261
Egg yolks, conventional	17	15	255
Egg yolks, organic	14.8	15	222
Bear fat, JC	14.3	15	215
Bear fat, BP	4.99	15	75
Butter oil	23.7	2.5	59
Lard, Armour	3.41	15	51
Tallow, white	3.28	15	49
Tallow, yellow	3.08	15	46
Goose fat	2.56	15	38
Lamb fat	2.02	15	30
Caviar	1.01	30	30
Duck fat, d'Artagnan	1.86	15	28
Lard, pastured	1.48	15	22
Emu oil, Walkabout	2.46	2.5	6
Duck fat, Epic	0	15	0

In many ways, the results confirmed our general knowledge about the food sources of these activators, but there were some surprises.

was not far behind with a value of 366 IU per tablespoon. The vitamin A no doubt came from vitamin A in the feed, and not from green grass. The lowest value for butter was organic butter at 288. Nevertheless, the range in values for butter is less than one order of magnitude, so it is clear that butter, any butter, is a good source of vitamin A.

After butter come egg yolks, with values ranging from 222 to 269 IU per average yolk. Pastured yolks had the highest value, organic yolks the lowest. Still, the range of values is

small, and we can be assured of getting vitamin A from any egg yolk.

Lard, tallow, lamb fat and poultry fats are not good sources of vitamin A.

VITAMIN D

Results for vitamin D are shown in Table 2. All brands of cod liver oil provide vitamin D in high amounts. Other good sources are caviar, conventional lard and foie gras.

Surprisingly, there was far more vitamin D in conventional lard than in pastured lard. Likewise with the egg yolks, the highest amount was in conventional yolks. These values no doubt reflect vitamin D in the feed. It would be interesting to test pastured and conventional egg yolks, and

TABLE 2: VITAMIN D FOOD	Vit D IU/g	Serving Size (g)	IU/ Serving
Cod liver oil, V	122.5	5	613
Cod liver oil, NP	112.5	5	563
Caviar	11.6	30	348
Cod liver oil, R	56.38	5	282
Cod liver oil, GP	43.7	5	219
Lard, Armour	9.64	15	145
Foie gras	3.55	30	107
Egg yolks, conventional	4.16	15	62
Egg yolks, organic	3.63	15	55
Egg yolks, pastured	3.38	15	51
Egg yolks, Vital Farms	2.22	15	33
Duck fat, D'artagnan	2.08	15	31
Chicken livers, pastured	1	30	30
Duck fat, Epic	1.13	15	17
Lard, pastured	1.59	15	9
Emu oil, Walkabout	3.44	2.5	9
Goose fat	0.47	15	7
Tallow, yellow	0.36	15	5
Ghee	0.22	15	3
Tallow, white	0.19	15	3
Butter, Irish	0.11	15	2
Butter, Food Lion	0.11	15	2
Lamb fat	0.11	15	2
Butter, New Zealand	0.04	15	1
Butter, organic	0.09	15	1
Butter oil	0.22	2.5	1
Chicken livers, conventional	0	30	0
Butter, raw grass-fed	trace	15	0
Bear fat, JC	0	15	0
Bear fat, BP	0	15	0

TABLE 3: VITAMIN K, FOOD	Vit K ng/g	Serving Size (g)	ng/ Serving
Goose fat	879	15	13,185
Duck fat, D'artagnan	860	15	12,900
Emu oil, Walkabout	3870	2.5	9675
Duck fat, Epic	509	15	7635
Egg yolks, Vital Farms	484	15	7260
Egg yolks, organic	483	15	7245
Butter, Irish	286	15	4290
Foie Gras	140	30	4200
Egg yolks, conventional	255	15	3825
Butter, Food Lion	239	15	3585
Butter, organic	234	15	3510
Chicken livers, pastured	109	30	3270
Lamb fat	204	15	3060
Butter, New Zealand	198	15	2970
Ghee	192	15	2880
Chicken livers, conventional	88	30	2650
Tallow, yellow	142	15	2130
Butter, raw grass-fed	174	15	2010
Egg yolks, pastured	109	15	1635
Tallow, white	65	15	975
Lard, Armour	50	15	750
Lard, pastured	42	15	630
Caviar	20	30	600
Cod Liver Oil, GP	90	5	450
Bear fat, JC	20	15	300
Bear fat, BP	20	15	300
Cod Liver Oil, NP	40	5	200
Cod Liver Oil, R	40	5	200
Butter oil	70	2.5	175
Cod Liver Oil, V	30	5	150

pastured and conventional lard for vitamin D activity using the Rat Assay Test at the University of Wisconsin. This test uses live rats to determine whether a particular source of vitamin D has true vitamin D activity in supporting healthy, strong bones. These tests are very expensive, but according to vitamin D expert Hector Deluca, laboratory analyses are of little value in determining the vitamin D activity of a food.

Egg yolks and duck fat are also good sources of vitamin D, but butter and other animal fats tested low.

VITAMIN K₂

All foods tested contained vitamin K₂, even cod liver oil, but the clear winners are bird fats—goose fat, emu oil and duck fat. Egg yolks, butter and chicken livers are also good sources, as are lamb fat and yellow beef tallow.

Several of the foods tested scored much lower than results we obtained several years ago from Vita K Laboratories in the Netherlands.¹ (This lab has since closed.) For example, butter oil tested three to eleven times higher in vitamin K₂ at Vita K Laboratories. Also, we obtained surprisingly low levels on bear fat, reputed to be extremely rich in vitamin K₂. Australian emu oil tested three times lower than reported by the manufacturer (see page 34). Obviously, more testing is needed.

COD LIVER OIL

An interesting discovery was lower levels of vitamin D in the two brands of cod liver oil that we know are not heat treated—Green Pasture and Rosita. We believe that Vassburg cod liver oil is extracted at a rendering plant in Alaska; in other words, it is a heat extraction. On its website, the manufacturer assures its customers that vitamins A and D in the product are naturally occurring.

As for Nutrapro, the ratio of vitamin A to vitamin D is almost

exactly ten to one, a sure sign that these are synthetic vitamins added after molecular distillation processing. WAPF will be withdrawing its recommendation for this brand.

FOIE GRAS AND EGG YOLKS

A surprising finding was the high levels of all three activators in *foie gras* (fatted liver of duck or goose). No wonder epicures value this food! For the rest of us, the food with the best balance of A, D and K₂ is egg yolks, both pastured and conventional. This makes egg yolks a perfect weaning food for baby, and eggs (with an emphasis on the yolks) a wonderful food at all stages of life.

VITAMIN TESTING

Vitamin testing is not an exact science, and levels in various foods can vary according to the time of year, the amount added to feed and even the particular sample. And some technicians are more skilled at extracting all the vitamins from a sample than others. We hope to do more testing in the future to answer the questions raised in this round. ☺☺

REFERENCES

1. <https://www.westonaprice.org/cod-liver-oil/#gsc.tab=0>

A WORD ABOUT OUR BEAR

One sample of bear fat was provided by chapter leader Vicki Plotner. Vicki reports: This bear was one month from the mini hibernation time, shot October 8th, 2022, in North Carolina's Nantahala National Forest, a region once populated by the Cherokee Indians.

Norman Layne, the hunter, told us the story of the hunt right afterwards. The bear gets run up into a tree by bear hunting dogs who stay at the bottom of the tree, barking. The hunter runs up to the tree and he has to, *has to*, shoot the bear either straight between the eyes or in the eye. If you don't, the bear will remain alive (for how long depends on your shot), fall out of the tree and be pissed like nothing seen, kill the dogs and kill the hunter. It's usually not possible to run fast enough.

For Norman's hunt, he got to the tree, was required to wait for the dogs' owners to arrive so they could be ready to shoot the bear if he fell to the ground alive and angry. The dogs are very expensive to replace. The bear was sixty feet up in the tree, standing on a branch and holding onto the trunk. Norman shot the bear directly in the eye. The bear fell off his feet and lay like a rag doll stuck on the branch, sixty feet up in the air. The bear started jerking as the blood ran from his body, which thankfully shook him off the branch, and he fell to the ground. The tree was at the top of a steep hill with a stronger than forty-five-degree rise most of the way. When the bear hit the ground, it immediately began tumbling down, down, down the steep hill and came to a stop at the feet of the two other hunters, who were ready and aimed for battle if necessary. Norman and the owner of the dogs slid down the hill like children on a slide to get there more quickly. They chopped down a small tree and hog-tied the bear to the trunk and the men carried him out the three miles, needing to change men every twenty minutes due to the weight. Nearly halfway out of the woods, they had to radio the other hunters to come assist, due to the bear's weight. It took twelve strong hunters in total to carry out the bear. This bear fat was well earned!

Technology as Servant

THE OBSCURE ORIGINS OF MODERN-DAY CLIMATE CHANGE HYSTERIA

By James Kirkpatrick

Global climate change, or more precisely the fear of global climate change, has emerged as one of the dominant narratives of our time. It has become so prevalent that not a single day goes by without the topic gracing the front pages of at least one of the major international news outlets. Pretty much every single event that involves weather, pollution, farming, construction of any kind and even human psychology is now attributed to climate change. Even more startling, a 2021 Pew Research Center survey reported that 5 to 10 percent of childless adults are foregoing having children due to climate change concerns. Imagine an external force, which no human being can control, so terrifying that it overtakes our biological programming to successfully procreate.

The “official” narrative on climate change goes like this: the Earth’s climate has been stable for hundreds of thousands, if not millions, of years, that is, until about the 1850s, when human society began burning (combusting) hydrocarbons—defined as coal, oil, natural gas liquids and natural gas—in massive amounts, releasing ever-increasing volumes of combustion by-products into the atmosphere. We are told that the most important of these is carbon dioxide, which is a greenhouse gas, and as such has an almost linear relationship with the average global temperature of Earth; in other words, carbon dioxide is the environmental control knob for our planet; every increment we produce warms the planet by that same increment. According to this narrative, the only way to save the planet is to stop using hydrocarbons and stop the release of carbon dioxide from human activity. If this does not happen in the next twenty (or fifty or one hundred) years, humanity as we know it will be doomed, and the Earth will be rendered inhabitable.

We are told in no uncertain terms that the scientific community is “unanimous” in this prognostication and that the science regarding this topic is “irrefutable.” A good example of the conventional wisdom came in a multipage spread of prestige journalism from the *New York Times* in April 2021, titled “The Science of Climate Change Explained: Facts, Evidence and Proof (Definitive Answers to the Big Question).” Unsurprisingly the article focused only on the human (or “anthropogenic”) role of fossil fuel combustion, while ignoring or heavily discounting any natural forces that contribute to climate change.

I intend this article, the first in a series, and subsequent discussions to help inform readers about the complexity of Earth’s climate system and to show that no one variable can explain or is responsible for variations in Earth’s macro climate patterns. Further, a trace gas in our atmosphere, carbon dioxide—which over the last one hundred fifty years has increased from two hundred eighty to four hundred twenty parts per million (0.028 percent to 0.042 percent), largely through human combustion of fossil fuels—is not the dominant variable affecting all of Earth’s weather. It should also become evident that there is much less consensus within the scientific community than we are led to believe, and “the science” is by no means settled.

POLITICAL, NOT SCIENTIFIC, ORIGINS

In tackling this expansive subject, I decided to start at the beginning, with the political origins of the climate change discussion. In early 1972, a previously obscure think tank published an unusual book about the future of society. *The Limits to Growth (LTG)*, developed and published by The Club of Rome (CoR), would go on to sell thirty million copies and influ-

No one variable can explain or is responsible for variations in Earth’s macro climate patterns.

ence a generation of academics, public policy wonks and, unfortunately, politicians.

Several details about this book were unusual for the time but would not be considered out-of-place today. The first oddity was the book's popularity despite its dark, Malthusian and utterly bleak outlook for humanity as a whole. The second was the use of computer programs as the primary tool to support the analysis in the modeling of humanity's societal trajectory into the great unknown of the future. The final aberration was the source of the book: the CoR think tank. Although this group's official branding is altruistic, it consists of a collection of unelected intellectuals—today they would be called “thought leaders”—who research, analyze and disseminate (through studies, books, white papers, etc.) policy documents to help steer policymakers into what they believe to be the best course for countries, nations, society and other cultural constructs.

In retrospect, the advent of groups such as the CoR can be viewed as a canary in the coal mine presaging the emergence of a “consulting-industrial complex” into the mainstream. The influence of groups like the CoR has metastasized across our society over the past fifty years to the point of mass-infection that we have today. This complex consists of for-profit consultancies (such as McKinsey, Bain, Boston Consulting Group, Oliver Wyman, Booz Allen Hamilton and IBM); accounting and advisory firms (for example, Deloitte, Ernst & Young, Accenture, KPMG and PricewaterhouseCoopers [PwC]); and nonprofit foundations and think tanks (which in addition to CoR include entities like Davos, World Economic Forum, Brookings Institute, RAND Corporation, Bill & Melinda Gates Foundation, Sierra Club and the Rockefeller Foundation). All of them together form the backbone of the consulting-industrial complex and represent the outsourcing of thought in the Western political states from the people and their elected representatives to corporations and special interest groups. Across the Western democracies (meaning the member-countries of the Organisation for Economic Co-operation and Development or OECD), there is almost no piece of public policy or political agenda today that is not heavily influenced or written outright by the various appendages of the consulting-industrial complex.

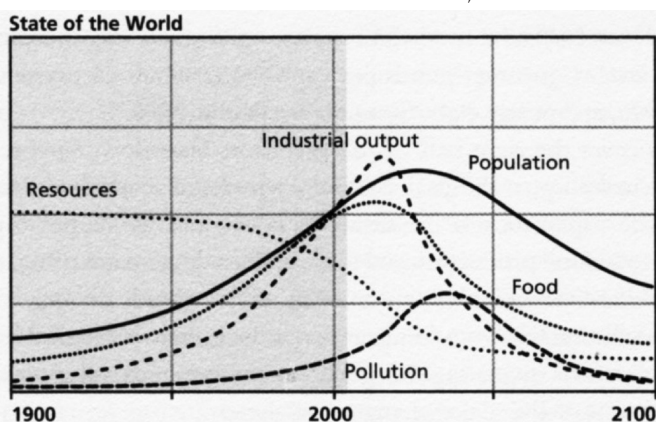
The Club of Rome was—and is—no different. On paper (that is, officially), the CoR was established by Aurelio Peccei (an industrial

consultant for Fiat) and Alexander King (a British science advisor with the OECD). Reportedly, they formed a partnership over a shared interest in emerging global macroeconomic issues—namely, rising population and resource depletion. Behind the scenes (depending on how much tinfoil you own), the true financial backers of the CoR look like the Volkswagen corporation, the Agnelli family (founders of Fiat), David Rockefeller (grandson of John D. Rockefeller), Maurice Strong (Canadian oilman) and David Rusk (U.S. Secretary of State from 1961 to 1969). There are two items of note regarding the financial backers of the CoR. First, they all seem to have had a heavy guiding hand not just in the formation of the CoR but also two other prominent organizations: the Rockefeller Foundation and the United Nations (UN). Second, their role as founders in each seems to have been largely scrubbed from the Internet record. The consistency of the underlying philosophy shared by each of these organizations—and the involvement of the same players—seems too remarkable to be purely coincidental (if not a reason to stock up on more tinfoil).

What were the interesting and novel ideas that *The Limits to Growth* proposed? Pointing to the post-WWII population boom—an estimated increase from 2.4 billion to 3.8 billion people between 1945 and 1972—*LTG* argued that the growing global population would soon strip the world of resources, food and industrial capacity, leading to an exponential rise in “pollution” and a collapse of prosperity and society—within the next hundred years but likely much sooner (see Figure 1). Among other predictions, *LTG* forecast that as of 1970 population growth levels, the world would exhaust its global gold resources by 2001, silver by 2014, copper by 2020, natural gas by 2021, oil/petroleum by 2022 and aluminum by 2027.

The solution to avert disaster, in the opinion of the *LTG* authors, was to return the human population and its influence over the earth to a state of “equilibrium.” They argued that the only way to avert catastrophe was to massively bend the curve on population (to, say, around one to two billion individuals) and de-emphasize the pursuit of growth among the world economies. Thomas Malthus reached a remarkably

FIGURE 1. Limits to Growth State of the World, 1900–2100



similar conclusion in his book, *An Essay on the Principle of Population*, written one hundred seventy-five years earlier.

The *LTG* premise, shared by Malthus, was that human population growth is geometric (exponential), while food and resource availability increase only linearly, setting the stage for population to regularly overshoot resource and food production. Unlike Malthus' pad-and-paper approach, the technique underpinning the *LTG* analysis was the peak of modern mathematics—a computer simulation—which, in this case, was a program called World2 (now World3) developed by MIT systems engineer Jay Forrester. However, *LTG* was not without vocal detractors when published, many of whom pointed out a couple of inconvenient facts about the study. The main criticism was that the negative effects of population growth had been modeled on geometric growth, while the positive effects of a growing population—namely, innovation and technology—had used a linear growth model. A second major critique was that the core World2/World3 model made no adjustments for—and largely ignored—the impact of price or the relationship between supply, demand and price.

Ironically, given their current position on climate change, one of the largest detractors of the *LTG* study was the *New York Times*, which published an excoriating rebuttal in April 1972. The news outlet wrote:

“*The Limits to Growth*, in our view, is an empty and misleading work. Its imposing apparatus of computer technology and systems jargon conceals a type of intellectual Rube Goldberg device—one which takes arbitrary assumptions, shakes them up and comes out with arbitrary conclusions that have the ring of science. *Limits* pretends to a degree of certainty so exaggerated as to obscure the few modest (and unoriginal) insights that it generally contains. Less than pseudoscience and little more than polemical fiction, *The Limits to Growth* is best summarized not as a rediscovery of the laws of nature but as a rediscovery of the oldest maxim of computer science: Garbage In, Garbage Out.”¹

One of the fortuitous developments that initially made *LTG* such a popular and influential book is what happened next. In a twist of fate, the world experienced a physical scarcity of crude oil—the lifeblood of the global economy—during the 1973–1974 Arab Oil Embargo, which was OPEC member-nations' response to Western democracies' political and military support of Israel. This front-and-center resource scarcity (driven by political motivations rather than outright scarcity of this critical commodity) helped reinforce the underlying message of *LTG* to the masses, leading many to consider the study prescient in the moment.

However, what ended up happening following the 1973-74 oil price shock is exactly the type of complex system dynamic that the *LTG*/World3 model simplified or ignored. The reduction in oil supply drove a geometric increase in price as well as spurring short-term conservation measures. Over the next decade, the high oil prices led to development of new resources (namely, fields in the North Sea, Alaska, West Africa and the Soviet Union). As those resources came on line in the early 1980s, the supply deficit was transformed into a supply surplus, and by the mid-1980s, the price of oil was collapsing. The period of scarcity abated while consumption and prosperity continued, ushering in a twenty-year period of low energy prices and high economic growth globally.

REAL-WORLD CONSEQUENCES AND FAILED PREDICTIONS

Lest anyone think that white papers such as *LTG* are merely academic postulations without any real-world consequences, consider the example of China's one-child policy, implemented between 1979 and 2015, which illustrates the real impact of translating an analytical exercise backed by computer simulations into social policy. The architect of that program, engineer and demographer Song Jian, was directly influenced by *LTG* and two other policy documents. The second document, *The Population Bomb*, was written in 1968 by Stanford biologist Paul R. Ehrlich, who argued that population growth in the 1960s would lead to widespread famine and societal collapse in the 1970s. The book was written at the suggestion of Sierra Club execu-

They argued that the only way to avert catastrophe was to massively bend the curve on population (to, say, around one to two billion individuals) and de-emphasize the pursuit of growth among the world economies.

Starting in the late 1980s and early 1990s, the Club of Rome and similar organizations began the great pivot away from population control and resource depletion to the next great phantom boogeyman: climate change.

tive director David Brower. Thirty leading scientists of the day wrote Jian's third influence in 1972, *A Blueprint for Survival*, making similar arguments that humans should return to living in small deindustrialized tribes.

Advocates of China's policy will highlight the fact that the one-child program prevented an estimated four hundred million births and, by the 2010s, had helped China bend its population curve, topping out at a total population of 1.2 billion. However, this "success" must be weighed against the large societal distortions that the program produced, including millions of stories of personal human suffering and pain and a massively demographic top-heavy society where the younger generations have an unprecedented gender imbalance—25 percent more men than women—never experienced by such a large population in world history. (Usually, the demographic gender imbalance swings the opposite way as a function of war, with many more women than men.) The ultimate consequences of this type of policy are still being played out in China today, and I suspect much of the friction within Chinese society going forward will ultimately be traced back to this grand social engineering experiment.

Forty years after *LTG*'s publication, it becomes more obvious with each passing year that very little of what was predicted has come to pass, despite the study's grim hundred-year time horizon. Even with a global population approaching eight billion, the world has not run out of resources. Moreover, much of the macro pollution of the 1970s (smog, acid rain, DDT poisoning and various air and water pollutants) has been abated in the West, and humans are enjoying one of the highest collective standards of living that any civilization (that we know of) has ever experienced.

Given the stark rebuttal of what was predicted, one would think that organizations such as the CoR would have disappeared, condemned to delegation as a footnote of history and largely forgotten, but they have not. In fact, starting in the late 1980s and early 1990s, the CoR and similar organizations began the great pivot away from population control and resource depletion to the next great phantom boogeyman: climate change. Nothing better exemplifies the great

pivot than this quote from Alexander King and Aurelio Peccei from 1993:

"Because of the sudden absence of traditional enemies, new enemies must be identified. In searching for new enemies to unite us, we came up with the idea that pollution, the threat of global warming, water shortages, famine and the like would fit the bill. . . . All these dangers are caused by human intervention, and it is only through changed attitudes and behavior that they can be overcome. The real enemy then is humanity itself."²

PASSING THE BATON

The handoff—from the CoR to other organizations as the vanguard of the climate change advocacy movement—began in the 1980s, highlighted by the June 23, 1988 Senate testimony of NASA scientist James Hansen,³ who reported that "he was ninety-nine percent certain the earth was warmer than it had ever [been] measured to be and that there was a clear cause and effect relationship with the greenhouse effect and lastly due to global warming, the likelihood of freak weather was steadily increasing." Hansen at the time was the director of the NASA Goddard Institute for Space Studies (GISS) and was instrumental in advancing the transition from the instrument era (1750–1980) to the satellite era (1980 to present) in monitoring and measuring the Earth's climate and atmosphere. It is important to note that when he gave his speech to the U.S. Senate, we had at most ten years of satellite-based measurements, so how these could be used to make deterministic, long-term statements about climate change remains a bit of a mystery to me personally. Hansen is also noted for his studies of the planet Venus and its 95 percent carbon dioxide atmosphere, for popularizing the concept of "runaway" climate change and for using large average global mean temperature as a means of tracking climate change.

That same year, the Intergovernmental Panel on Climate Change (IPCC) was formed as an offshoot of the UN Environment Programme (UNEP) and the World Meteorologi-

cal Organization (WMO). The purpose of the IPCC is to publish periodic reports (namely, to collate, combine, scrub and peer-review the existing scientific literature) to provide a comprehensive outlook on the state of Earth's climate to help inform and steer global decisions regarding climate change. The IPCC then feeds its principal Assessment Reports (ARs), published every five to seven years beginning in 1990, to the UN Framework Convention on Climate Change (UNFCCC), which coordinates or negotiates intergovernmental agreements on limiting the release of emissions associated with climate change. (Think Kyoto Protocol, Paris Agreement, etc.)

To date, the IPCC has published approximately forty reports on climate change and finished its sixth Assessment Report (AR6) in 2022. For the most part, the mainstream media consider the ARs an invaluable and indisputable source in making the case for human-caused climate change or warming. What we are supposed to believe, in other words, is that these reports catalog “the science” or “the consensus” regarding greenhouse gases and their role in driving climate change.

ROCKEFELLER FOUNDATION GLUE

What connects the Club of Rome to the UN, the IPCC, UNEP and UNFCCC? For that, you need to look at a third organization, the Rockefeller Foundation—the granddaddy of them all—founded in 1913 by oil magnate John D. Rockefeller and his son John D. Rockefeller, Junior. With its enormous funding generated by the Rockefeller oil fortune, the Rockefeller Foundation has been a major player in “nongovernmental” world politics since its founding. The World Health Organization (WHO), the National Science Foundation (NSF) and the National Institutes of Health (NIH) all were modeled on the Rockefeller Foundation and owe it much of their early funding. The Foundation's early work focused on public health and medical research, and shifted in the 1930s into studying population control and the dark science subject of eugenics, including providing direct funding to German scientists in the 1930s and 1940s.

Although the Foundation's focus diversified into global governance after WWII, it never lost

its love for the controversial subject of population control. In the 1950s, Foundation control passed from the second to the third generation of Rockefellers, with John D. Rockefeller III becoming the chairman along with his colleague John Foster Dulles, who was Eisenhower's Secretary of State and brother of Allen Dulles, the first civilian director of the CIA. In 1952, they founded the Population Council, tasked with—wait for it—controlling the population boom of the post-WWII era. The Rockefeller Foundation's second focus in the post-WWII era was funding and supporting the fledgling United Nations. Their aim was to change the UN from a “parliament of nations to a modern think tank that used specialized expertise to provide in-depth impartial analysis of international issues.”

In 1965, Dean Rusk (U.S. Secretary of State after Dulles and also a board member of the Rockefeller Foundation) heard a speech on population control and non-renewable resource depletion by Italian consultant Aurelio Peccei. Rusk was so taken by the speech that he had it translated into English and had it circulated throughout the halls of power in Washington DC and New York City. This led to a collection of think-tank-type speeches organized by the OECD and the Rockefeller Foundation that, in turn, connected Peccei and Alexander King to the systems modeling work of Jay Forrester at MIT, resulting in early planning meetings for the Club of Rome. Many of those meetings took place at Rockefeller-owned properties in Italy. The meetings culminated with the CoR's founding and the publication of *LTG*.

In parallel to this, a different board member of the Rockefeller Foundation, Canadian oilman Maurice Strong, picked up on the very same themes as the CoR and carried them to the UN. Strong commissioned a report titled *Only One Earth: The Care and Maintenance of a Small Planet*, which compiled views from one hundred fifty-two leading experts from fifty-eight countries about the state of the Earth's environment. The report was presented at the UN meeting on the environment held in Stockholm in 1972.

This document and the 1972 UN meeting are considered the world's first “state of the environment” report. Given the success and apparent urgency, the UN used this moment to

What we are supposed to believe, in other words, is that these reports catalog “the science” or “the consensus” regarding greenhouse gases and their role in driving climate change.

An
Inconvenient
Truth...
brought the
climate change
discussion
fully into the
mainstream,
where actors,
influencers,
celebrities,
politicians
and a very
brave little girl
from Sweden
adopted it as
the popular
cause to
stand behind.

create a special carve-out organization—the UNEP—with Strong elected as UNEP’s executive director for the first four years of its existence. In an interesting turn of events, Canadian prime minister Pierre Trudeau called Strong home in 1976 to found and run Canada’s national oil company, Petro-Canada. Pierre Trudeau is also a listed member of—wait for it—the CoR.

All of this could merely be attributed to birds of feather flocking together, but it does seem uncanny how many of these organizations’ founders seemed to be board members of other similar organizations—and how many of them held ingrained views on the state of the Earth and the need to control human population growth.

THE (IN)FAMOUS HOCKEY STICK

Later in life, Strong maintained a guiding hand in the growth of UNEP and its message. The next generation of politicians would cite Strong as a mentor and role model in addressing Earth’s multi-nation environmental emission problems, with one of those politicians, Al Gore, becoming U.S. Vice President in 1992.

The most famous (and controversial) IPCC Assessment Report came in 2001 (AR3), presenting a figure showing a historical temperature recreation of the planet going back one thousand years and marrying temperature proxy reconstructions with the modern instrumentation record. (Temperature proxies and their reconstructions refer to a common data collection technique of paleoclimatologists

that involves using the plant and geologic record to recreate climate conditions of the past. The most common methods include using air bubbles from glacial ice cores to analyze the composition of the atmosphere, measuring tree rings, analyzing sub-fossilized pollen in lake beds and ocean sediment, taking temperature measurements in bore holes and analyzing the mineral and stable isotope composition of corals and calcium deposits.) The well-known figure represents a major data point in “proving” the current mainstream climate narrative, suggesting that Earth’s average climate (as represented by temperature) had been very stable for one thousand years until mass combustion of fossil fuels started with the Industrial Revolution. Combusting hydrocarbons releases carbon dioxide (and other gases); the IPCC argued that this had caused the planet’s average temperature to take off like a rocket ship (see Figure 2), resembling the curvature of a hockey stick (an oddly Canada-specific cultural reference).

This figure then figured prominently in Gore’s 2006 climate change documentary, *An Inconvenient Truth*, for which he was awarded two Academy Awards and a Nobel Peace Prize in 2007. The documentary brought the climate change discussion fully into the mainstream, where actors, influencers, celebrities, politicians and a very brave little girl from Sweden adopted it as the popular cause to stand behind.

The “hockey stick” graph is based on a research paper written by a trio of career aca-

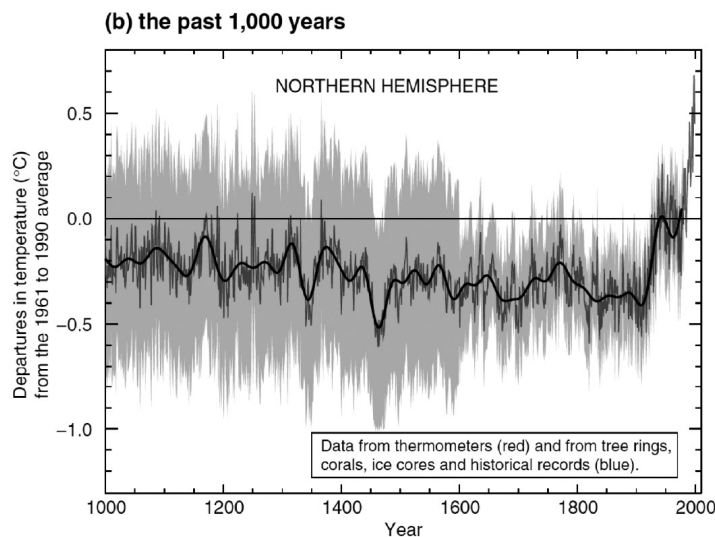


FIGURE 2.
The Hockey
Stick Graph

demics from the University of Massachusetts and University of Arizona (Michael E. Mann, Raymond Bradley and Malcolm Hughes, often referred to in shorthand as “MBH”). The paper, in turn, derived largely from Mann’s dissertation work. The originating piece of scientific work, published in *Nature*, was titled “Global-Scale Temperature Patterns and Climate Forcing Over the Past Six Centuries.”²⁴

What is most interesting about the paper and subsequent derivative work is that it does not present any actual new science; it is not the product of any new experiments and their rigorously tested results. Instead, “MBH” applied new statistical techniques to merge the results of various temperature inference information from climate proxies (such as tree rings and ice cores) with the primitive instrumentation record, the modern instrumentation record and the ultra-modern satellite record. In other words, it is more of a statistics and interpretation exercise, and thus is subject to both normal human biases and also outlier manipulation (such as throwing out data that do not fit the narrative you are trying to prove). Nevertheless, since the article’s publication and adoption as a *cause célèbre*, Mann & Co. have received every conceivable kind of award and platitude; their efforts and those of other scientist/researcher types in the field of paleoclimatology reconstructions have all bathed in enhanced fame, prestige and wealth.

The popularity and reach of the techniques developed by Mann & Co. initiated a cottage industry of similar reproductions and efforts, but with one glaring problem—none of the results ever seemed to match, further reinforcing the subjective nature of this type of “science.” Efforts to independently reproduce Mann’s results have proved impossible. In part, this is because Mann and his colleagues refuse to release their source work, but even when subsequent generations of academics use similar original data, their work has produced results that are often widely different. Some temperature reproductions show high variability in the past, but others show only a little. Some show various classic temperature periods (see Figure 3), while others omit them, and so on. The classic temperature periods refer to time spans—usually several hundred years—where qualitative observations from the time and the early instrument record reflect some type of shift in general climate conditions. These periods are RWP (Roman Warm Period, 250 BCE–250 CE), MWP (Medieval Warm Period, 950 CE–1250 CE) and LIA (Little Ice Age, 1450 CE–1850 CE).

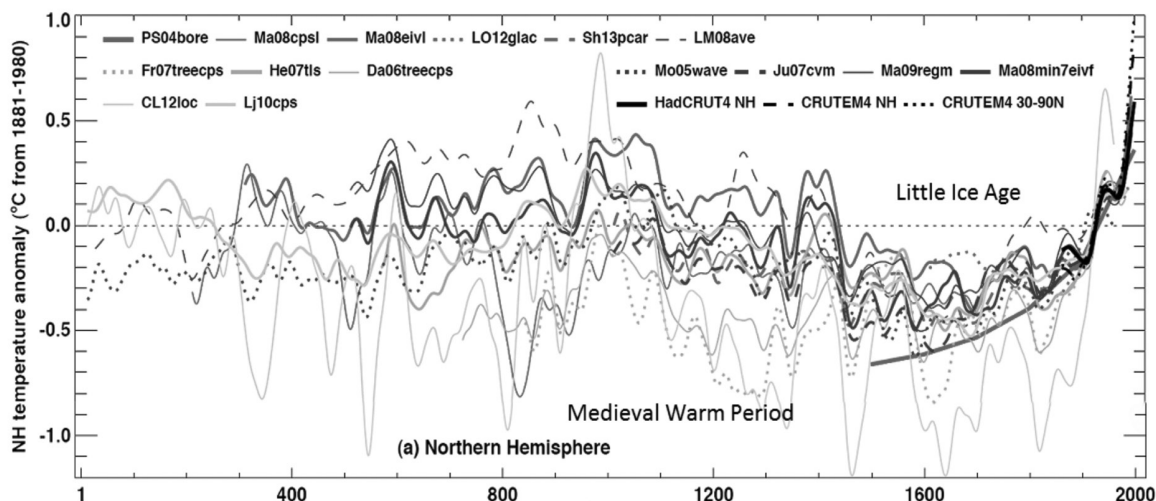
Mann and his colleagues refuse to release their source work, but even when subsequent generations of academics use similar original data, their work has produced results that are often widely different.

DESIGNED TO CONFUSE?

There are some other small(er) items to note about Figures 2 and 3. These items have become hallmarks of the climate change discussion but, in my opinion, they are designed to confuse.

The first thing to note is the extremely small

FIGURE 3. Classic Temperature Periods



This is Figure 5.7a from chapter 5 of the IPCC report *Climate Change 2013: The Physical Science Basis*. The non-black lines show various reconstructions of Northern Hemisphere temperature based on proxy data. Please see source for information about each one. The black lines are based on observations (direct measurements) of surface temperature after 1850.

The third item to point out is the use of smoothed rolling averages on top of highly variable underlying data.

range on the Y-axis, usually with an absolute amplitude of two to three degrees Celsius. Most humans cannot feel or detect a temperature variation of less than one degree Celsius.

Second is the general refusal to use actual temperatures. All temperatures are presented in reference to a range of years from the instrumentation age (1961–1990 in Figure 2 and 1881–1980 in Figure 3). Why were those specific years chosen for this analysis? The answer, though often arbitrary, is relevant, as one (if so inclined) can manipulate the answer choosing a range of years that trended cold or hot.

The third item to point out is the use of smoothed rolling averages on top of highly variable underlying data.

Fourth (and pertaining just to Figure 2), the gray shaded area around the main blue and black data/lines is the confidence band, as in “with 95 percent confidence.” This means that there would be a 95 percent probability that the actual temperature readings (if instrumentation had existed at the time) would have landed within the gray band. This is a huge amount of error for such small increments of variation, particularly the further back in history you go.

Finally, notice that both figures clearly denote that these are “Northern Hemisphere” reconstructions only. This is often done on purpose, as the temperature record starting in the instrumentation age (roughly 1750 onward) was heavily dependent on just two countries

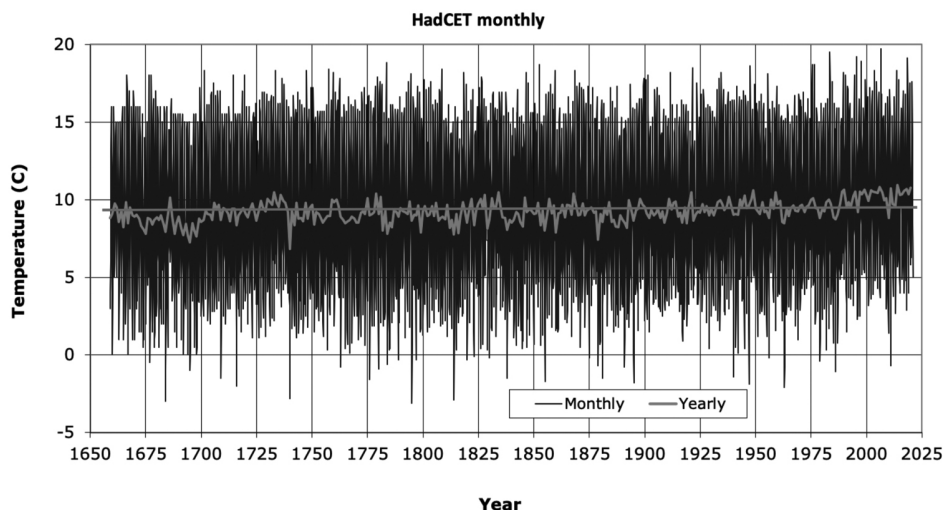
(England and the U.S.) until fifty to seventy-five years ago.

More broadly, what exactly is a “hemispherical average temperature” (or, for that matter, a “global mean temperature”), and how does it account for half a hemisphere being in day and the other half being in night? How does it take into account the fact that our hemispherical seasonal patterns are mirror opposites of each other? One could reasonably assume that a society as complex and technologically inclined as ours would implement a global-scale project that looks something like this:

- Grid the world to Cartesian coordinates;
- Chop grid to some fixed increment of distance;
- Build identical temperature monitoring at each increment (over land, sea, mountains, sand, swamps, etc.);
- Equip surface air temperature monitoring stations with exactly the same staff and equipment down to the instrument manufacturer;
- Turn them all on at the same time;
- Collect data;
- Maintain each station to the same standard.

This is what you would have to do to ensure data integrity for the temperature data that you are collecting and to consider the data, you know, scientific. However, it should come as

FIGURE 4. Central England Temperature (CET) Data Set



no surprise to the reader that globally, we have nothing close to this type of coordinated system. What we have is a patchwork of methods and accuracy checks, largely held together with duct tape and bailing wire, leaving huge gaps in coverage, reliability, standardization and historic data (which are then largely cobbled together using computer simulations, models and other novel statistical techniques).

Some may find these points to be arcane or minutiae-laden, but temperature—or, more importantly, large average temperatures—is one of the prime instruments being used to make the case for anthropogenic, humanity-induced climate change. Given that large societal gears are beginning to turn and that our current political trajectory envisions remaking the planet's entire energy system in the next twenty-five years based on micro-movements in global average temperatures, it behooves all of us to get educated on this topic, particularly since the guesstimated cost of this energy transition would be higher than total current global GDP.

CLOSING THOUGHTS

Looking at the last one hundred fifty years of the early and modern instrumentation record, what is becoming apparent is that Earth, on average, is getting slightly warmer. Averaged across the various hemispheres, this is usually rated at about 0.5 to 1.0 degree Celsius (or 0.9 to 1.8 degrees Fahrenheit) over the past fifty

years. I myself believe that human activity is responsible for a portion of this increase—but that includes all human activity and not just the release of carbon dioxide.

What is also true, if you believe the instrumentation record, is that the period of the early to mid-1800s (1800-1850) was one of the coldest on record and the last pulse of the Little Ice Age, a finding reinforced by a thick packet of anecdotal evidence (for example, the “year without summer,” 1816). Thus, to use this date as both the start of the hydrocarbon era and the start of the “trustworthy instrumentation” era ends up artificially inflating current temperature increases by comparing the latter to a temperature nadir. What this also means is that some of the temperature rise of the past one hundred fifty years must have been naturally induced, or we would be trending into a new ice age, with or without hydrocarbons.

The other part of the distortion is the ability of skilled artists to contort data and paint any kind of statistical story that may be wanted. Look at a raw data set and see if you can spot the emerging “climate emergency.” The Central England Temperature (CET) data set is the oldest continuous temperature data that we have in existence, stretching back to 1659 without any known data manipulations (see Figure 4).

Looking at the CET, there is not much variability—not much of a trend—aside from a barely discernible warming starting around

What is also true, if you believe the instrumentation record, is that the period of the early to mid-1800s (1800-1850) was one of the coldest on record, a finding reinforced by a thick packet of anecdotal evidence.

FIGURE 5. Energy Consumption and Population

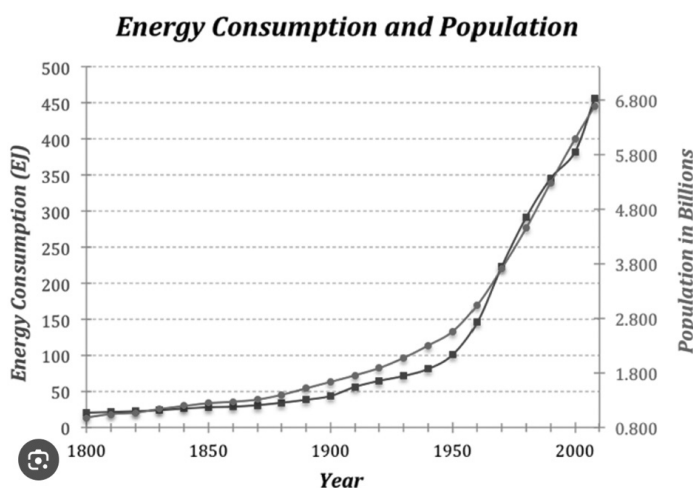
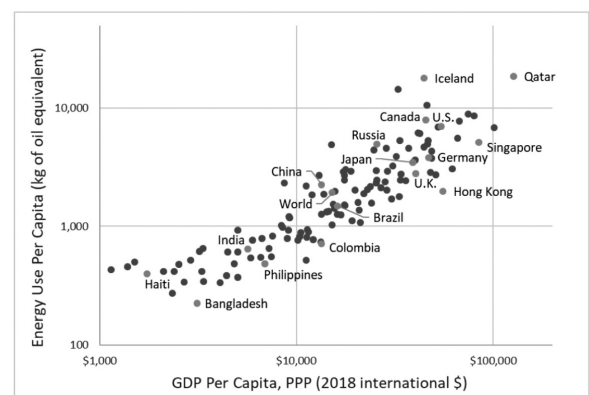


FIGURE 6. Energy Use per Capita vs. GDP per Capita, 2014



Energy use per capita vs. GDP per capita in 2014. Sources: International Energy Agency [5] and World Bank [6].

If carbon dioxide is only a fractional contributor to the barely perceptible increase in global temperature, why is the primary solution presented to us the elimination of hydrocarbons from our society in order to “save the planet”?

1975, but there was also an extended period of cooler-than-average temperatures from 1659 to 1700. This occurred despite England’s role as the epicenter of the Industrial Revolution and experiencing a thousand-fold increase in hydrocarbon usage over the same period.

If carbon dioxide is only a fractional contributor to the barely perceptible increase in global temperature, why is the primary solution presented to us the elimination of hydrocarbons from our society in order to “save the planet”? This is something I have pondered for a while, and I have come up with one possible hypothesis. Maybe it is not about saving the planet at all; maybe it is about cutting off the flow of available energy into our society. It is interesting to note that one of the other statistical correlations that we have observed since the start of the industrial age is the strong correlation between energy use (hydrocarbons), population, GDP and GDP per capita, as well as, for good measure, the literacy rate (see Figures 5 and 6).

What we also know is that the total human population never exceeded one billion inhabitants prior to the discovery and exploitation of hydrocarbon energy. The gusher of energy released with the Industrial Revolution created a tremendous amount of surplus energy in society as a whole, which has in part fueled the increase in global population from one to eight billion. Maybe the logic is that by throttling back the availability of surplus energy in society (hydrocarbons), this will in turn reverse or undo the population effects of the Industrial Revolution.

By sheer coincidence, this is the thesis first put forward by Malthus and later rebooted with

shiny scientific bells and whistles by the Club of Rome, which in turn passed the same baton of population control to the UN (UNEP). Each iteration has taken a slightly different refraction (“Food will run out,” “We do not have enough resources,” “There is too much pollution”) to achieve the same end goal—reducing the human population to one to two billion inhabitants or to pre-Industrial Revolution levels. To some, this might make complete sense, if not for the pesky issue of having to get rid of seven out of every eight of us.

In a future article, I will cover all the other factors that affect climate and weather, other than carbon dioxide, to further show that this trace gas in our atmosphere is not the sole driver of all climate change. This will expand to a discussion of the energy system being envisioned and installed to replace hydrocarbons—and, if realized, the terrible consequences this will have for all of humanity. ☹️

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TEN REASONS TO EAT BUTTER

1. Butter is one of our best dietary sources of vitamin A.
2. Butter is also a good source of vitamin K₂, Dr. Price’s Activator X.
3. Butter is a unique source of ready-made butyric acid, important for thyroid function and colon health.
4. Butter provides arachadonic acid, out of which the body makes feel-good endocannabinoids.
5. Butter contains glycosphingolipids, which support digestive health.
6. Butter can be a good source of minerals, such as selenium, iodine and zinc.
7. Butter is a good source of vitamin E, important for fertility.
8. The fats in butter are stable and will not break down into free radicals or aldehydes.
9. Butter tastes delicious!
10. Butter will warm the heart but does not cause global warming!!

NOURISHING TRADITIONS AND WAPF IN SPAIN

To celebrate the publication of *Nourishing Traditions* in Spanish, and to bring the Wise Traditions message to Spain, Sally Fallon Morell (WAPF president) and Kathy Kramer (WAPF executive director) traveled to Spain in June of this year. (See the press clippings at padlet.com/ericena/campa-a-prensa-tradiciones-culinarias-ed-diente-de-le-n-37t14h9dq2qm1et6.)



Sally Fallon Morell with Ana de Azcarate, president and founder of Editorial Diente de Leon, (editorialdientedeleon.com). Andrea Rosenschein and Natalie Erice of Diente de Leon helped arrange the tour and Monica Fernandez Perea served as translator.



One of several book launches, this one took place at the Biblioteca Babel in Palma, Mallorca. Sally and Kathy met many WAPF members at these events, while introducing the WAPF message to others. The lowfat, anti-cholesterol message has taken hold in Spain, so they fielded a lot of questions about the importance of animal fat and cholesterol-rich foods.



ABOVE: Food served at a seminar given by Sally at the Institución Libre de Enseñanza. The traditional foods that have nourished healthy, handsome Spaniards for generations are high in fat and salt. Note the slices of pure ham fat in the above photo.

ABOVE RIGHT: Raw milk and cheese from Crica dairy. In addition, many brands of kombucha are available in Spain.



RIGHT: Aina Entrecanales (left) and Kathy Kramer (right). Aina, along with her husband Bruno, hosted the group at their beautiful olive plantation, Son Moragues (sonmoragues.com), in Valdemossa. The olive oil tasting included some oil from thousand-year-old olive trees on their property. Photos by Andrea Rosenschein and Kathy Kramer





A Campaign for Real Milk

PERSPECTIVES ON FOODBORNE RISKS

By Peg Coleman, MS, MS

In my recent *Wise Traditions* article (Spring 2023),¹ I wrote about Microbial Risk Assessment (MRA), a qualitative or quantitative structured approach developed by international consensus.² Overall, the approach would begin with the best available data at the time, consider alternative assumptions where uncertainty existed about model parameters, and conclude with reporting risk estimates with uncertainty, data gaps and limitations.

Uncertainty and data gaps are crucial to address because data are rarely sufficient to estimate risk without invoking assumptions where data are sparse, inconsistent, of a poor quality, ambiguous or conflicting. An MRA can be considered a snapshot in time for a given set of data and assumptions. Targeted research may be conducted to fill significant data gaps. As scientific knowledge advances, earlier data and assumptions may prove invalid, and the MRA would require updating, consistent with international principles and guidelines.²

One common and crucial misunderstanding that I address in this article the fact that epidemiology is not risk assessment as defined by international consensus.² Epidemiologic data are generally used for two major purposes in MRA, starting with the first MRA element: identifying which pathogens present in foods have the potential to cause adverse human health effects (hazard identification). Consistent with the work of Abe and colleagues,³ I report numbers of illnesses rather than numbers of outbreaks due to higher relevance for representing the burden of illness for risk management decisions.

CURRENT DATA ON HAZARD IDENTIFICATION

For the purposes of this article, I use a Centers for Disease Control and Prevention (CDC) data set for 2005 through 2020,⁴ comparing the CDC data with global data considered by the European Food Safety Authority (EFSA) and European Union (EU) opinions about hazards associated with raw milk.⁵ According to the CDC data (Figure 1), the major pathogen causing illness associated with raw milk for the sixteen-year period was *Campylobacter* (1,570 illnesses, including one death in a case with chronic underlying disease). In addition, *Campylobacter* was associated with 1,647 pasteurized milk illnesses, for a total of 3,217 illnesses. Note that although parasites caused some milk-borne illnesses in the U.S. in this time period (sixty-two cases of cryptosporidiosis; thirty-eight cases of giardiasis), this article emphasizes bacterial illnesses.

As a microbiologist, it is puzzling to me that the major milk-borne hazard, campylobacteriosis, was associated with 3,217 illnesses, yet the pathogen cannot actually grow at refrigeration temperatures in raw or pasteurized milk. Neither can *Campylobacter* grow under normal aerobic conditions for culturing. Recent studies

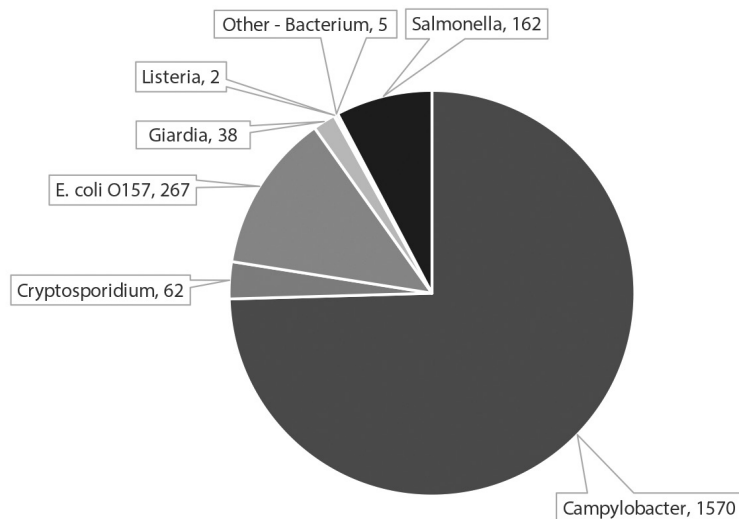


FIGURE 1. Pathogens associated with raw milk (CDC, 2005-2020).

document promising results for chemical, phytochemical and microbial interventions that can disrupt persistent *Campylobacter* biofilms that might be the root cause for milk-borne illnesses.⁶⁻⁹ Other major foods that also contributed to the burden of campylobacteriosis in this time period included:

- Poultry (603 illnesses)
- Mollusks (408 illnesses)

Moderate numbers of illnesses associated with raw milk outbreaks were reported for pathogenic *E. coli* (267 illnesses, zero deaths) over the sixteen-year period. Other foods contributed to the majority of the burden of pathogenic *E. coli* cases, including:

- Leafy-vine-stalk vegetables (2,221 illnesses)
- Beef (1,485 illnesses)

Moderate numbers of illnesses associated with raw milk outbreaks were reported for salmonellosis (162 illnesses, zero deaths) over the sixteen-year period. Other foods contributed to the majority of the burden of salmonellosis cases, including:

- Poultry (6,244 illnesses)
- Leafy-vine-stalk vegetables (6,000 illnesses)
- Pork (2,759 illnesses)
- Beef (1,715 illnesses)
- Melons (1,544 illnesses)
- Root/underground vegetables (1,540 illnesses)
- Processed nuts (1,490 illnesses)
- Sprouts (983 illnesses)

The smallest hazard associated with raw milk in this period was two *Listeria monocytogenes* illnesses; one of the two individuals was immunocompromised and died¹⁰. Multiple lines of evidence support the success of existing risk management controls (such as proper refrigeration,⁵ hazard analysis and critical control points or risk analysis and management plans¹¹ and proper hygiene in milk parlors) in limiting listeriosis cases associated with raw milk.

These recent CDC data for raw milk hazards are consistent with the 2015 findings of the EFSA,⁵ which reported that major bacterial hazards included *Campylobacter*, pathogenic *E. coli* and *Salmonella*, but *not* listeriosis.

Hazard identification for pasteurized milk differs in that a recent systematic review for North America documented four deaths and a higher risk of hospitalization and death from listeriosis associated with pasteurized, not raw, milk.¹²

Other foods that contributed to the majority of the burden of listeriosis cases in the U.S. were:

- Melons (153 illnesses)
- Pasteurized solid/semi-solid dairy (73 illnesses)
- Pome, stone, and sub-tropical fruits (54 illnesses)
- Deli meats (49 illnesses)
- Leafy-vine-stalk vegetables (48 illnesses)

- Fungi (41 illnesses)
- Raw solid/semi-solid dairy (37 illnesses)

Considering foodborne deaths, we have just seen that one death each from campylobacteriosis and listeriosis over the sixteen-year period were attributed to raw milk. Note that in this period, 141 other deaths were attributed to *Listeria monocytogenes*. Foods other than raw milk were associated with 75 deaths from salmonellosis and 40 deaths from pathogenic *E. coli*.

Overall, considering the CDC data for 2005-2020 in the Hazard Identification phase of MRA, neither raw nor pasteurized milks are risk-free, and both are associated with bacterial hazards that, under certain conditions, may contribute to risk of foodborne illness. Both raw and pasteurized milk were rarely associated with fatalities, though five were reported in the sixteen-year period, two associated with raw milk and three with pasteurized milk. Note that some illnesses and deaths were also associated with other raw and pasteurized dairy products in this period as documented in the previous bullets, though I do not report on these data further in this article.

DATA FOR EXPOSURE ASSESSMENT

Microbiology, not epidemiology, provides the major source of evidence for the MRA element exposure assessment, notably data on the presence or absence of pathogens in raw milk and pathogen growth or decline during storage. Another common and crucial misunderstanding addressed herein is the fact that data on the presence or absence of pathogens, or levels of indicator microbes (such as total plate counts, coliforms and generic *E. coli*), are insufficient evidence to estimate microbial risk. The more important determining factors in predicting both the chance or likelihood of illness and the severity of illness are the levels or densities of pathogens and natural microbiota, and whether or not pathogen growth occurs under typical storage conditions of the food.

Some significant shortfalls in MRA quality were identified in the exposure assessment of the MRA on severe listeriosis associated

Even though pasteurized milk was classified as a high-risk food, a decision was made that consumers were not going to be warned about risks of consuming pasteurized milk.

with twenty-three ready-to-eat foods including raw and pasteurized milks.¹³ Colleagues in the Society for Risk Analysis (SRA), Applied Risk Management specialty group developed the Risk Analysis Quality Test (RAQT)¹⁴ that I applied to both MRAs considering milk prepared by FDA/FSIS (2003)¹³ and FSANZ.¹⁵

The exposure assessment for milk-borne listeriosis by the two U.S. agencies—the Food and Drug Administration (FDA) and the Food Safety and Inspection Service (FSIS)—was based on sparse data and invalid assumptions. The Agencies assumed that quality and safety of pre-pasteurized milk (that is, milk from multiple farms in bulk tanks and regional silos stored for unspecified periods prior to pasteurization) was equivalent to that of fresh raw milk from farms producing raw milk for direct human consumption.

FDA presented results of their recent systematic review on prevalence of pathogens in raw milks at the International Association for Food Protection conference in Toronto this year.¹⁶ Not surprisingly, the prevalences of pathogens in pre-pasteurized milk greatly exceeded prevalences from government monitoring programs for dairies producing raw milk for direct human consumption.¹⁷

The agencies also assumed that pathogen growth was equivalent in raw and pasteurized milk, though a cited study reported contrary results¹⁸ (no growth or lower growth in raw milk). Further, a manuscript on analysis of results from a 2022 pilot study on growth of the four major pathogens in raw milk produced for direct human consumption was accepted by *PLOS ONE* in July of 2023.¹⁹ This study documents suppression of pathogen growth at 4.4 °C over the fourteen-day storage period for all three major pathogens identified as hazards raw milk in the U.S. in the previous hazard analysis section.

RISK ANALYSIS QUALITY TEST OF SRA

A half-day workshop and a round table panel symposium were conducted at the SRA conference in Tampa on beta testing of the Risk Analysis Quality Test (RAQT) for milks. WAPF leader Pete Kennedy participated in the 2022 SRA workshop in Tampa where the beta testing

results for the MRAs were discussed.

Prior to the round table, a panelist, former FDA economist Richard Williams recalled a closed-door internal FDA meeting where the draft MRA results were shared with management. Even though pasteurized milk was classified as a high-risk food, as noted in the Summary Table (page 95), a decision was made that consumers were not going to be warned about risks of consuming pasteurized milk. The language of the final 2003 MRA document reflected this pro-pasteurization bias clearly, describing the decision that set separate courses for risk management of raw milk (“priority candidate for continued avoidance”) and pasteurized milk (“priority candidate for more study to confirm model predictions or identify factors not captured by current models that would reduce risk”).

The basis for assigning “avoidance” and “more study” to two foods both ranked as high-risk was not specified in the assessment. In my view, both commodities merit more study and updating of the risk assessment based on data and assumptions more than twenty years old. Re-evaluation in light of more than a decade of scientific advances characterizing the microbiota of milks would be in keeping with the general principles for MRA.²

Based on the set of data and assumptions considered by FDA and FSIS at the time, the agencies reported risk as both per serving estimates and annual estimates of severe illness. Both are estimates that together characterize risk that may inform decision-making. In the Summary Table’s left column on a per-serving basis, the agencies ranked raw milk fourth highest of the twenty-three food groups considered, and pasteurized milk ninth highest. In the right column on a per annum basis, the agencies ranked pasteurized milk second highest and raw milk ranked seventh highest.

It is notable that FDA manager John Sheehan excluded citation of the 2003 FDA/FSIS ranking of both raw and pasteurized milk as high risk for severe listeriosis from his affidavits for the Toronto case in 2018 and 2019. Nor did he acknowledge FDA/FSIS assignments of different risk management actions for raw and pasteurized milks that strongly suggest a

Summary Table 1. Relative Risk Ranking and Predicted Median Cases of Listeriosis for the Total United States Population on a per Serving and per Annum Basis

Relative Risk Ranking	Predicted Median Cases of Listeriosis for 23 Food Categories					
	Per Serving Basis ^a			Per Annum Basis ^b		
	Food	Cases	Food	Cases		
1	High Risk	Deli Meats	7.7×10^{-8}	Very High	Deli Meats	1598.7
2		Frankfurters, not reheated	6.5×10^{-8}		High Risk	Pasteurized Fluid Milk
3		Pâté and Meat Spreads	3.2×10^{-8}	High Fat and Other Dairy Products		56.4
4		Unpasteurized Fluid Milk	7.1×10^{-9}	Frankfurters, not reheated		30.5
5		Smoked Seafood	6.2×10^{-9}	Moderate Risk		Soft Unripened Cheese
6		Cooked Ready-to-Eat Crustaceans	5.1×10^{-9}		Pâté and Meat Spreads	3.8
7	Moderate Risk	High Fat and Other Dairy Products	2.7×10^{-9}		Unpasteurized Fluid Milk	3.1
8		Soft Unripened Cheese	1.8×10^{-9}		Cooked Ready-to-Eat Crustaceans	2.8
9		Pasteurized Fluid Milk	1.0×10^{-9}		Smoked Seafood	1.3
10	Low Risk	Fresh Soft Cheese	1.7×10^{-10}	Low Risk	Fruits	0.9
11		Frankfurters, reheated	6.3×10^{-11}		Frankfurters, reheated	0.4
12		Preserved Fish	2.3×10^{-11}		Vegetables	0.2
13		Raw Seafood	2.0×10^{-11}		Dry/Semi-dry Fermented Sausages	<0.1
14		Fruits	1.9×10^{-11}		Fresh Soft Cheese	<0.1
15		Dry/Semi-dry Fermented Sausages	1.7×10^{-11}		Semi-soft Cheese	<0.1
16		Semi-soft Cheese	6.5×10^{-12}		Soft Ripened Cheese	<0.1
17		Soft Ripened Cheese	5.1×10^{-12}		Deli-type Salads	<0.1
18		Vegetables	2.8×10^{-12}		Raw Seafood	<0.1
19		Deli-type Salads	5.6×10^{-13}		Preserved Fish	<0.1
20		Ice Cream and Other Frozen Dairy Products	4.9×10^{-14}		Ice Cream and Other Frozen Dairy Products	<0.1
21		Processed Cheese	4.2×10^{-14}		Processed Cheese	<0.1
22		Cultured Milk Products	3.2×10^{-14}		Cultured Milk Products	<0.1
23	Hard Cheese	4.5×10^{-15}	Hard Cheese	<0.1		

^aFood categories were classified as high risk (>5 cases per billion servings), moderate risk (<5 but ≥1 case per billion servings), and low risk (<1 case per billion servings).

^bFood categories were classified as very high risk (>100 cases per annum), high risk (>10 to 100 cases per annum), moderate risk (≥1 to 10 cases per annum), and low risk (<1 cases per annum).

pro-pasteurization bias. The discussions about RAQT results at the SRA meeting considered the CDC dataset for 2005-2020 and data from the recent decade of advances in knowledge of the microbiota of milks.²⁰

REASSESSING RISK WITH INDEPENDENT EPIDEMIOLOGIC DATA AND SCIENTIFIC ADVANCES

The final two general principles of MRA2 are of great relevance to global societies: risk estimates should be reassessed over time by comparison with independent epidemiologic data on human illness; and MRAs may need reevaluation as new relevant scientific data become available.

Many microbial risk assessment teams use epidemiologic evidence as a reality check at the end of the MRA process to compare the numbers of annual illnesses estimated from their risk models with the numbers actually observed over time from human disease surveillance programs. If inconsistencies are significant, the MRA data and models might be reexamined, the MRA results may be flagged as uncertain (low confidence), or additional data might be collected to replace assumptions for future reevaluation of the MRA.

The FDA/FSIS MRA Summary Table 1, opposite, lists estimates of high risk for per serving associated with raw milk (seven serious listeriosis cases per one hundred million servings) and moderate risks (three serious listeriosis cases per year). Now, compare the FDA/FSIS MRA annual estimate with subsequent epidemiologic data on listeriosis from the CDC dataset for 2005-2020:

- MRA estimate: three serious listeriosis illnesses per year (2003)
- CDC reported cases: two listeriosis illnesses over sixteen years (2021)

If the MRA estimate represented current data, one might expect approximately forty-eight cases in the subsequent sixteen-year period, not two. Also, in fifteen of sixteen years, no listeriosis cases were observed associated with raw milk. Clearly, subsequent CDC data are inconsistent with the FDA/FSIS ranking of moderate risk per annum for raw milk or

of the FDA position that raw milk is inherently dangerous.

The high risk ranking for listeriosis in raw milk per serving from the 2003 FDA/FSIS assessment is also inconsistent with subsequent reassessments of independent academic teams that estimated lower risk for raw milk²¹ and higher risks associated with increasing temperatures for pasteurizing milk.²²

Granted, uncertainty may be high in both MRA simulations and epidemiologic data.

Based on international consensus on general principles,² the epidemiologic evidence and the protective effects against infectious pathogens¹⁸ and non-communicable disease¹⁷ support the need for updating the milk FDA/FSIS MRA (2003),¹⁰ as well as the MRA subsequently prepared by FSANZ (2009).¹⁵

Moreover, trends since 2005 in raw milk outbreaks and illnesses across all bacterial pathogens are flat or declining, not increasing, for both the U.S. overall and for each U.S. state (manuscript under review). In fact, Figures 2 and 3 (below) document the fact that retail raw milk production in California and numbers of raw milk licenses approved by New York state are increasing in this time period, while raw milk outbreak numbers and rates are flat or declining. This is exactly contrary to what would be expected if access to raw milk was linked to increasing numbers of outbreaks and illnesses.

Milks, both raw and pasteurized, are not risk-free. For the most recent eighteen years of data from the U.S. CDC (2005–2020, NORS

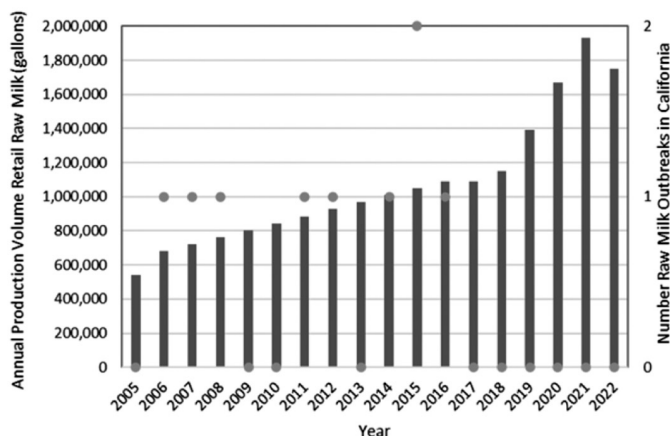


FIGURE 2: California retail raw milk production from one licensed dairy and state outbreaks by year.

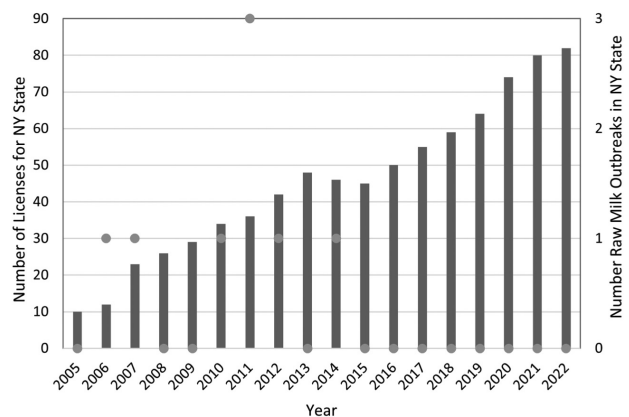


FIGURE 3: New York state licenses for raw milk dairies and outbreaks by year.

Access dataset; 2021-2022, NORS online Dashboard), the state of California reported a total of six outbreaks, eighty-three illnesses, eleven hospitalizations, and no deaths associated with raw milk. Of those eighty-three illnesses, sixty-eight were campylobacteriosis and fifteen were due to pathogenic *E. coli* O157:H7. One California producer (Raw Farm, formerly Organic Pastures) sold nearly nine million gallons of retail raw milk from 2017 to 2022, without a single outbreak reported in the state linked to raw milk consumption. This volume of raw milk in the California retail market represents a risk of infectious illness of less than one in twenty million 250-mL servings.

For New York, the most recent eighteen years of data (2005–2022), a total of eight outbreaks, fifty-eight illnesses, four hospitalizations, and no deaths were reported. All those fifty-eight illnesses were campylobacteriosis. No raw milk consumers became ill from other pathogens—which caused more hospitalizations (and deaths) from consuming leafy greens!

The available evidence is consistent with adequacy of current hygienic procedures and cold-chain for raw milk producers, which minimizes risk of illness and enhances safety for listeriosis, perhaps illnesses from pathogenic *E. coli* and *Salmonella*, but not for *Campylobacter*. The burden of campylobacteriosis for both raw and pasteurized milks warrants further study and evaluation, particularly regarding technologies to disrupt biofilm formation.⁶⁻⁹ We note the societal need for cultivating a culture of quality analysis in governmental MRA projects and support updating the 2003 and 2009 MRAs for raw milk.

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REAL MILK UPDATES: BIG YEAR FOR RAW MILK IN STATE HOUSES

Over the past decade or so, a growing number of states have passed laws either to legalize the sale of raw milk and raw milk products or to increase access to raw dairy; no year has been as productive as 2023. Resistance from the dairy industry and public health agencies is not as great as it once was, and demand for raw dairy products is increasing rapidly. Through either statute, regulation or policy, forty-six states now allow the sale of raw milk for human consumption, the sale of raw milk for pet consumption or the distribution of raw milk through herdshare agreements.¹ The four outliers prohibiting any sale or distribution of raw milk are Hawaii, Louisiana, Nevada and Rhode Island. The states passing raw dairy legislation this year include:

IDAHO – Senate Bill 1036 (SB 1036) removes the limit on dairy animals that herdshare operations can have; under prior law, herds were limited to seven cows, fifteen goats or fifteen sheep.

IOWA – Iowa became the forty-sixth state to legalize raw milk sales or distribution when Senate File 315 (SF 315) passed into law. The bill allows the sale of any dairy product from producer direct to consumers on the farm or through delivery. There are testing, labeling and record-keeping requirements. Farms must have no more than ten animals producing milk at any one time.

NORTH DAKOTA – House Bill 1515 (HB 1515) legalized the unregulated sale of raw milk and any other raw dairy products from producer direct to consumers. Under prior law, only the distribution of raw milk and raw milk products through herdshare agreements was legal. HB 1515 originally allowed only Grade A dairies (who produce milk for pasteurization) to sell raw milk to the consumer, but those supporting raw milk sales by all dairies hijacked the bill, turning it into the version that passed. The North Dakota Department of Agriculture (NDDA) has issued a press release² claiming that sales are limited to raw milk only (and not other raw dairy products) under HB 1515 even though the bill states that farms selling raw milk direct to consumers aren't subject to any provision of the chapter in the North Dakota statutory code, titled "Dairy Product Regulation."³

UTAH – House Bill 320 (HB 320) legalizes retail sales of raw milk and any product produced from raw milk if a licensed producer has a majority ownership in the retail store. Licensees may also sell these products on-farm as well as deliver and/or sell via refrigerated mobile unit. Prior law limited the raw dairy products licensees could sell to milk, butter and cream. HB 320 marks the fourth raw milk bill since 2015 that the mother-daughter team of Symbria and Sara Patterson, founders of the nonprofit Red Acre Center, have been responsible for passing.

WYOMING – Senate Bill 102 (SB 102) allows the sale of any raw dairy products produced by unregulated producers in retail stores. Prior law limited transactions to direct to consumer. When it comes to food freedom of choice, Wyoming remains way ahead of the curve; allowing any raw dairy products produced by an unregulated farmer to be sold in a retail store would have been unfathomable in any other state. How much raw dairy is sold in Wyoming retail stores will likely be determined by what stores require for a producer to obtain product liability insurance; it is difficult enough for regulated raw milk producers to get a product liability policy.

The biggest development in 2023 was in Iowa, a state that had once jailed someone for selling raw milk. Senator Jason Schultz (R) and farmer Tom German had been trying for seventeen years to legalize raw milk sales in the state. A difference maker this time around was dairy farmer Esther Arkfeld, a mother with young children, who was the face of the effort to legalize raw milk sales in Iowa. Lobbyist Tyler Raygor of Americans for Prosperity (AFP) also helped; Raygor and another member of AFP were the only ones who registered with the state to lobby for the bill; twenty-four people—representing government agencies, the dairy industry and Farm Bureau among other organizations—registered to lobby against SF 315.

The national opposition to further legalization of raw milk sales in any state made Iowa a litmus test. Mary McGonigle-Martin, a board member of the national food safety group Stop Foodborne Illness said, "Public health has lost the war on raw milk."⁴ McGonigle-Martin had testified four different times in opposition to Iowa raw milk bills. Passage of SF 315 into law struck a nerve with the mainstream media, which published more stories about raw milk after the Iowa law went into effect than it had in years. *USA Today*, the *New York Times* and *Forbes*, among other major media, ran stories warning about the "health risks" of drinking raw milk in an attempt to dissuade their readers from joining the millions of people who are already consuming the product.

A trend in recent years that accelerated in 2023 was the legalization of the sale of raw dairy products other than milk. In addition to Iowa, North Dakota, Utah and Wyoming, laws have also gone into effect since 2021 in Alaska, Montana, New Hampshire and Texas, allowing the sale of numerous products made from raw milk. Value-added is where the money's at; the trend bodes well for the ability of small-scale dairy farmers to make a living. It appears that the dairy processing lobby is no longer fighting the legalization of value-added raw dairy sales like they once did.

The food safety argument—the opposition's only argument—leans increasingly in favor of raw milk proponents. The latest foodborne illness outbreak figures from the Centers for Disease Control (CDC) are that in 2020 there were five foodborne illness outbreaks resulting in twenty-eight illnesses that were attributed to raw milk consumption.⁵ The number of raw milk consumers continues to increase considerably; hundreds of thousands of consumers go to realmilk.com each year for the first time to find a source of raw milk in their state. The number of illnesses attributed to raw milk consumption is significantly less than it was a decade ago.

Increased demand, fewer illnesses and deteriorating quality in the conventional food supply are a formula for raw milk legalization. The next state to lift the prohibition on any raw milk sales or distribution could be Hawaii. That state has had bills for legalizing raw milk sales by micro-dairies passed out of the House the last two years only to die in Senate committee. There is only one dairy producing raw milk for pasteurization in Hawaii. For reasons of food security alone, a raw milk bill there should pass into law.

Whichever of the four remaining states is next to get rid of the ban, the goal of the Weston A. Price Foundation is to have legal raw milk distribution in every state, and that goal is getting closer to realization.

MISSISSIPPI - HERDSHARES LEGAL BY POLICY

Until recently, Mississippi allowed the sale of only raw goat milk, and then only if the farm had nine goats or fewer. Thanks to state Agriculture Commissioner Andy Gipson, that has now changed per the policy of the Mississippi Department of Agriculture. Under the policy, distribution of raw milk (including cow's milk) through herdshare agreements is legal; there has been some pushback from the state department of health, but the policy remains in place. Farm-to-Consumer Legal Defense Fund (FTCLDF) has written herdshare contracts for its Mississippi members.

Gipson has been one of the more progressive agriculture commissioners in the country. In 2020 he adopted a policy on distribution of meat from custom slaughtered and processed animals—better enabling small farmers and ranchers to make a living—by removing the limit on the number of owners there could be for a custom animal. Prior to becoming commissioner, Gibson served in the Mississippi legislature where he supported several food freedom bills, including legislation to legalize the sale of raw cow's milk.



WAPF member Cathleen Bull shares a delightful moment: her grandson Reece enjoying a delicious glass of raw buffalo milk!

NORTH DAKOTA - NDDA TRIES TO STOP SALE OF RAW DAIRY PRODUCTS

At the time House Bill 1515 (HB 1515) went into effect on August 1, the North Dakota Department of Agriculture (NDDA) issued a press release claiming the new law limited farmers to selling raw milk only and not other raw dairy products. Even though the bill specifically mentions only raw milk sales, HB 1515 stated that farms selling raw milk under the bill weren't subject to any provision of a chapter in North Dakota statutes titled "Dairy Product Regulation," laws governing the production and sale of any dairy product, such as permitting and sanitation. NDDA sent warning letters to at least two dairies ordering them to stop selling raw dairy products other than milk.


NDDA's position on the new law was surprising in light of the decline in the North Dakota dairy industry. There are only 36 Grade A dairies left in the state; only one dairy pasteurizes and bottles their own milk. The price the other Grade A dairies receive for their milk is around a dollar per gallon after expenses—a ticket to bankruptcy. With the excellent track record for safety of raw dairy products such as butter, allowing the sale of value-added raw dairy would be a good move to give dairy farmers—especially the Grade As—a better chance to thrive. If NDDA does not change its position on raw dairy sales, litigation over the matter could be taking place in the near future.

MAINE - TEST CASE FOR MAINE FOOD SOVEREIGNTY ACT

An important case from Maine Food Sovereignty Act (FSA) and possibly the state's Right to Food Constitutional Amendment (RTFA) is ongoing in Kennebec Superior Court. Nathan and Rhiannon Deschaine, owners of Kenduskeag Kitchen, their customer Frank Roma, and the Farm-to-Consumer Legal Defense Fund (FTCLDF) have sued Jeanne Landrew, Commissioner of the state Department of Health and Human Services (DHHS), for violations of the FSA and the RTFA. The Deschaines prepare and sell home-cooked meals in Kenduskeag, a town which per the FSA, has passed an ordinance allowing the unregulated sale of most foods direct from the producer to consumer. The FSA gives towns and cities in Maine, the power to adopt ordinances legalizing unregulated local producer-to-consumer commerce within their boundaries.

DHHS sent an enforcement letter to the Deschaines in October 2022, claiming that the couple needed a license to operate their business because, among other reasons, "Kenduskeag Kitchen does not meet [the] definition of direct producer to consumer transactions because it is preparing and selling meals that contain food products and/or ingredients that are purchased from other sites." The FSA contains no restriction that producers engaging in unregulated commerce under a town ordinance are limited to preparing food with only ingredients that they grow.

Roma is suing DHHS for a violation of the RTFA, which gives individuals the right "... to consume the food of their own choosing ... as long as an individual does not commit trespassing, theft, poaching, or other abuses of private property rights, public lands, or natural resources in the harvesting, production or acquisition of food."

Plaintiffs are seeking to have DHHS enjoined from regulating the operation of Kenduskeag Kitchen and requiring it to be licensed; the department has filed a motion to dismiss the lawsuit. A favorable resolution to the case for the Deschaines, Roma and FTCLDF should lead to a more expansive interpretation of the FSA and RTFA statewide, improving food security and food quality in Maine. 

Those who have not joined the Farm-to-Consumer Legal Defense Fund are encouraged to do so. Membership applications are available online at farmtoconsumer.org or by calling (703) 208-FARM (3276); the mailing address is 8116 Arlington Blvd, Suite 263, Falls Church, VA 22042.

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Healthy Baby Gallery



This little munchkin, Ana Luiza (left), is eight months old and the first grandchild of long-time WAPF members, born at home without assistance last November with her proud grandma at her side. Ana Luiza's mama was raised on a traditional foods diet—including animal fats, raw dairy and fermented and cultured foods, whereas her grandma was fed soy formula as a baby and was vaccinated with every vaccine on offer (a lot fewer than now, but not great either), spending most of her childhood on antibiotics and four continuous teenage years on tetracycline to “treat” acne. As a baby, Ana Luiza's mama received her first vaccine at four months old and had a negative reaction; her parents instantly understood it to be from the vaccine (with a little help from a wise pediatrician), and she was never vaccinated again. Ana Luiza thrives on breast milk; grass-fed and organic animal foods and fats from lamb, liver, beef and pork; some berries with raw cream; and vegetables cooked in ghee and tallow. She was nine and a half pounds at birth and has never been unwell. It's amazing to see how bright and engaged she is. Her grandparents couldn't be more in love. This is also a love note for WAPF. Your work matters—we can heal generational illnesses and poor health!



Junia (below) is a one-year-old bundle of joy and energy. Her mother, a chapter leader and holistic dietitian, enjoyed a healthy, easy pregnancy eating WAPF foods (raw milk, liver, sardines, cheese, fermented veggies and homemade sourdough bread), taking walks in the woods and sharing the joys of pregnancy with two other expectant mamas. Despite a long and difficult birth that ended in a C-section, Junia has been a robust, vibrant baby since day one. She is social, curious and active, and draws attention for her beauty and brightness wherever she goes. Of course, she loves to eat. Her favorite foods are homemade yogurt, cheese, butter, sausage, bananas and breast milk! Her face lights up when it is time for her daily cod liver oil, and she licks the spoon clean! Junia's family is so blessed to have the wisdom from traditional diets and WAPF to help keep her as healthy and happy as possible!



John Larix Jacob B. (left) was born at home into an old fuel tank converted to a cold plunge tank/birthing tub. He is a joyous little guy. (His parents say he's the reason people have babies.) He is sweet, giggly and loves to wrestle. His mother was trying to grow a fat, happy baby this time round, and by God's grace (and lots of raw milk, beef, liver, honey, fruit, etc.), she was successful. The family thanks WAPF for the nutritional wisdom that is so important. They continue to do elimination communication and encourage other parents to let their baby use the potty!



Maven (right, shown at two months) is now four and a half years old and was joined in July 2023 by her sister Leiora (not shown). The family has been following WAPF since 2004, eating plenty of meats, fermented veggies and raw dairy. Mom was thirty-eight when she had Maven—the family's first child—and in her early forties when Leiora was born. Both pregnancies were easy, and the second birth was even easier than the first (perhaps due to the increased cream and cod liver oil mom consumed and the fact that it was a home birth). Both girls were born with big round heads and faces and broad noses, quite different from their parents, who both have very narrow faces and palates. The girls were/are completely breastfed—no pumping, no formula and no bottles.

Local Chapters

Local chapters help you find locally-grown organic and biodynamic vegetables, fruits and grains; and raw milk products, butter, eggs, chicken and meat from pasture-fed animals. They also represent the Weston A. Price Foundation at local fairs and conferences and may host cooking classes, potluck dinners and other activities to help you learn to integrate properly prepared whole foods into your life. Local chapters may be able to put you in touch with health practitioners who share our philosophy and goals. **IMPORTANT WARNING: This chapter list is meant for individuals to contact a local chapter for food sources and for small farms or food producers to contact chapters near them. It is not for use by vendors and marketers. If you use the chapter email addresses to promote a product, even a free product or giveaway, we will not allow your company to advertise in *Wise Traditions* journal nor exhibit at our conference.**

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SAN DIEGO EXPO

Chapter leader Nancy Teas-Crain attended a local sustainability expo organized by a private membership association (PMA).



SAN DIEGO CHAPTER

The chapter enjoyed a pleasant potluck under the trees.

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CENTRAL FLORIDA

Chapter leaders Karen Greer-Gay (left) and Carrie Perez (not shown) enjoyed sharing WAPF principles with health-minded ladies at the Crescent Oaks Golf Club in Tarpon Springs. Several attendees were excited to hear about local raw milk resources, while others were surprised to read the truth about diet and nutrition!

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ROCHESTER, NEW YORK

The chapter's annual potluck dinner attracted sixty smiling people all savoring the special time together and the outstanding food made with love and care. The opportunity to connect with both familiar faces and newcomers was priceless. Having seven generations in attendance was especially meaningful, as we know that Dr. Price intended his work for this very purpose—to support the improved health of future generations.



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LOCAL CHAPTER BASIC REQUIREMENTS

1. Create a food resource list of organic or biodynamic produce, milk products from pasture-fed livestock (preferably raw), pasture-fed eggs and livestock and properly produced whole foods in your area.
2. Provide a contact phone number to be listed on the website and in our quarterly magazine.
3. Provide Weston A. Price Foundation materials to inquirers, and make available as appropriate in local health food stores, libraries and service organizations and to health care practitioners.
4. Provide a yearly report of your local chapter activities.
5. Be a member in good standing of the Weston A. Price Foundation.
6. Sign a contract on the use of the Weston A. Price Foundation name and trademark.

OPTIONAL ACTIVITIES

1. Maintain a list of local health care practitioners who support the Foundation's teachings regarding diet and health.
2. Represent the Foundation at local conferences and fairs.
3. Organize social gatherings, such as support groups and pot luck dinners, to present the Weston A. Price Foundation philosophy and materials.
4. Present seminars, workshops and/or cooking classes featuring speakers from the Weston A. Price Foundation, or local speakers who support the Foundation's goals and philosophy.
5. Represent the Weston A. Price Foundation philosophy and goals to local media, governments and lawmakers.
6. Lobby for the elimination of laws that restrict access to locally produced and processed food (such as pasteurization laws) or that limit health freedoms in any way.
7. Publish a simple newsletter containing information and announcements for local chapter members.
8. Work with schools to provide curriculum materials and training for classes in physical education, human development and home economics.
9. Help the Foundation find outlets for the sale of its quarterly magazine.

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CHAPTER RESOURCES

Resources for chapter leaders can be accessed at westonaprice.org/local-chapters/chapter-resources, including our trifold brochures in Word format, the chapter handbook, PowerPoint presentations, business cards and more.

The Weston A. Price Foundation currently has 430 local chapters:
360 serve the District of Columbia and every state in the U.S.
except Delaware and West Virginia and 70 serve 26 other countries.

LOCAL CHAPTER CHAT GROUP

Our chapter leaders have a wonderful secure platform to carry on our many beneficial discussions, developed by Jay Hamilton-Roth, the husband of one of our chapter leaders. We encourage all chapter leaders and co-leaders to join if interested in learning and growing as leaders and individuals. To join, contact Maureen Diaz: outreach@westonaprice.org.

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BATH, ENGLAND

Philip Ridley, honorary Board member and London chapter leader, exhibited at the Better Way conference in Bath, England.



The Shop Heard 'Round the World

Dedicated to Helping the Consumer Obtain Nutrient-Dense Foods and Accurate Nutrition Information

CO

Meadow Maid Foods, 100% grass-fed, grass-finished beef. On pasture year-round at the family ranch in WY. Production practices detailed on our website. Custom beef, Farmers markets, and food co-op in Fort Collins. meadowmaidfoods.com, (307) 534-2289.

Rafter W Ranch, Simla, CO. A family-owned ranch, practicing regenerative agriculture, bringing you nutrient-dense food. Our animals are **100% certified American Grass-fed**. Our beef is 30-day dry-aged. We also offer pasture-raised lamb and broiler chickens. Bones, offal (liver, tongue, oxtail, kidney, cheek, heart) and other choice cuts available. Bulk and piece orders. *We are part of the Harvest Host*. Pick-up locations along the Front Range and **NOW shipping** in CO. (719) 541-1002, rafterwranch.net.

FL

Beyond organic, regenerative family farm selling raw goat milk, yogurt, kefir and cheese locally in Lake County Florida, along with probiotic skincare using live cultured yogurt, extracts and herbs from our chemical-free farm. We ship our skincare products. www.farmercrafted.com farmercrafted@gmail.com.

Ecofarm Florida Diverse Earth & WAPF-Friendly Farm serving the Tampa Bay area. Pastured water buffalo products, organically grown vegetables and seasonal fruits, edible container plants and trees. Farm buying club and produce available at two markets. ecofarmfl@yahoo.com, (813) 708-3179.

GA

Broad River Beef, LLC, tender, flavorful Angus beef, 100% grass-finished, toxin-free and mineral rich. Cuts you actually use available in sizes that actually fit in your refrigerator. Produced seasonally with nature. Delivery available from Atlanta through northeast Georgia. broadriverbeef.com, (706) 310-8060.

ID

Idaho Food Coop specializes in providing pasture raised meats and wild caught fish. Beef and lamb are grass finished and our poultry is pasture raised. Pastured meats, organs and bones are available. Pickup locations are located throughout southern Idaho. idahofoodcoop.com.

IL

Honeysuckle Farm, Morris, Illinois is a family-owned and operated small-scale, pasture-based farm. We offer pastured eggs, chicken, turkey, and pork, raw honey, syrup, and raw A2 milk. Locally milled non-GMO feed, antibiotic and chemical-free. Order online at honeysucklefarm.net.

IN

DEVON BEEF, 100% grass fed, no antibiotics, no growth hormones. Full cow, 1/2 cow or individual cuts from my ranch in St. Leon, Indiana. Pastured pork, 100% antibiotic free, fed minimum amount of organic corn, 100% outdoors on pasture and woods. All meat USDA inspected. Information on how we raise our beef and pork plus important health links at abundantgreenpastures.com or Mike at (513) 646-8739.

HILL N DALE, RED DEVON 100% grass fed beef, RED WATTLE non-gmo pork, ROBUST WHITE pastured chickens, BRONZE pastured turkeys. On Farm Store open six days a week, delivery available. 12683 South 300 East, North Manchester, IN (260) 578-7294.

MA

Many Hands Organic Farm in Barre, MA. All products certified organic and free range. Lard, pork, chicken and turkey stocks, pork, chicken, turkey and 26 weeks of CSA. No till, nutrient dense. mhof.net; (978) 355-2853; farm@mhof.net.

MD

Chesapeake's Bounty: A local foods market in North Beach and St. Leonard. Local seafood, produce, meat, dairy, baked goods and plants. All products are grown, caught or processed in the Chesapeake Bay region. Chesapeakebounty.com StL: (410) 586-3881 (7 days week) or NB: (443) 646-5700 (Fri, Sat, Sun).

Nick's Organic Farm, since 1979 offering quality products to Washington, DC, suburban MD, No. VA, Baltimore and Frederick areas. 100% grass-fed beef (no grain ever), pastured chicken, turkey, eggs. Using a regenerative 12 year crop rotation, we constantly move our livestock to fresh pastures to build our soils. Our animals receive only organic feed raised on our farm, no hormones, no antibiotics, no animal by-products, no GMOs. Beef and poultry liver, organ meats, fat, and bones, chicken/turkey feet, beef sausage and jerky. Hay, straw, poultry feeds, food grade grains, popcorn, stone ground heirloom cornmeal (301) 983-2167; nicksorganicfarm.com; nicksorganicfarm@comcast.net. **JOIN our mailing list** to receive **order forms** and an invitation to our annual **Buckeystown Farm Tour**.

100% soy-free chicken, eggs, pork and beef. Chicken livers, chicken feet and heads. Bacon and sausage. Raw pet milk. Raw milk blue and cheddar cheese by cheesemaker Sally Fallon Morell. **Will ship** whole cheese wheels. Southern Maryland, within 1 hour of downtown Annapolis and Washington, DC. Saturday farm tours. Store open Thursday to Saturday 10-6 or by appointment. P. A. Bowen Farmstead, 15701 Doctor Bowen

Road, Brandywine, MD. (301) 579-2727, pabowenfarmstead.com.

MN

Farm On Wheels offers animals raised green grass-fed & organic. USDA inspected. Nutrient-dense beef, lamb, chicken, eggs, turkey, goose, duck, and pork, no corn or soy or GMOs. Farmers Market year around in St. Paul, Prior Lake. Linda (507) 789-6679, farmonwheels.net, farm_on_wheels@live.com.

MO

1984Farms.com - Regenerative farm in Atlanta, Missouri, providing pastured-raised/finished beef, lamb and pastured corn/soy-free pork. Shipping weekly nationwide. No synthetic or toxic chemicals used. Order online and read more information on our values and methods. Kerissa info@1984farms.com, (435) 224-4593

NC

Little Way Farm, Siler City, NC is a family-owned farm, practicing regenerative agriculture and operating on a human scale. We offer 100% grass-fed and grass-finished beef and lamb, woodland-raised pork, pasture-raised poultry and eggs, wild caught seafood, and 100% natural and raw honey. We follow intensive rotational grazing practices, with no hormones, antibiotics, GMOs, or pesticides. Shipping available nationwide, as well as home delivery and local pick-ups in central NC. Order online at littlewayfarmsilercity.com.

NY

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OH

COPIA FARM, Dan & Caitlin, Short drive from Columbus, Johnstown Ohio. Farm store open daily, 9 am-7 pm. Raw milk herdshares, grass-fed meats, pasture-raised eggs, organic produce, organic sourdough bread & more! Regenerative, GMO-free, organic,

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paleo. (614) 915-9269, CopiaOhio.com.

Sugartree Ridge Grassfed Herdshare/PMA, located 60 miles east of Cincinnati in Highland County. We deliver 100% grass-fed milk, optional A2-A2 milk and many other products to sixteen delivery sites in Cincinnati. Farm and contact address is: Scott Richardson, STRG Herdshare 6851 Fair Ridge Road, Hillsboro, OH 45133-9548.

OR

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GAP VIEW FARM MARKET Raw milk, raw milk cheese, cream butter, eggs, including duck eggs and fresh vegetables from our chemical free farm. Call (484) 667-1382 or visit our farm market in the heart of Lancaster County, PA at 5230 Newport Rd, Gap, PA 17527.

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Visit our farm and choose from our selection of grassfed beef and lamb, and pastured soy-free pork, chicken and eggs. Hours: Wednesday and Saturday 9 am-11 am; Friday 3 pm-7 pm. **We ship.** Locust Grove Farm, 619 Locust Grove Road, Port Trevorton, Pennsylvania 17864.

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wilds of God's creation. Call or text Cleason Weaver at 717-706-5961 to order or visit: 501 Shippensburg Rd. Newville, PA 17241.

TN

Echo Valley Farm, Madisonville, Tennessee Organic grass fed, herd shares for raw milk, raw cream, raw butter, raw yogurt, raw kefir, beef and raw pastured free-range eggs. Our herd share owners have enjoyed a 100% safety record for over 15 years. (865) 399-8320 www.echovalleyfarms.net.

Martin Family Farm - located between Knoxville and Chattanooga. Offers pastured pork, eggs, 100% grassfed lamb, pasture raised meat chickens, 100% grassfed - grass-finished beef, veal, and whole raw A2A2 milk from 100% grassfed Jerseys. Everything is organically raised in harmony with nature, and is sold at the farm. Contact address and farm location: Martin Family Farm 959 Co Rd 423, Athens, TN 37303.

VA

Salatin family's Polyface Farm has salad bar beef, pigator pork, pastured chickens, turkeys and eggs, and forage-based rabbits. Near Staunton. **Nationwide delivery available.** Call (540) 885-3590, polyfacefarms.com.

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WY

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APPRENTICE/EMPLOYMENT

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GARDENER/COOK Organic regenerative ranch near Olympia Washington seeking seasonal gardener/cook through end of harvest. Room, board, stipend, travel expenses. Email qualifications and interest to Lawren@wellaroo.com.

Internships: 300-acre family farm in Live Oak, Florida with 20 years of success and over a half million in gross sales wants to share their success secrets. We have on-farm housing to rent and classes in butchery, cow and goat milking, pastured poultry, pigs, permaculture, gardening, silvopasture and broad acre food forest, and more. We offer internships with hands-on experience for a weekend, week long, month or 6-months. Contact us for prices and bookings thisisdennis@startmail.com.

MILKER AND FARM HAND Organic regenerative ranch near Olympia, Washington seeking seasonal cow milker through end of fall. Room, board, stipend, travel expenses. Email qualifications and interests to Lawren@wellaroo.com.

Prairie foods is seeking a marketer. We are a group of plain select farmers currently growing and shipping Dairy beef pork chicken and eggs. We are seeking a dedicated individual that is passionate about healthy food to create and manage a website for us (570) 855-3715.

Temple Wilton Community Farm in Wilton, NH is seeking aspiring or experienced vegetable farmer apprentices for the 2023 season. We are one of the country's two oldest CSA farms, offering organic vegetables, grass-fed dairy and cheese from our on-site creamery. Apprentices will be paid monthly and offered housing, food, and dairy from April-November. Learn biodynamic, regenerative, and no-till farming methods mostly done by hand on our 4-acres of cultivated land. For more information, visit twcfarm.com or email blanknoriega@gmail.com with a brief resume and statement of interest. We look forward to growing with you!

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DVDS/ON-LINE VIDEOS/BOOKS

DVD "Nourishing Our Children" recently launched a DVD that may be used for one's self-education or to present to an audience. You will learn how to nourish rather than merely feed your family. nourishingourchildren.org/DVD-Wise.html
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For sale: 67 Wise Traditions journals; 2001-2020 in good to excellent condition. Will sell all for \$400 including shipping (OBO). Missing W2003, Su2005, W2007, Su2009 and F2012. (540) 626-5287, ldt.pwp@gmail.com.

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FARMING VENTURE

Grassroots Farmers (GRF) is leading a life changing Colorado movement cultivating local organic sustainable solutions through co-farming 41 acres in southern Colorado. We are looking for farming nonprofits and organizations to bring into the folds as we break ground on our 6 acre Fountain property as proof of concept as we expand into our 35 acre Las Animas property. We are starting with two 1,024 square foot structures to provide farmer lodging/housing, community bathrooms and showers in April weather dependent. Sign up for April Volunteer Sundays here: <https://www.grassrootsfarmers.org/april-build-volunteer-sign-up> We are a new birthing nonprofit farm, donations are graciously accepted! Here is our donation link: <https://www.grassrootsfarmers.org/donate> We are looking for a storage container(s) to start growing chicken fodder feed. If anyone has a connection/access/wanting to get rid of theirs we'd love to connect with you.

HEALTHY FOOD/PRODUCTS

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RESEARCH

Do you have a child with a chronic health or developmental condition? The Documenting Hope FLIGHTTM Study is recruiting participants in Northern Virginia! Nutritious food, doctor/practitioner visits, supplements, lab tests, etc. provided at no cost. To learn more: documentinghope.com/flight-study.

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Seeking adoption connection. We wish to welcome a baby into our family and rural Wisconsin homestead. We follow WAPF health practices and are looking for a birth mother or adoption agency with similar values. Please send responses or suggestions to Gabby at wiseadoption@gmail.com.

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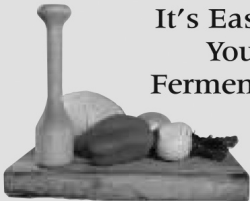
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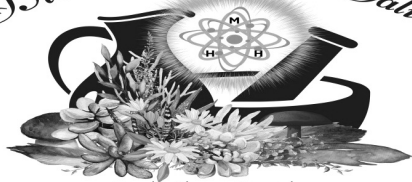


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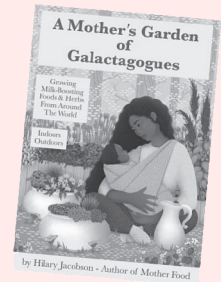
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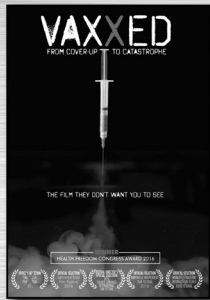
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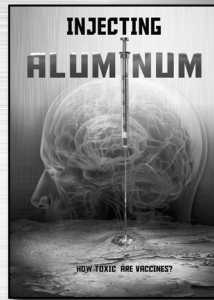
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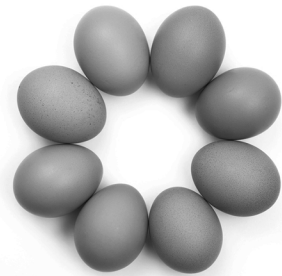
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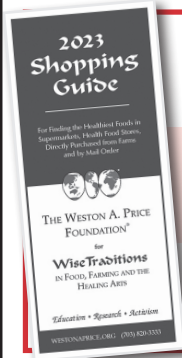
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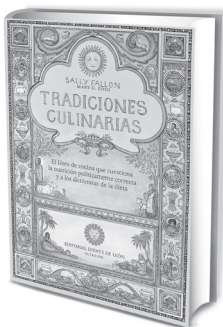
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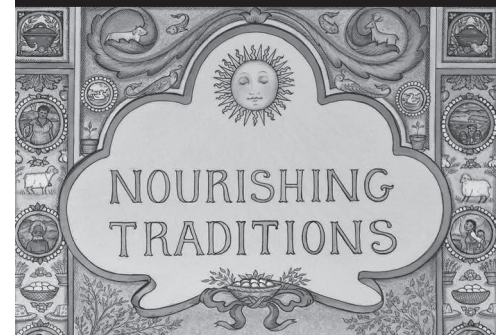


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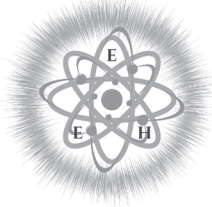
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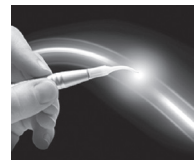


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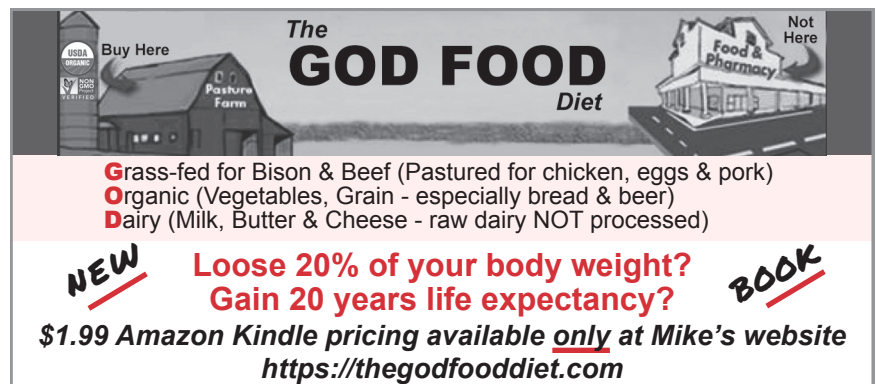
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Last words of Dr. Weston A. Price, January 23, 1948



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