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Wise Traditions

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



Education ♦ Research ♦ Activism
westonaprice.org



Volume 25 Number 3

Fall 2024

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THE WESTON A. PRICE FOUNDATION®

Education ♦ Research ♦ Activism

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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

The health crisis in the population—particularly in our children—has become so bad that both presidential candidates are talking about it. So I feel justified in chiming in on how to Make America Healthy Again. Here's what I would do if I were president:

- Have the Justice Department get a Supreme Court ruling on the constitutionality of the 1986 Act whereby vaccine manufacturers were granted immunity from any liability for injuries caused by vaccines—because the Act is clearly unconstitutional. By removing immunity for manufacturers and health care workers, the push to poison our children with vaccines would disappear overnight.
- In addition, have the Department of Justice put a stop to incentivized medicine, whereby doctors get bonuses for writing prescriptions, a practice that clearly constitutes racketeering and makes our doctors very aggressive in pushing vaccines and pharma-based medicine.
- Ban fluoride in the water supply.
- Abandon the dietary guidelines—they make us sick and infertile.
- Support legislation making it illegal to give children reduced-fat milk. Milk used in baby formula and provided in school lunches should be full-fat milk.
- Stop all persecution of raw milk and raw milk products; provide grants to help farmers start producing raw milk.
- Require the clear labeling of free glutamic acid (MSG) added to food or formed during processing, with a warning that its presence in food can predispose to weight gain. Also, require clear labeling for the salt substitute Semonyx.
- Rescind approval for spraying glyphosate on grains and legumes as a desiccant just before harvest.
- Mount an education campaign on the health benefits of animal fats: butter, tallow, lard and poultry fats.

Dr. Tom Cowan, Leslie Manookian and myself will be discussing this very topic—what can be done to make America healthy again—at the closing ceremony of Wise Traditions 2024. If you are planning to register, do so now. Tickets are going fast. 

Letters

THE RAW MILK CURE

Early in the 20th century, doctors were curing terminal diseases and other types of sickness with protocols built around a 100 percent raw milk diet for a period of weeks or months. For example, see returntonow.net/2023/01/17/why-youve-never-heard-of-the-mayo-clinics-raw-milk-cure/

Now the medical drug dealers have eliminated almost all discussion of this critical information. I want to contact anyone currently using this therapy, perhaps as a health professional, retreat owner or in some other capacity. Please email me at richard@globalleadersconsulting.com if you have any practical experience with this therapy. [You could also send a Letter to the Editor for this journal.]

Richard A. Sacks, PhD
Host of Lost Arts Radio

IN THE SEARCH FOR HEALTH

In the search for health, I would love some feedback from those who have looked into the effects of glyphosate on humans. We are in Florida. I wanted to share three different stories. First, after moving to and living in Florida for a few years, I started to have symptoms such as significant fatigue and swelling in my fingers and sometimes lower legs. I am a very physically active athlete who eats a Wise Traditions diet, and I don't eat out. I never had these issues before. I got a thermography scan which showed significant lymph congestion. When I leave Florida all the symptoms go away. When I return, they come back (although now not as severe since I started implementing some lymph drainage techniques). I realize there are many reasons (some emotional) the

lymph system could become congested. I realize that glyphosate is sprayed in most places, however it is not sprayed nearly as much where we visit (when outside Florida) compared to how much is sprayed in our Florida neighborhood and county. All my neighbors spray, and all our parks and playgrounds are sprayed, even the cracks in all the sidewalks downtown.

Second, my nine-year-old son experiences "allergy" symptoms when in Florida, but not in other places. I understand that it could be pollen, etc., but he doesn't suffer from any symptoms when in any other state. But as soon as we get back to Florida, regardless of the time of year, he immediately is symptomatic, with massive congestion all the time. He also eats a good diet with no junk.

Third, one of my son's friends suffers from symptoms such as severely

Are you a pasture-based farmer seeking customers?



The Weston A. Price Foundation can Help!

1. **Contact a volunteer chapter leader near you to be added to their Local Food Resource List.** ("Find Food/Local Food" tab on our website.)
2. **Advertise in our quarterly journal**, which goes to 15,000 members. ("Get involved" tab on our website.)
3. **Are you a dairy farmer? Advertise for free on our site, RealMilk.com.** (At the bottom of the homepage is a link to add a listing.)

For a list of how we can help farmers and food producers, go to: westonaprice.org/farmhelp



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Letters

inflamed red eyes (he looks like he has been hit in both eyes), and trouble breathing. After a couple years of trying to figure it out, his mother took him to a biological dentist who said his tonsils and adenoids were swollen, and they thought it was because his lymphatic system was severely congested. After talking to his mom, I found out that the symptoms significantly increase every time he is on the golf course (six times a week because he is a competitive golfer). Obviously, golf courses are the most heavily sprayed places of all.

So after hearing our friend's story, and comparing it to mine and my son's, I started to wonder whether it's the glyphosate. Have any of you read about these types of symptoms from glyphosate? Is there a homeopathic remedy that could possibly help these symptoms or the lymphatic system if this is indeed caused by glyphosate spraying?

I remember the lawsuits against

Roundup by those who have lymphoma. But I haven't dived in much more than that.

Any other insight? Would the GAPS protocol help even if we continue to live where we live and our friend continues to play golf on sprayed courses? Even though the GAPS diet may help heal our terrain, would the continued exposure to glyphosate keep wreaking havoc and most likely cause symptoms? I am unsure why we would be affected by the glyphosate in this manner when our neighbors seem not to suffer—but they may suffer in different ways that I am not aware of or perhaps they are all on medication, who knows!

Anya
Sarasota, Florida

THRIVING ON THE FORMULA

I wanted to reach out to thank you and let you know the information you've provided has transformed my entire family's life and has played a sig-

nificant role in our lives for over twenty years since we first read Weston Price's book. So, I wanted to share a story.

My wife Ashley and I had our first-born child last year. From a young age after a bout with cervical cancer Ashley was told it would be highly unlikely she would be able to conceive a child. We followed your suggested prenatal diet and Ashley got pregnant naturally at age thirty-seven. Our son was born two months premature due to her remaining cervix letting go. After a month in the NICU, our son Isaiah was able to come home from the hospital.

We followed your baby formula with great care, exactly as it's written. We are so pleased with the results I had to reach out and tell someone. Isaiah is now nine months old, and is not only caught up developmentally but mentally and physically, surpassing "average" one-year-olds. He has never had a cold or sickness, has received no vaccinations of any type and no antibiotics.





Letters



I can go deeper into how healthy this child is but you get the point.

I have included pictures of him when he was born at four pounds and now at nine months at twenty-four pounds. Thank you, thank you, thank you from my entire family to yours!

Matthew Lussier
Cumberland, Rhode Island

EVIDENCE OF HARM

On June 4, 2024, Dr. Huber, Dr. Dupmeier and I presented volumes of information and evidence on the numerous harms of GMO crops and glyphosate herbicides to a group of farmers and ranchers along with individuals from the Calgary Vet School and officials from CFIA at a meeting in Swift Current, Saskatchewan, Canada.

We learned of a grain sales agreement that Canadian farmers are being impelled to sign when delivering grain for sale to grain merchandisers. The liability that should be directed toward the chemical companies for the lingering effects of their synthetic chemicals is being transferred to the farmers who are using these chemicals in their farming operations as well as farmers who choose not to use chemicals but are having these chemicals drift onto their land from neighboring farms and/or custom applicators.

Dr. Huber and I also visited a farm where the lentil crop was killed last year by the glyphosate residue in the soil. The field was on track to make seventy bushels per acre with excellent nutrient management and very specifically managed fertilization. The final foliar application of micronutrients and macronutrients (based on tissue tests

and sap testing results) contained a very available form of phosphorous. This highly available form of phosphorous triggered a release of the glyphosate residues from the soil (this is well documented in scientific literature) and subsequently killed the lentil crop within ten days. The yield of the lentils was seven bushels per acre.

Glyphosate is rightly called the elephant in the room on numerous health issues. Too few people realize that the soil health is one of the first places where glyphosate is wreaking havoc. This story needs to be told far and wide and the chemical companies need to be held accountable and liable, not the farmers.

For those who wish to further investigate this, please contact me and I will connect you with the parties involved. To the lawyers receiving this, please reach out to me as time permits. I would like to discuss the legal ramifications of this very troubling matter.

Howard R. Vlieger
Maurice, Iowa

IMPROVED HEALTH

I learned about the Bates Method via the Wise Traditions podcast in 2021. I read the Bates book, found a website with exercises (bateseyeexercises.com/welcome.php), and have been doing them since. I didn't expect any improvement, yet I was interested to see (pun intended) if I could prevent further decline.

I'm excited to share my results: my left eye went from -4.50 to -3.50 for far glasses. (Right eye is exactly the same at -3.50.); my left eye went from -3.00 to -2.50 for close glasses. (Right

eye declined from -2.00 to -2.50.) Huge improvement for the left! My left eye is now even better than my 2014 numbers of -3.75. Yeah!

At first I tried the usual ophthalmology route: eye doctor and exam. And then two different optometrists. But those results were always too strong, which meant blurry vision and eye pain. I bought a 200 euro trial lens kit from eBay, figured out my numbers, and ordered new glasses online. Problem solved.

Here is another example of my improved health: In 2007, I took ibuprofen one hundred eighty-three times. I learned about the WAPF in 2008, started improving my diet, and my ibuprofen use decreased to one hundred times that year. Then only ten times in 2009. And now I haven't taken any ibuprofen since 2018. Woohoo!

Thank you for the information the Foundation provides!

WAPF Member
Ulm, Germany

MAGGOTOLOGY

I saw a dead squirrel covered in maggots on the side of the road. Did the maggots kill the squirrel, everyone wondered? The maggotologist did a genome test on the maggots and sure enough these virtually same maggots are showing up all over the world with slight variations depending on country and region.

"That proves it," said the maggotologist. "These maggots could infect humans," he warned.

When some people spoke out against this possibility, they retorted, "These flat earthers believe in supersti-



Letters



tion and don't understand how science works. They need to be shut up or it will cause everyone to die of maggots."

They were able to produce magic bullet maggot injections very quickly thanks to new technology. "Here take our magic bullet maggot injections, quickly before it's too late. They'll protect you from the maggots."

They plastered it all over the news. Then the government passed laws about maggot protection. And everyone flocked in a panic to get the magic bullet maggot injections. They "attenuated" the maggot shots so they weren't alive anymore and not capable of causing any harm.

The people who didn't get the magic bullet maggot shots were shunned as evil and stupid and cast out of society. Some were even put in prison. Some were even killed for speaking out. The magic bullet maggot-shot makers stood to profit, earning huge sums of money, and they couldn't let the public believe otherwise. Thank science (God doesn't exist) for the magic bullet maggot injection makers. They were given a big parade and called heroes.

Praise science!

Later we found out the maggotologist worked for the same group that created the magic bullet injections. Some people accused them of helping to create the maggots in a lab. I guess we'll never know.

Dave Bowers
Yankton, South Dakota

REQUESTING TESTIMONIALS

I am working with a physician, Kevin Ham, MD, to produce some very short books on ancestral diets,

obesity and chronic disease. Kevin is a physician who is fully trained in family practice but never practiced medicine, as he became a highly successful Internet entrepreneur. He has some tricks to market books that most would not. Anyway, our planned books will be short and sweet, driving home the message about ancestral diets, but with more of a story line—a Sherlock Holmes "whodunnit" kind of approach—and less science.

We're working on the table of contents and general plan for a book on cancer—which will mostly be related to prevention, not cure once the disease has begun. However, it might be helpful to weave a few short anecdotes in the book about cancer reversal with ancestral diets.

We are seeking testimonials. Please send them to me at cknobbe@me.com.

Chris Knobbe
Dallas, Texas

IMPRESSED

Thank you for the twenty-five dollar membership option. A friend sent me a year's membership as a gift. I was very impressed by the quality of the writing in the articles.

I'm eighty years old, a retired school teacher and am on public assistance. I am so grateful that you make this available to us who are living in poverty. I have ordered from the Shopping Guide—it's very useful.

Elaine Rylin
Roundup, Montana

BIRTH CONTROL FOR RATS

Regarding your recent article on

toxic gossypol in cottonseed oil (Summer 2024), my neighborhood group has been talking about the increasing rat problem in our area. One neighbor said they've been using rodent birth control on their property, and they've seen a definite decrease in the number of rats showing up. Interestingly, the main ingredient is cottonseed oil. One neighbor said it makes her wonder whether cottonseed oil contributes to the increased incidence of infertility or low sperm counts in humans, too. So maybe people are slowly catching on to the dangers of industrial seed oils.

Linda Harkness
Seattle, Washington

CELEBRATING WAPF

This is one of the only truly real, unsubsidized organizations with a huge heart, with true ancestral knowledge and an amazing staff. We are all the lucky recipients of your perseverance, talent and benevolence. Thank you for everything you do as an organization and individually, God bless and watch over you all,

Raymond Silkman, DDS
Los Angeles, California 

Gifts and bequests to the Weston A. Price Foundation will help ensure the gift of good health to future generations.

Caustic Commentary

Sally Fallon Morell takes on the Diet Dictocrats

BRING US MEAT!

The fifteen thousand athletes competing in the Paris Games at the 2024 Olympics had little good to say about the “climate-friendly” meal options served up in the Olympic Village. They wanted animal protein, not lentil sausages and veggie bourguignon. The food service ran out of meat and eggs the first day and had to quickly “make some adjustments. . . [adding] 700 kilos of eggs and a ton of meat.” Swimmer James Magnussen, who won a bronze medal for Australia in 2016 blamed “the lack of world records” on “this whole eco-friendly, carbon footprint, vegan-first mentality rather than high performance. . . Their caterer had to rejig their numbers and bring in more of those products because surprise, surprise—world class athletes don’t have vegan diets” (Facebook@realjonfleetwood, July 31).

NATO SECURITY FORCES AGAINST ANTI-VAXXERS?

As more and more parents just say “No!” to childhood vaccinations, pro-vaccination forces are proposing more and more draconian measures to fill our children and grandchildren with poisons. Recently, vaccine bulldog Dr. Peter Hotez of Texas Children’s Hospital called for the United Nations and NATO to deploy security forces against “anti-vaxxers” in the United States. Hotez’s statements first appeared on the YouTube channel of the International Symposium of Pediatric Updates, a conference that took place in Colombia, South America. The conference has since removed the interview, but clips continue to circulate on X. According to Hotez, the situation is so dire that the government will need to bring in Homeland Security, the Commerce Department and the Justice Department to deal with the anti-science anti-vaxxers. “This is a security problem,” said Hotez, “because it’s no longer a theoretical construct or some arcane academic exercise. Two hundred thousand Americans died because of anti-vaccine aggression, anti-science aggression” (www.youtube.com/watch?v=XICtKdpg_1o).

AND IN NEW ZEALAND

In related news, New Zealand’s Ministry of Health has released an interim update to its Pandemic Plan, last published in 2017. According to the ministry, “whilst the plan is focused on respiratory pathogens, such as influenza and COVID-19, it can be adopted and applied with adaptations as necessary

to any pandemic, regardless of the nature of the pathogen and its severity”. The critical text is found on page one hundred twenty-five, under the heading of “Special Powers.” An emergency declaration gives “power to detain, isolate or quarantine [and] allows a medical officer of health to ‘require persons, places, buildings, ships, vehicles, aircraft, animals, or things to be isolated, quarantined, or disinfected’ (section 70(1)(f)). “The power to prescribe preventive treatment allows a medical officer of health, in respect of any person who has been isolated or quarantined, to require people to remain where they are isolated or quarantined until they have been medically examined and found to be free from infectious disease, and until they have undergone such preventive treatment as the medical officer of health prescribes (section 70(1)(h)).” “Preventive treatment,” of course, means vaccines, forced vaccines (nakedemperor.substack.com/p/new-zealands-pandemic-plan-to-legalise).

ATTACK ON HELPLESS CIVILIANS

Dr. Michael Yeadon, formerly a vice president of Pfizer and chief scientist for allergy and respiratory illness, has joined many other scientists and physicians in arguing that there is not sufficient evidence that either the Covid-19 virus or any other virus actually exists. He asserts that there was no Covid-19 pandemic, in other words no increase in deaths anywhere in the world until the “pandemic” was announced. The cause of the deaths that followed was not a virus but rather “a monstrous, long-planned attack on helpless civilians by coordinated, lethal, central planning incorporating deadly hospital and home care protocols, lockdowns, fraudulent PCR tests, and gene-based injections designed intentionally to injure, kill and reduce fertility.” Most importantly, “the most difficult point for readers to believe,” is that respiratory illnesses, indeed any illnesses, are not contagious, as proven in numerous studies. Therefore, “they cannot be infectious. That rules out the mendacious description of these illnesses as being caused by microscopic, infectious particles called viruses” (LifeSiteNews, July 19, 2024).

ANOTHER CAPTURED AGENCY

The Farm Credit System (FCS), created almost one hundred years ago with a mission to save the family farm,

Caustic Commentary

now serves corporate agricultural interests, according to attorney Dustin Kittle, former cattle and poultry farmer in an interview with Robert F. Kennedy, Jr. The agency is even forcing small farmers off their land. Kittle dates the agency takeover to 2009 when the FCS changed its mission from saving family farms to saving the agriculture industry as a whole. The FCS began prioritizing large corporations over small farmers, “doling out loans to [corporate giants] JBS and Tyson. . . We are not talking about \$100,000 lines of credit. We are talking about billion-dollar loans to those companies.” One way that FCS takes out the small farmer is through “loan distress declarations.” This is the practice of declaring loans in distress even when farmers are current on their payments—such as when someone whose name is on the deed dies. Kittle’s loan was placed in distress in retaliation for representing a group of farmer-borrowers. The practice forces farmers to hire legal help, which they can hardly afford. Since the FCS was created, America has lost five million family farms. “We are down to 1.8 million family farms,” he said, from a high of almost seven million (www.youtube.com/watch?v=LsL3eCWsEz8).

LOVERS OF DIET MOUNTAIN DEW

Carbonated water, concentrated orange juice, citric acid, natural flavor, potassium benzoate (preserves freshness), citrus pectin, aspartame, potassium citrate, caffeine, sodium citrate, acesulfame potassium, sucralose, gum arabic, sodium benzoate (preserves freshness), calcium disodium EDTA (to protect flavor), yellow 5. These are the ingredients of Diet Mountain Dew, the preferred beverage of both vice presidential candidates, Tom Walz and J.D. Vance. The beverage contains three artificial sweeteners: aspartame, acesulfame potassium and sucralose, plus a number of other additives of doubtful safety. Mountain Dew also has one of the highest levels of caffeine in soft drinks. Heaven help our nation when our political candidates think it’s OK to brag about consuming this garbage.

MULTIVITAMINS NO GOOD

One American in three takes a multivitamin, but researchers from the National Cancer Institute have found that those taking multivitamins do not live longer; in fact, they have a slight increase—about 4 percent—in mortality risk. Published in the *Journal of the American Medical Association* (June 26,

2024), the study analyzed data of almost four hundred thousand adults for up to twenty-seven years. Many factors can explain these findings. First, the vitamins in multivitamins are all artificial; some, like folic acid (instead of folate) have known harmful effects. Vitamin D is rarely balanced with vitamins A and K, nor are copper and iron (the wrong kind of iron) balanced with zinc. Then there are the questionable additives: titanium dioxide, artificial colors, preservatives and flavors, talc, magnesium silicate and glazes or coatings in the capsules. As we learn more about how vitamins and minerals work in the body, it becomes clear that the best way to get our vitamins is from food, nutrient-dense food like liver and other organ meats, grass-fed butter and egg yolks, raw milk and cheese, and shellfish, which come with cofactors that support optimum assimilation.

MAMMOGRAPHY IN QUESTION

“Abolishing Mammography Screening Programs? A View from the Swiss Medical Board,” published in the *New England Journal of Medicine* (May 22, 2014), notes that many controversies have surrounded mammography screening for the past ten to fifteen years, and even today, the benefits remain “nonobvious.” For example, Centers for Disease Control (CDC) statistics indicate that out of about one thousand women screened for breast cancer (that is, given mammograms), in ten years, four will die from breast cancer and about forty from other causes; out of the same number of women not screened, five will die of breast cancer and about forty from other causes. Moreover, many mammograms give false positive results, which means that a woman may undergo surgery and other awful treatments for breast cancer when she doesn’t need to. Of note is the fact that most women are unaware that the benefits of mammography are “nonobvious,” believing that regular mammograms can cut the risk of dying of breast cancer by half. Based on these findings, the Swiss Medical Board recommended that no new systematic mammography screening programs be introduced and that “clear and balanced information should be provided to women regarding the benefits and harms of screening.” In other words, women should be told that the unpleasant experience of the biannual mammogram is unlikely to be of benefit and may even lead to the harmful consequences of a false positive. Predictably, Swiss cancer “experts and organizations” loudly rejected these conclusions as “unethi-

Caustic Commentary

cal.” The mammogram madness must continue! Otherwise how could they keep feeding victims into the maw of the cancer machine.

STATINS AND DIABETES

It was the 2008 Jupiter trial that first raised concerns about statins causing diabetes. A study just published in *The Lancet* provides confirmation of this finding. The meta-analysis by the Cholesterol Treatment Trialists (CTT) Collaboration looks at patient data from several large-scale, long-term randomized controlled trials. The findings raise many concerns about anybody taking statins. The study showed that low-to-moderate-intensity statin therapy was associated with a 10 percent increased risk of new-onset diabetes; high-intensity statin therapy raised that risk by a whopping 36 percent. This finding was consistent across different types of participants and over time. Other adverse effects associated with statin use included muscle wasting, pancreatic cancer and cataracts. New guidelines based on the American Heart Association’s 2023 Predicting Risk of Cardiovascular Disease Events (PREVENT) equations could reduce the number of American adults “eligible” for statin therapy from forty-five to twenty-eight million, but we’re not holding our breath. There’s too much money involved to change the incentives for doctors to prescribe them. The best strategy remains to just say No (articles.mercola.com, August 10, 2024)!

GUT FLORA AND FAT-SOLUBLE VITAMINS

A paradigm shift with regard to the role of bacteria in health is a defining phenomenon of the twenty-first century. Medical orthodoxy has moved from “bacteria attack us and make us sick” to “bacteria are our friends, essential for life.” Researchers have discovered that a healthy gastrointestinal microbiota—comprising from five hundred to one thousand species—is necessary for protection against toxins, production of nutrients and even the creation of feel-good chemicals. And guess what? According to researchers at Pennsylvania State University, our old friends vitamins A and D have a lot to do in supporting a thriving gut flora. Vitamin A and D deficiencies result in “less diverse, dysbiotic microbial communities and increased susceptibility to infection or injury of the gastrointestinal tract.” Moreover, vitamins A and D regulate the cells that line the intestine to ensure “tight barrier function” so that the gut does not pass unwanted proteins

into the bloodstream; and A and D both regulate various compounds necessary for digestion and immune function. “Together, vitamin A and vitamin D mediated regulation of the intestinal epithelium and mucosal immune system shape the microbial communities in the gut to maintain homeostasis” (*Crit Rev Biochem Mol Biol*, April 2019). So be sure to include butter, egg yolks, poultry fats and seafood in your diet to support all the friendly critters in the gut.

BLOOD THINNER RISKS

For decades, the only drug available to doctors for preventing clots was the anticoagulant warfarin, a true poison with many side effects including necrosis and death. Then, starting in 2010, the FDA approved several “novel oral anticoagulants” (NOACs), going by the names of Pradaxa, Xarelto, Eliquis, and Savaysa, supposedly easier to take, just as effective and less toxic than warfarin. However, patients are reporting the same side effects, including bloody stools, vomiting blood, digestive issues, dizziness, fainting, rapid heartbeat, hives, difficulty breathing, chest tightness and—most troubling—internal bleeding. NOACs can also interact dangerously with other medications and pose heightened risks for those suffering from kidney disease. In 2011, an FDA review of Pradaxa, the first approved NOAC, reported hundreds of fatalities and thousands of serious adverse events. Like warfarin, these NOACs are a leading cause of death in emergency rooms due to uncontrolled bleeding (NaturalHealth365.com, August 9, 2024). Given routinely in emergencies, anticoagulants should be used only with the utmost caution. ☹☹☹

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.

What Does Glyphosate Have to Do with Soggy Sauerkraut, Bone Broth that Won't Gel and the Collagen Needed for Joint Health?

By Martha Carlin

The effects of the insidious and ubiquitous herbicide glyphosate (N-phosphonomethylglycine) on the modern food supply are a topic familiar to *Wise Traditions* readers. In 2020, I came to know and work with world-renowned glyphosate expert Dr. Don Huber through my nine years of work on the microbiome, both human and environmental.

In this article, I describe an investigation into soggy sauerkraut led by Dr. Huber, which provides new insights into glyphosate and its impact on cellular structure, with implications that go far beyond sauerkraut.

INITIAL FINDINGS

In 2022, Dr. Huber was researching heavy crop losses in lentils, wheat and canola due to the desorption (the release of an adsorbed herbicide from soil colloidal surfaces) of accumulated soil glyphosate following foliar application of phosphate fertilizer. He was looking for ways to degrade glyphosate in soil, building on Dr. Monika Krüger’s veterinary lab studies on dairy cows using raw sauerkraut juice (a source of *L. plantarum*).¹

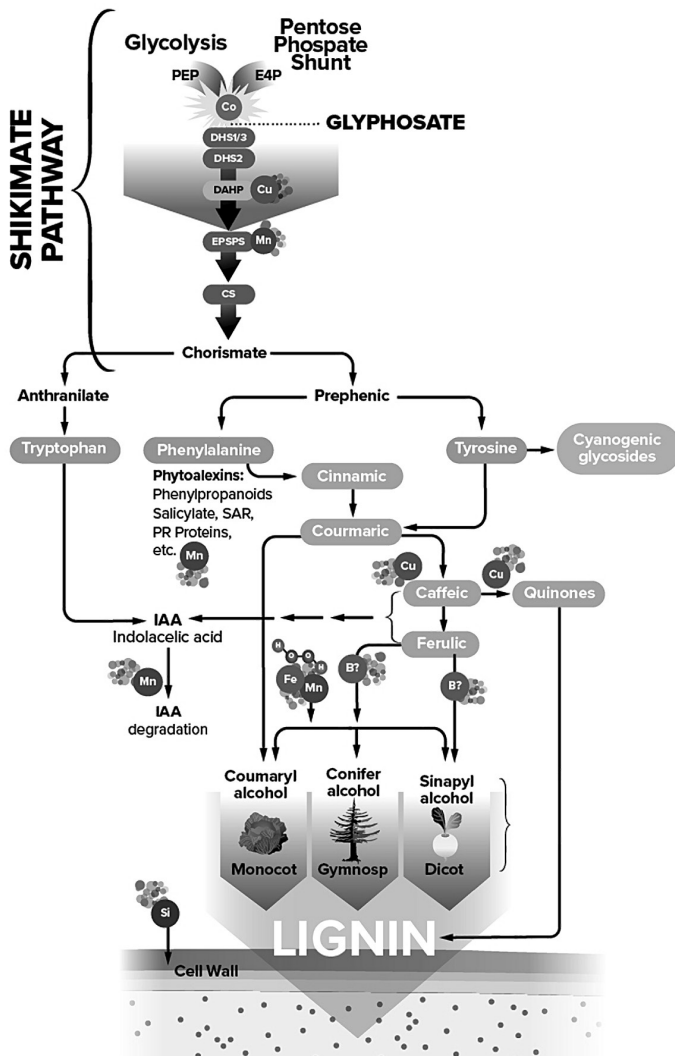
During a visit to a sauerkraut processing plant in Wisconsin to obtain excess sauerkraut juice from the fermentation process, Dr. Huber learned that the company had recently suffered a significant financial loss of one million dollars due to organic sauerkraut turning soggy. Consumer demand for organic sauerkraut has grown considerably, but because crisp, white kraut is the market standard, a soggy product is not usable. The soggy problem did not occur in the facility’s kraut production from conventionally grown cabbage.

In 2022, conventional and organic cabbage had arrived at the fermentation facility in good condition. After inspection for size, maturity, color,

flavor and texture, facility personnel deemed acceptable both the organic and conventional harvests. Fermentation proceeded normally, and the color and flavor of the sauerkraut from conventional cabbage were rated as normal and shelf-stable. However, the organic cabbage fermentation ranged from normal to below average to mush, with little to no solids remaining; the company had to abandon several large vats of fermented cabbage as unsellable.

Dr. Huber’s chance conversation about soggy kraut led to a two-year project, described below, to discover the cause of crisp structure loss in organic sauerkraut and to test glyphosate remediation solutions to address future crop and production quality. Our recently accepted publication is forthcoming in the *Journal of the American Society for Horticultural Science*.²

FIGURE 1. Cell wall lignification, glyphosate and the shikimate pathway



FOCUS ON MINERAL CONTENT

Initially, the investigation of soggy sauerkraut considered the different fermentation methods used for the organic versus conventional products. Sauerkraut fermentation involves a co-community of microorganisms, starting with *Leuconostoc mesenteroides*, which establishes the anaerobic environment enabling the growth of lactic acid-producing strains, primarily *L. plantarum*, *L. brevis*, and *P. cerevisiae*. Occasionally, this acidic environment doesn’t develop properly, which allows for the growth of other organisms that can contribute to the softening of the cabbage. Other potential variables influencing texture are temperature, salt concentration and the mineral composition of the cabbage.

After eliminating potential causes other than the mineral content of the cabbage, Dr. Huber and the research team began looking at the mineral content of soil, manure fertilizer and plants during the growing season. Mineral analysis of the 2022 season sauerkraut tissue indicated below-optimum levels of many trace minerals, including copper, zinc, iron and manganese. The primary constituents of cell walls are carbohydrates, but trace minerals such as copper, iron and manganese are essential for key enzymes in building cellular structure. Lignin provides rigidity and structural support to plant cell walls, and cell wall lignification is in the shikimate pathway—the specific biologi-

cal pathway targeted by glyphosate (Figure 1).³ Thus, anything—such as glyphosate-based herbicides—that interferes with the shikimate pathway and the minerals and enzymes involved in cell wall composition can damage the quality of the sauerkraut produced.

In late 2021, soil analysis of the fields planted to organic and conventional cabbage likewise indicated deficiencies in nutrients involved in plant cell wall synthesis and lignification. Conventional and organic crops address these deficiencies differently; conventional crops can use synthetic fertilizers, whereas organic crops typically cannot. In organic farming, manures are the primary source of fertilizer nutrients. With certain restrictions, the National Organic Program (NOP) standards have allowed the use of conventional manure in organic agriculture since the year 2000.⁴ Researchers observed in 2021 that glyphosate residues in animal feed “persist throughout the digestive process of production animals and accumulate in their excretion products,” notably in the poultry industry.⁵

In the cabbage study, approximately four tons per acre of poultry manure had been applied to the fields. Due to glyphosate residues in the poultry feed and thus the manure, subsequent testing indicated that following the poultry manure application, the organically produced cabbage was severely deficient in copper, iron and zinc, high in nitrogen, boron and sulfur, and sufficient in all other nutrients.

COPPER CHELATION

Copper (Cu) is a critical micronutrient in plants, vital for various physiological processes, including lignification. Moreover, copper is essential for the function of several enzymes, including those involved in lignin synthesis. The enzyme lysyl oxidase, for example, relies on copper to create cross-links in collagen and elastin fibers, crucial for strong cell walls in plants.

Unfortunately, copper has a very strong binding affinity for glyphosate (see Table 1), which is quantitatively described by chelation constants. These constants, often expressed in logarithmic terms, indicate how tightly a metal ion binds to a chelating agent like glyphosate. A 1978 study revealed that glyphosate forms very stable complexes with Cu²⁺ ions, significantly reducing the bioavailability of copper in the soil for plant uptake.⁶

Copper deficiency, exacerbated by glyphosate chelation, leads to a significant decrease in cell wall material relative to the total dry matter. This reduction, which compromises the structural integrity of plant tissues, resulted in the production of soft, soggy sauerkraut from the organic cabbage and could be expected to have similar effects on other plant lignins.

COLLAGEN FORMATION AND TRACE ELEMENTS

Now let’s consider collagen, the most abundant protein in mammals. Collagen plays a crucial role in the structural integrity and function of various tissues. There are twenty-eight known highly diverse collagen types in vertebrates, all characterized by a unique “triple helix” collagenous structure.⁷

Type I collagen is the most widely distributed form of collagen, primarily found in connective tissues. It is the main component of tendons, providing strength and flexibility. Type II collagen is predominantly present in cartilage, contributing to its ability to withstand pressure and

TABLE 1. Glyphosate chelates copper preferentially

Table 2. Stability constants K_{ML} , $K_{H(ML)}$, and $K_{OH(ML)}$ of the metal complexes of glyphosate at $I=0.1$ (KNO₃) and 25 °C.

Metal	Expt. No.	log K_{ML}	log $K_{H(ML)}$	log $K_{OH(ML)}$
Cu	1	11.93	4.05	—
	2	11.91	4.05	—
	Mean	11.92	4.05	—
Cu (2nd method)	1	11.71	4.33	—
	2	11.71	4.36	—
	Mean	11.71	4.35	—
Zn	1	8.4	—	—
	2	8.4	—	—
	Mean	8.4	—	—
Mn	1	5.55	6.93	4.37
	2	5.52	6.91	4.23
	Mean	5.53	6.92	4.30
Ca	1	3.25	—	2.7
	2	3.25	—	2.9
	Mean	3.25	—	2.8
Mg	1	3.25	—	2.7
	2	3.24	—	2.9
	3	3.25	—	2.9
	Mean	3.25	—	2.8

From: Madsen H, Christensen H, Gottlieb-Petersen C, et al. Stability constants of copper(II), zinc, manganese(II), calcium, and magnesium complexes of N-(phosphonomethyl)glycine (glyphosate). *Acta Chem Scand*, 1978;32a:79-83.

provide smooth joint movement. Type III collagen interlaces the extracellular matrix (ECM) as a reticular network, supporting the structure of various organs and tissues.

Collagen is a major component of the ECM,⁸ a critical regulator of cell function, providing a structural support network made up of proteins, sugars, hydroxyapatite and other minerals. This matrix not only supports the cells physically but also influences their behavior and communication.⁹ Collagen constitutes between 30 and 70 percent of all ECM proteins.

With the exception of blood cells, all cell types appear to be capable of collagen synthesis, “at least up to a certain level of development.”¹⁰ This highlights the widespread ability of cells to produce collagen, underscoring its importance in tissue development and repair.

Iron, copper, zinc and manganese are critical trace elements necessary for the healthy formation of collagen:

- **IRON:** Iron is involved in hydroxylation reactions, necessary for the stabilization of the collagen triple helix. Hydroxylation of proline and lysine residues in collagen is essential for the proper folding and stability of the collagen triple helix, as it allows for the formation of hydrogen bonds between the collagen strands.
- **COPPER:** As already mentioned, copper plays a critical role in the activity of the enzyme lysyl oxidase, which is necessary for the stabilization and cross-linking of collagen and elastin fibers, providing tensile strength to connective tissues.
- **ZINC:** Zinc is a cofactor for collagenase, which is involved in collagen synthesis and degradation.
- **MANGANESE:** Manganese is required for

the synthesis of glycosaminoglycans, components of the ECM necessary for collagen formation.

I have already noted that the chelation of copper by glyphosate can lead to deficiencies in critical minerals that affect plant health, and this is also the case for human and animal health. In humans, copper deficiency along with zinc and iron deficiency or dysregulation can result in poor collagen formation, leading to joint issues, weakened connective tissues and other health problems.

CHICKEN BROTH THAT DOES NOT GEL

Collagen formation in poultry, as in humans, requires the same key minerals and nutrients—iron, copper, zinc and manganese—to maintain collagen’s structural integrity and support overall connective tissue health. Because of the essential role played by copper in the activity of lysyl oxidase, deficiencies in copper—often caused by glyphosate chelation—can lead to weakened connective tissues and poor bone health in poultry.

How does this translate to chicken bone broth that doesn’t congeal? Over the last decade I have noticed from time to time that when I make broth with a commercially grown chicken there is occasionally little to no collagen in the finished broth. This collagenous material is, of course, one of the key benefits of bone broth.

Iron, copper, zinc and manganese are the very same minerals that the cabbage study found to be deficient in the organic plants due to the lingering effects in poultry manure of glyphosate in the poultry feed. If there is enough glyphosate remaining in manure to bind up the minerals in the soil in which organic cabbage is grown, then there is certainly sufficient glypho-

The chelation of copper by glyphosate can lead to deficiencies in critical minerals that affect plant health, and this is also the case for human and animal health.

GLYPHOSATE RESIDUES IN ANIMAL FEED

As explained in a publication from the University of Wisconsin-Extension, much of the food and crop waste in the U.S. is approved for animal feed operations in dairy cattle, poultry and pork.¹³ In an appendix to that publication titled “By-Product Feedstuffs in Dairy Cattle Diets in the Upper Midwest,”¹⁴ the author lists an astounding array of “by-product feedstuffs” acceptable for dairy cattle, including high-fiber by-products, high-protein by-products from plant sources and animal-marine sources and “unusual by-product feedstuffs” such as bakery wastes and candy. This publication and its appendix give some perspective on the number of crops likely contaminated with glyphosate residues in these feedstocks, including corn, soy, beets and cotton.

In 2021, China issued guidelines to reduce the amount of corn and soybean meal in animal feedstocks in order to improve animal health. No such steps have been taken in the United States.

It is clear that mineral binding by glyphosate may be one explanation for the phenomenon termed “high-calorie malnutrition.”

sate in the feedstock to bind the minerals in the birds as well.

The cabbage study found that glyphosate levels in poultry manure were particularly high in the 2021/2022 period. This was during the peak of Covid, a time when labor shortages prompted farms to increase their use of glyphosate for desiccation purposes. This may have contributed to the higher glyphosate in the manure from those two years. Given the significant variation in glyphosate content in manure from year to year, the regulations regarding the testing and use of manures may need some additional parameters and guidelines for use in organic farming.

ADDITIONAL GLYPHOSATE EFFECTS

Copper is also essential for several enzymes in the mitochondrial respiratory chain, including cytochrome c oxidase (complex IV) and superoxide dismutase (SOD1). These enzymes are crucial for ATP production and oxidative stress management. Glyphosate chelation of copper can impair these enzymes, leading to mitochondrial dysfunction, reduced energy production and increased oxidative stress, contributing to various health issues such as fatigue and muscle weakness.

In addition, copper plays a critical role in iron metabolism, including the formation of red blood cells and the recycling of iron from senescent cells. Copper-dependent enzymes like ceruloplasmin and ferroxidase are involved in iron transport and utilization. Glyphosate-induced copper deficiency can disrupt these processes, leading to anemia, reduced oxygen transport and impaired immune function.

Finally, research by Anthony Samsel and Stephanie Seneff suggests that glyphosate can substitute for glycine in proteins, including collagen proteins, due to its structural similarity.¹¹ This substitution can disrupt protein function and has been implicated in various health issues. In collagen, this could mean compromised structural integrity, leading to issues like joint degradation and poor skin health. Samsel’s and Seneff’s research provides a compelling argument for the pervasive and subtle impacts of glyphosate on health, reinforcing the need for vigilance in its use and regulation.¹²

POTENTIAL SOLUTIONS

When thinking about the pervasiveness of glyphosate in our environment, and now in the organic food chain, it is important not to get overwhelmed by the enormity of the problem. The second part of the study forthcoming in the *Journal of the American Society for Horticultural Science*² focused on examining methods of degrading glyphosate. Given my focus on the microbiome, Dr. Huber and I worked together in 2020 with Dr. Raul Cano, founder of Ancient Organics Bioscience (formerly PaleoBiotica), on a patent filing for a soil probiotic formula that could degrade glyphosate while increasing crop yield. In the past four years, the formula, with some additions, has been tested in multiple crops from alfalfa, soy, cotton and corn to vegetables and grapes.

In the multistep cabbage study, remediation studies were performed at a test farm on silage corn. Dr. Huber has also been studying the use of sauerkraut juice as a possible glyphosate remediation product. The sauerkraut manufacturing process removes a significant amount of juice, and this waste contains microbes that are resistant to glyphosate and have some benefits in remediation in dairy cattle feed operations according to Dr. Monica Krüger’s research.¹ However, sauerkraut juice has a significant salt content, which could be an issue if applied to crops in excess.

The study assessed several forms of bioremediation against an untreated control: (1) raw sauerkraut juice (RSKJ) alone; (2) the Ancient Organics soil probiotic formula (PB027) alone and with RSKJ; and (3) a biocatalyst called Catawater, alone and with RSKJ. All three remediation approaches degraded the glyphosate and the glyphosate by-product aminomethylphosphonic (AMPA) by more than 84 percent over the five-month study period. In terms of yield improvements, the PB027 with RSKJ gave the only statistically significant improvement in yield over the untreated control. (Details of the various applications and results can be found in the forthcoming paper.²)

The complex study offers new insights into effective bioremediation strategies that may significantly mitigate glyphosate’s adverse impacts. The remediation strategies also may have

broader applications for the nutritional content of food for animal and human consumption, helping to address the issues discussed regarding collagen synthesis.

Overall, the study highlights the need for stricter regulation and monitoring of glyphosate use, particularly in animal feed and manure used in organic farming, as well as the need for focused remediation efforts. It is clear that mineral binding by glyphosate may be one explanation for the phenomenon termed “high-calorie malnutrition.” We are literally starving for the key trace minerals that power the enzymatic reactions necessary for life.


Ensuring the availability of essential minerals is crucial for maintaining both the quality of agricultural products and the health of consumers. Further research and policy changes are necessary to address these issues and safeguard food quality and public health. By addressing the broader implications, we can better understand the far-reaching effects of glyphosate on our food supply and health. ☯☯

Martha Carlin is a citizen scientist, TEDx speaker and a leading figure in microbiome research, recognized for her innovative approach, particularly in Parkinson’s disease. As the founder of The BioCollective and BiotiQuest probiotics, and a partner in Ancient Organics BioScience, Martha has made significant contributions to advancing our understanding of the impact of microbes on human, plant and soil health. Her work has been featured in influential scientific publications, including The Scientist and Science News, reflecting the impact and credibility of her research. Martha was a speaker at the White House Microbiome Initiative on the topic of interdisciplinary science and the need to understand the interconnected nature of the microbial web on earth. Martha is known for pushing the boundaries of conventional science with her out-of-the-box thinking.

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Dental Metals and Their Relationship to Neurodegenerative Diseases

By Dianna Cortese, DDS

Do you know someone with a neurodegenerative disease? Most people do, or you may have one yourself. A neurodegenerative disease is a “nerve-degenerating” condition—a disease where the nerves are damaged or die. Unfortunately, neurodegenerative conditions such as Alzheimer’s disease (AD), amyotrophic lateral sclerosis (ALS) and Parkinson’s disease (PD) are becoming more common, now affecting over fifty million people worldwide.¹

Despite promising research and some helpful treatments, much about these diseases is still unknown. Science has not agreed upon a definitive cause for many of these conditions, and some would say that they “remain a mystery.” But there is a plausible cause for neurodegenerative conditions, though not commonly spoken about: heavy metal toxicity.²

In our everyday life, there are many sources of exposure to heavy metals, whether natural or man-made. These can include industrial waste, tailings, mining, paints, pollution, treated timber, agricultural runoff and fertilizers, lead-acid batteries, some thermometers, fluorescent light bulbs, volcanic eruptions, emissions from coal-burning power stations, contaminated seafood, some medications, the water supply and even micro-plastics.³⁻⁵ However, a commonly overlooked source of heavy metals can be found within your own body, and more specifically in your mouth! In this article, I discuss the links between heavy metals, dental metals and three common neurodegenerative diseases.⁶

DENTAL METALS

The most well-known metal found in the mouth is mercury from dental amalgam (silver/black) fillings. Dental amalgam fillings contain about 50 percent elemental mercury,⁷ a known neurotoxin. While the exact composition may vary between brands, the elemental mercury is usually mixed in an alloy with copper, silver and tin.⁶ Amalgam fillings also may contain smaller amounts of nickel, palladium and indium, and possibly zinc, lead and cadmium.⁶ Dental amalgams are the largest source of mercury exposure in industrialized countries, with autopsy studies showing that 60 to 95 percent of mercury deposits in human tissues are from dental amalgams.⁸

Mercury is notorious as one of the most toxic elements on the planet.^{7,9} It can target many different mechanisms and parts of the body, but it is most well-known as being toxic to the nerve cells (neurons). Mercury neurotoxicity can disrupt structures in cells such as the cytoskeleton and mitochondria, as well as generate harmful reactive oxygen species (ROS) and much more.¹⁰ Mercury is ten times more toxic to neurons than lead and is associated with many medical problems, including neurological disorders.^{9,10} When it comes to the development of mercury-related diseases, the mercury exposures may be either sudden or chronic. Researchers have posited that mercury accumulation in the brain may be a cause of Alzheimer's, ALS and Parkinson's.^{4,7,10,11}

Mercury can be found in the mouth in several places, including in amalgam fillings,

amalgam tattoos or even in the root of the tooth if it has had a root canal procedure called an apicoectomy. In the mouth, amalgam fillings have the ability to emit mercury vapor in the form of elemental mercury, which can travel throughout the body and pose significant health threats. The vapor can travel to the lungs, teeth, gums and brain, where it can then enter the neurons and, crucially, the mitochondria.^{7,8} Even the Food and Drug Administration (FDA) now acknowledges that mercury fillings release mercury vapor that can pose dangers to certain "high-risk" groups.¹²

Studies suggest that the largest exogenous source of brain mercury comes from dental mercury fillings.^{5,9} Mercury in the brain increases in proportion to the number or surface area of amalgam fillings that a person has.⁵ Several studies have shown that individuals with amalgam fillings can have two- to tenfold higher amounts of mercury in their brains compared to persons with no amalgam fillings.¹⁰

Have you ever left a metal object in the rain or outside? Over time, it starts to rust, wear away, chip or corrode. This same concept applies to dental metals in the mouth. Mercury fillings may be worn down from normal wear and tear or via corrosion. As they chip, are worn down and abrade, pieces can be swallowed and enter the digestive system and be reabsorbed.⁵ However, many factors influence how much corrosion occurs, including mouth acidity levels, certain bacteria and other factors.^{13,14}

Other dental materials contain metals as well, including some crowns, bridges, implants, posts, pins, wires, clasps, brackets, parts of dentures and some orthodontic or oral positioning devices. Some have been found to contain metals such as aluminum, beryllium, chromium, cobalt, copper, gallium, gold, indium, iridium, iron, manganese, nickel, palladium, platinum, silver, tin, titanium, vanadium, zinc and others.⁶ The specific composition usually depends on the brand and type of device.

As already suggested, dental metals have the potential to do a lot of harm to nerves. Long-term exposure to heavy metals is associated with nerve inflammation, damage and, in some situations, nerve death.³ Some of the effects^{3,4,15} include:

Autopsy studies show that 60 to 95 percent of mercury deposits in human tissues are from dental amalgams.

Despite the claim of “idiopathic” causes, numerous studies show a strong relationship between Parkinson’s and metals, some of which are commonly used in dentistry.

- Placing stress on cell structures such as the mitochondria
- Causing misfolding of important proteins essential to health
- Breaking apart and damaging DNA
- Causing oxidative stress, characterized by “an imbalance between production and accumulation. . . in cells and tissues”¹⁶ of reactive oxygen species (ROS)—a type of free radical—and an inability to detoxify them¹⁷
- Triggering cells to die (apoptosis)

Some metals work together to damage nerves, producing synergistic effects. A little-known fact is that mercury may have exacerbated effects when combined with other metals such as aluminum, lead, cadmium, zinc or manganese, even at levels that are considered to be “low” or “nontoxic.” Therefore, having multiple metals in your body or a combination of abnormal levels of certain metals may be a unique risk factor for worsening health.⁵

METALS AND PARKINSON’S DISEASE

Parkinson’s disease (PD) is the second most common neurodegenerative disorder (behind Alzheimer’s) and is the most common muscular function disorder. PD is known for the degeneration of nerve cells in the area of the brain called the substantia nigra.³ The specific nerve cells that are lost are called dopaminergic neurons. This leads to a deficiency of dopamine (a messenger for nerve cells), which can present as the typical motor issues seen in PD such as tremors, rigidity and bradykinesia (slowness).^{3,5}

Parkinson’s usually progresses slowly and presents not only as motor impairment but also in the form of psychological, cognitive and autonomic nervous system changes and dysfunction.^{3,15} PD can be difficult to study because of the slow progression and because exposures can happen years or even decades before Parkinson’s is diagnosed.

Although modern medicine considers most cases of PD to have “idiopathic” (unknown) causes,^{5,15} historically, an association between environmental exposure to metals and PD was noted. In 1817, James Parkinson discovered a connection between the Industrial Revolution in

England and PD. Back then, with little knowledge about pollution emission technologies, the release of environmental toxins such as mercury, arsenic and lead from coal burning was high.¹⁸ In addition, mercury was commonly used in teething powders and for treating syphilis, corresponding with a higher incidence of PD.⁵ In Canada, research has linked higher ambient levels of manganese metals to an increased risk of PD and a lower age at PD diagnosis.⁵

In fact, despite the claim of “idiopathic” causes, numerous studies show a strong relationship between PD and metals, including copper, manganese, lead, mercury, iron, bismuth, zinc, aluminum and titanium,^{3,5} some of which are commonly used in dentistry. Epidemiological studies have found that the risk of PD increases with exposure to pesticides, solvents and metals.¹⁵

Is there a connection between genetics and PD? Interestingly enough, even though fifteen genes and loci have been associated with PD, researchers believe that genetic causes can account for at most 5 to 10 percent of cases. A large epidemiological study of twenty thousand pairs of twins found no definite genetic cause explaining the occurrence of PD, nor could any role of genetics be ascertained in the Italian community of Valcamonica, where researchers observed a high prevalence of PD in conjunction with environmental exposure to metals.⁵ With that said, there is evidence that the APOEε4 allele (a form of a gene) is associated with increased PD risk; APOEε4 increases susceptibility to nerve damage from metals such as mercury and lead.⁵

Several proteins are important when discussing PD and other neurodegenerative diseases. These include Lewy bodies (bundles of proteins that form in the nerves), alpha-synuclein (a protein found within Lewy bodies thought to be a potential cause of PD), phosphorylated tau proteins (also found in Lewy bodies and affected in PD and other neurodegenerative diseases) and amyloid-beta (a protein that can form amyloid plaques, or clumps on the neurons).⁵ Metals can interfere with these proteins and can damage the mitochondria of cells.^{3,15} Metals are commonly known to form free radicals, disrupting the antioxidant/free radical balance; as mentioned earlier, this can lead to nerve damage.³ People

with PD have high production of ROS and tend to have high levels of oxidative stress,⁵ which can lead to an abnormal aggregation of proteins as well as cell death.³ Increased numbers of proteins affected by this oxidative process are found in the substantia nigra part of the brain in PD patients, where impaired mitochondrial function is also seen.⁵

Thus, environmental toxins can account for the dopaminergic nerve cell death seen in Parkinson's, which can lead to misfolding and buildup of the alpha-synuclein proteins mentioned earlier. Pesticides and metals such as aluminum, cadmium, copper, iron, lead, mercury, manganese and zinc promote the aggregation of alpha-synuclein, with negative effects on PD.^{5,15} In fact, as with the synergy between different metals, pesticides and metals also can work together and have synergistic effects that make the situation worse.⁵ In addition, there is evidence that alpha-synuclein can be increased and have more toxicity due to the amyloid-beta proteins that play a role in both Parkinson's and Alzheimer's; mercury increases the production of amyloid-beta proteins.⁵ It is also interesting to note that mercury promotes the hyper-phosphorylation of the tau proteins, even at low doses.

As already outlined, there are multiple mechanisms whereby mercury (and other metals) can cause nerve degeneration and Parkinson's-like symptoms. These include via

damage to the mitochondria, oxidative stress, DNA alteration and protein misfolding, as well as altered copper-zinc metabolism.^{3,5} Studies have found that blood mercury levels are substantially higher in Parkinson's patients compared to non-PD patients, and people exposed to dental amalgam fillings have a sixfold higher incidence of PD compared to those without amalgam fillings.^{3,5} One study showed that PD patients had significantly more mercury fillings before their Parkinson's symptoms developed than non-PD patients.⁵ Men are twice as likely to develop PD as women, and research suggests that this could be due to hormone levels. Estrogen protects against mercury, while testosterone can enhance mercury toxicity.⁵ Of note, dentists are disproportionately likely as an occupation to develop PD¹⁹; researchers have found that dental professionals exposed to mercury from dental amalgam fillings at work have elevated PD-related dementia and mortality.⁵

In their 2018 study titled "Metals and Parkinson's Disease: Mechanisms and Biochemical Processes," a group of international researchers provides an informative chart showing the many similarities between mercury's effects and Parkinson's disease pathology (reproduced in Table 1).⁵ It shows what goes on in the body as a result of mercury exposure and how those same things are also happening in PD. This does not necessarily mean that there is a cause-and-effect relationship between mercury and Parkinson's, but it is shocking to see that the two sets of symptoms are almost identical.

Research also connects metals other than mercury to Parkinson-like symptoms, including cadmium—one of the most toxic metals, found in some amalgam fillings⁶—and copper, found in some dental materials, including crowns. Producing oxidative stress, cadmium damages or triggers the death of the dopaminergic neurons and can produce symptoms such as neurological disturbances, peripheral neuropathy and motor impairment.³ As for copper, although it is an essential nutrient that our bodies use for important functions, when present in excess it can cause

TABLE 1. Similarities between symptoms of mercury (Hg) toxicity and the hallmarks of Parkinson's disease

EFFECT	Hg	PD	PD-RELATED COMMENTS
Loss of dopamine receptors	√	√	Dopaminergic neuron loss (pre-onset)
Tubulin degeneration	√	√	High tubulin in dopaminergic neurons
Axon degeneration	√	√	—
Glutathione depletion	√	√	First biochemical event in substantia nigra
Increased glutamate	√	√	Results in loss of dopaminergic neurons
Increased amyloid-beta	√	√	Promotes alpha-synuclein aggregation
Tau phosphorylation	√	√	Promotes alpha-synuclein aggregation
Mitochondrial dysfunction	√	√	Appears to play a major role
Glutathione susceptibility	√	√	Increased risk, earlier onset
APOEε4 susceptibility	√	√	Increased risk, earlier onset, dementia

Adapted from Bjorklund G, Stejskal V, Urbina MA, et al. Metals and Parkinson's disease: mechanisms and biochemical processes. *Curr Med Chem.* 2018;25(19):2198-2214.

Parkinsonian movement symptoms, degeneration of nerves and even psychiatric disturbances.^{3,20}

When the blood transports metals such as mercury and copper from dental restorations and implants through the body and deposits them in the brain,⁵ there are cells that can “eat them up” and engulf the toxic metals. One of these cell types, located in the substantia nigra, is called a neuro-melanocyte. Ordinarily, the neuro-melanocytes are involved with making dopamine, but the ingested metals can impair their ability to make it.⁵

METALS AND ALZHEIMER’S DISEASE

Alzheimer’s disease, the most common type of dementia, is a progressive brain disease that, like PD, involves inflammation of and damage to nerve cells.²¹ Symptoms can include memory loss, language problems and cognitive dysfunction, and may progress to disorientation and impaired communication where it is difficult to speak or even swallow.^{20,22}

Research not only implicates mercury in AD but has even strongly put forth mercury as a cause.^{9,20} Studies show that people with AD can have two- to tenfold higher amounts of mercury in their brains compared to those without AD.^{10,20} In some studies, patients with AD have had higher levels of mercury in other body tissues as well as in the blood.^{9,23,24} Another study showed both mercury and manganese in the plasma to be significantly higher in people with AD compared to people without AD.²⁵ Studying exposure to dental amalgam fillings, researchers found that women who were exposed were 1.13 times more likely to have AD compared to women who were not exposed to amalgam fillings.²⁶ While this may seem like a borderline significant result, the authors of the article clearly considered amalgam a risk factor for AD.

As with PD, an interesting review article that compares seventy factors associated with AD and the effects of mercury shows extensive overlap.⁹ For example, mercury causes the production of amyloid-beta proteins, which make the amyloid plaques infamously associated with AD.^{4,9} In fact, we know that mercury can cause many of the hallmarks of AD. For example:

- Mercury is associated with the genetic mutations *presenilin-1* and *presenilin-2* in AD through its ability to stop production of DNA in the brain. AD also has mutations in *apolipoprotein E 4*, which increases mercury’s toxicity. Mutations that make people more sensitive to metals could be related to the metabolism of metals in AD.⁹
- AD and mercury toxicity share the same abnormalities of aluminum, calcium, copper, iron, magnesium, selenium, zinc and vitamins C, E, B₁ and B₁₂.
- AD and mercury toxicity both cause inhibition of the neurotransmitters serotonin, dopamine, acetylcholine, glutamate and norepinephrine.
- Both mercury toxicity and AD disrupt the same enzyme functions, including those of nitric oxide synthetase, choline acetyltransferase and cytochrome-c-oxidase.

Despite the abundant evidence that mercury and certain other metals

can be neurotoxic, mainstream sources such as the Alzheimer’s Association in the U.S. persist in claiming that there is no association between AD and dental amalgam fillings.²⁷ To support their claim, the Association cites a twenty-five year-old study from 1999 funded by the National Institutes of Health (NIH), which concluded, “Hg [mercury] in dental amalgam restorations does not appear to be a neurotoxic factor in the pathogenesis of AD. The authors found that brain Hg levels are not associated with dental amalgam, either from existing amalgam restorations or according to subjects’ dental amalgam restoration history.”²⁸

It is important to point out the flaws in the study²⁷ upon which the Alzheimer’s Association stakes its bold claim that mercury doesn’t seem to be a factor in AD. First, the study’s sample size was very small, which can impact the results. Thus, although the study did not find a statistically significant difference in the amount of mercury in the brains of individuals with and without AD (meaning that the numbers weren’t strong enough to show a connection), that does not mean that there wasn’t any mercury in the brain. Moreover, low amounts of mercury do not necessarily equal safety, for even low amounts have been shown to be connected to neuronal damage in AD and in general. The phosphorylated tau in Lewy bodies found in AD furnishes one example; even at low doses, mercury promotes tau protein hyperphosphorylation, which can lead to nerve cell death and even dementia.^{5,10,25,29} The World Health Organization and other UN agencies agree that there is no safe exposure threshold for mercury toxicity.³⁰

Another flaw in the 1999 study cited by the Alzheimer’s Association was its failure to consider the fact that mercury can accumulate in and affect organs all over the body, not just the brain. Looking only at the brain excludes other potentially important considerations such as gut health, which can impact AD. A third limitation pertains to contradictory statements in the study’s Results and Methods sections; although the researchers asserted in their Results that they had accounted for dental amalgam restoration history, in the Methods section, they disclosed that for some subjects, they only were able to get their dental history at the time of autopsy.

This could have led them to underestimate the amount of mercury fillings subjects had in their lifetime, which could significantly alter the findings.

The Alzheimer's Association also bases its claim of no association between Alzheimer's and amalgam fillings on a March 1991 finding of the FDA's Dental Devices Panel, which stated, at the time, that "there was no current evidence that amalgam poses any danger." Given additional research findings over the past thirty-plus years, an update to the Association's website seems warranted, not least because of the FDA's current recommendation that "high-risk populations. . . avoid dental amalgam, if possible and appropriate."¹² The FDA's list of those at high risk includes "People with neurological impairment or kidney dysfunction" and "People who are sensitive to mercury, silver, copper, tin, or zinc" as well as young children, pregnant and nursing mothers and women planning to become pregnant.¹²

METALS AND AMYOTROPHIC LATERAL SCLEROSIS

ALS (also known as Lou Gehrig's disease) is another common neurodegenerative disease, affecting the motor neurons of the brainstem, spinal cord and cerebral cortex.² In the general population, there are about one and a half new cases of ALS per year per hundred thousand inhabitants. Although medical science asserts that the causes are unknown, exposure to metals should be considered a possible culprit.

As with Parkinson's and Alzheimer's, research has linked ALS to heavy metal toxicity, and specifically to mercury.² Mercury toxicity typically presents as tremor, peripheral neuropathy (weakness, numbness and/or pain) and cortical blindness, all of which are also symptoms of ALS. There have been several reported cases of ALS related to mercury intoxication.¹¹ In a case study of a woman with ALS, the researchers observed an increase in mercury and the mercury/selenium molar ratio in the blood and the motor region of the brain.¹¹ In another case where a woman exhibited neuromuscular abnormalities consistent with ALS, she had very high levels of urinary excretion of and an increased blood level of mercury, indicating

mercury intoxication.²

Once again, damaged proteins play an important role in ALS. Oxidative stress can alter a protein called TDP-43, and mutations in that protein are thought to be a major cause of ALS.³¹ Interestingly, Lewy bodies play an important role not just for PD and AD, but also in ALS,³⁰ and as we have learned, metals can trigger both oxidative stress and the formation of Lewy bodies.

IT'S INDIVIDUAL

I often get asked, "Why doesn't everyone with metals in their mouth have a neurological disease?" The way I like to explain it is, "Why doesn't everyone who smokes cigarettes get lung cancer?"

Many possible variables can come into play to affect neurological health—not just metals. Everyone has a unique medical history and different levels of toxic exposures. Some people may have a heightened sensitivity or allergy to metals.³² Other variables that may contribute to poor health include diet, lifestyle, toxic load and genetics.

The concept of epigenetics refers to the notion that the environment can turn "bad" genes on and off. It is important to understand epigenetics because medicine will often "blame" diseases on genetics, when in fact, you can manage the condition by improving your environment. Research shows that maintaining brain and nerve health relies heavily on epigenetics and that ALS, Parkinson's and Alzheimer's all have epigenetic implications.^{33,34} There are actions that you can take to try to help the good genes to "stay on." Science is exploring targeted approaches to address epigenetics in neurodegenerative diseases.^{33,34}

I HAVE DENTAL METALS IN MY MOUTH—NOW WHAT?

I am also often asked, "Should I get all of the metal out of my mouth?" People ask, "If I get all of the metals out of my mouth, will this disease go away?" Unfortunately, there are no black-and-white answers to these questions.

On the one hand, there are encouraging cases in the medical and dental literature where removal of dental metals has helped to improve

Many possible variables can come into play to affect neurological health—not just metals.

We no longer live in a time where dental metals are the only option for replacing teeth.

certain medical conditions.³⁵ For example, removing amalgam fillings in mercury-sensitized patients has improved the general health of patients suffering from diseases such as fibromyalgia, chronic fatigue syndrome and other autoimmune diseases.⁵ I have witnessed symptoms associated with heavy metal poisoning “disappear” or “significantly improve” after removing dental metals. However, there is no guarantee that this will be the case for everyone. Every body is different, and many other variables can affect improvement or non-improvement of a medical condition. In addition, sometimes it can be risky to remove a metal for medical reasons or due to the risk of potentially losing a tooth. It is important to consult with your dentist about your specific situation to see what may be best for you.

To address the health variables that can impact neurological health, I usually recommend that patients work with a health practitioner who emphasizes approaches for improving overall health. I have seen naturopathic and functional medicine doctors make a huge difference for patients with chronic diseases, even when they were told that there was not much that could be done to help them. I believe it is important to consider metals as a factor when approaching neurological diseases. I hope that more dental and medical professionals will become aware of the potential harm that metals can cause and will opt for non-metal options whenever possible.

Not all dentists have much understanding about the risks of dental metals; biological and holistic dentists are more likely to have that knowledge. These types of dentists usually have certifications and training on how to work with dental metals safely. For example, they may know extra precautions to lower the risk of mercury exposure when removing a mercury filling. They also may have more knowledge about detoxing from metal exposure and the best non-metal replacement options, if necessary. Many of these dentists can also evaluate you or refer you for testing to assess the possibility that dental metals are affecting your health. Organizations such as the International Academy of Oral Medicine and Toxicology (IAOMT) are a resource to find dentists trained in these topics.

DENTAL OPTIONS

We no longer live in a time where dental metals are the only option for replacing teeth. Ask your dentist about using non-metal replacement options whenever possible. Non-metal options will vary, depending on what brands the office has available and what procedure is being done. Typical replacement options for fillings, crowns and implants will include forms of composites or porcelains. Speak with your dentist about which materials or brands are best for your particular situation.

There are situations, especially in some medical emergencies, where metals in the body may be extremely helpful and even life-saving. In such cases, try to get a metal allergy test so that if used, you can lower your risk of subsequent complications. You also can ask for non-metal options and discuss the pros and cons with your medical provider. If metal is placed, be sure to inquire whether it can be removed in the future and, if so, what that would entail. Sometimes, depending on your situation and the particular surgery, removing the metal later would be too risky.

My hope for dentistry is that it moves away from the use of dental metals and opts for non-metal options whenever possible. The European Union (EU) recently implemented some strict regulations pertaining to dental mercury, in particular, banning its use for certain groups⁷ and discussing the possibility of a complete ban in upcoming years.^{13,36} This is very promising news. However, there are still many countries that use dental mercury, including the U.S. The FDA has only recommended against using amalgam fillings for certain people but states that it does not support a ban of dental amalgam.¹² Hopefully, the FDA will change its mind and follow the EU’s lead.

Unfortunately, dental metals other than mercury are still commonly used. I hope that neurologists, physicians and other medical practitioners who treat patients with neurological conditions will become more aware of this issue.

POTENTIAL THERAPIES FOR NEURODEGENERATIVE CONDITIONS

In a promising case in the literature, a dentist with Parkinson’s disease who was found to

have mercury intoxication underwent chelation therapy, a process that helps remove metals from the body; after chelation, she regained her health.³⁷ Chelation therapy has been used successfully in many cases of PD—not only with mercury-related Parkinson’s symptoms but also with people who developed Parkinsonism after manganese exposure.^{38,39} Although this work suggests that the combination of standard treatment, removal of dental amalgam fillings, chelation therapy and support for detoxification may be an optimal treatment for PD and other neurodegenerative conditions, more research is needed.⁵ Therapeutic pharmaceutical approaches that help bind metals in the brain also have been explored for AD treatment.²³

The relationship between sleep, mercury and AD requires investigation, but it is interesting to note that mercury accumulates in the pineal gland where melatonin is produced.^{20,25} Preliminary research indicates that melatonin may be beneficial in addressing mercury issues in AD. Sleep issues and circadian rhythm disruption are strongly connected to PD as well.²⁰ Another AD study found that selenium and zinc may have a protective role against mercury toxicity.⁴⁰

FINAL THOUGHTS

Science says that we don’t know the definitive cause or causes of Parkinson’s, Alzheimer’s or ALS. However, there are clearly some striking relationships between metals, including dental metals, and these neurodegenerative conditions that warrant further investigation. Although we cannot say for sure which specific mechanisms are connected with specific diseases, given the evidence, it is clear to me that metal exposure is not something to be ignored when it comes to trying to figure out what is going on.

In the meantime, there has been some promising research on metals and neurodegenerative diseases with regards to metal removal, metal detoxification and improvement of neurological symptoms. Everyone’s body is different, and it is important to work with a practitioner who can help safely address your situation. More research needs to be done on these conditions and their relationship to dental metals, given that dental metals can be a significant contributor to metal toxicity. ☯☯

Dr. Dianna Cortese is a board-certified dentist who takes a biological approach to dentistry and understands the relationship between mind-body-spirit and dental health. She also has training in airway/sleep dentistry for adults and children, and in dental oncology and cancer research. She is committed to the well-being of her patients and strives to take the least toxic approach whenever possible. Dr. Cortese graduated from NYU College of Dentistry with honors in oral medicine and pathology (receiving the American Academy of Oral Medicine Award) and completed her general practice residency at New York Presbyterian Brooklyn Methodist Hospital. Oral medicine focuses on the oral health management of medically complex patients, which includes the diagnosis and management of medical conditions affecting the oral cavity and maxillofacial area. In 2019, she received Women in Medicine’s “Top Dentist” award. Dr. Cortese will make her debut as a children’s book

author this fall! Disclaimer: The information in this article is not medical advice and should not be substituted for consulting with a doctor.

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Eat Your Environment:

Enjoying Greenland's Local Food

By Mike Keen

Eat Your Environment. This has been my mantra for the last few years, but it's only recently taken on a more serious and natural aspect for me. I'm not a scientist or a nutritional therapist or a doctor—I am a chef. I've been a chef for nearly four decades, and yet it's taken until now for me to pull the curtains aside to reveal the bare bones of human evolution and our relationship with diet. I don't know why it took so long. It all makes so much sense that I'm frankly amazed (and not a little disappointed) that I didn't spot it before. It is like a bad “whodunit” where the baddie actually turns out to be the one you suspected from the start.

In my career in food, I've traveled all over the world—from cruise ships to tiny restaurants to big-event catering to beach-shack barbecues. I've cooked everything from terrible, mass-produced food—the cheapest stuff imaginable—to simple but great home-cooked food, to Michelin restaurant services involving six chefs around each plate, tweezers twitching like we're all cheffy Edward Scissorhands.

Well within living memory, fridges weren't "a thing." What did we do before their arrival? We preserved.

It took an epic adventure to change my entire perspective on food: a solo kayak adventure from the south of Greenland to the north along almost the entire west coast. I initially conceived the idea over a beer while I was trying to twist my tongue along the Greenlandic language. Greenlandic is a Scrabble player's dream (or nightmare, depending on your perspective). The place names of the most southerly and northerly towns in Greenland are liberally sprinkled with ten-point letters—Qaqortoq in the south and Qaanaaq in the north. The anglicized word "kayak" comes from the Greenlandic word for it—*qajaq*.

By default, living a hunter-gatherer lifestyle means a nomadic lifestyle, moving, usually seasonally, to follow game and optimal hunting and fishing conditions. Up until a few generations ago (before the use of fossil fuel), the Inuit would have had to carry everything they needed themselves—there is not much possibility of using a horse and cart in Greenland—with travel of any distance done by *qajaq* or *umiaq* (a larger boat that carried families and cargo). The real star was the *qajaq*. Without this uniquely designed craft, it would be hard to imagine life in Greenland back then. The *qajaq* enabled the Inuit to hunt effectively and to search out newer and better hunting grounds. So effective and efficient was the *qajaq* that its design and practical uses spread worldwide. It is easily the most widely recognized Greenlandic word.

The thought popped into my head: Would it be possible to *qajaq* from Qaqortoq to Qaanaaq (seven "Q's!)? At the time, I had only been

kayaking (henceforth called *qajaqing*) for three years. I have no athletic or army background, and I'd never camped and *qajaqed* before. I'm very much an ordinary chap. Thankfully, my chef career at that time was taking me away from restaurant work—and the ridiculous work-life balancing act that restaurant jobs entail—into more manageable hours doing pop-ups, talks and demos. So, I talked myself into it, calculating that the distance of three thousand or so kilometers would translate into thirty kilometers of paddling each day for one hundred days (give or take).

A big part of dreaming up the idea of the *qajaq* expedition was imagining how early *qajaqs* would have survived in their environment with homemade *qajaqs* made of driftwood and sealed seal skins for the outer covering. I wanted to replicate how those early *qajaqs* would have lived during such a trip, and obviously, they would not have had canned rations or anything a modern adventurer would be eating. Thus, eating from the environment was the way forward.

HIGH-TECH KITCHENS

I had always been troubled by how reliant a modern kitchen is on technology such as fridges, machines and computers; it felt vaguely unsustainable and wrong. However, as with many "Eureka!" moments, living life constantly gets in the way and these important thoughts get stuck on a dusty shelf in the back of your mind. It took a run-in with Environmental Health here in England—which forbade me from making traditional cured salamis and meats because it



The author eating fresh cod at midnight in Iceland



Qajaqing in Disco Bay, Greenland

didn't fit into their "safe practices" ethos—to make me start seriously and actively questioning absolutely everything the "authorities" had always drummed into professional chefs and the general public. The questioning was not just in the realm of food, but across the entire spectrum (but that's for another time).

The whole structure of a modern professional kitchen revolves around the fridge. Constant temperature checks of food and short use-by dates are always over-cautious—insurance and litigation considerations being the main drivers of this approach. An obscene and embarrassing amount of food waste occurs (current estimates suggest that a third of food goes into landfills), which is not a sustainable, let alone ethical, way of operating.

How long have fridges been an essential part of our species' existence? The answer is what we would expect—the tiniest speck in the timeline of our evolution. In Britain in 1963, for example, only 6 percent of households had a fridge. The U.S. reached this figure a decade or two earlier, but it turns out that well within living memory, fridges weren't "a thing." What did we do before their arrival? Nowadays, that is a question that would stump most people, because life without a fridge is almost unthinkable, but I'll tell you the answer: we preserved. We fermented and dried food, we ate foods that now would be discarded and we ate natural foods that develop, through the action of bacteria, into an almost different product from the original—one that is amazingly healthy and full to bursting with awesome bacteria that assist digestion and support mental health, our immune system and virtually every aspect of our existence.

Take raw milk, a virtually unprocessed product that is packed with vitamins, nutrients and beneficial bacteria. We've evolved alongside it for thousands of years, so much so that its consumption has assimilated into our physiology. When fresh, it's amazing and it doesn't go off; it evolves into something else. In the past in England, everyone who wasn't fortunate enough to live close to a dairy consumed clabbered milk. Clabber is essentially a live, totally natural yogurt with a mild taste, and it lasts for a long time. Pasteurized milk, on the other hand, is a dead product, which has had nearly every bit of

goodness blasted out of it. When left out, since it has no indigenous population of good bacteria to protect it, it molds and potentially pathogenic bacteria can get to it. This is why pasteurized milk tastes so sour and awful when old. Try it yourself—leave an equal amount of raw milk and pasteurized milk out (with a net cover). After a few days, the raw milk will separate; after straining, you can drink the whey and eat the clabber like yogurt. Whether you put it in the fridge or leave it out, it will still taste delicious. The pasteurized milk, on the other hand, will develop a film of mold and taste disgusting.

Despite what Big Food, Big Pharma and all the other "Bigs" would have us believe, people did incredibly well at surviving for thousands of years before modern industrial practices—food labeling, procedures promising to "kill 99.9 percent of all bacteria," extreme sanitization, temperature checks, antibiotics, supplements and ultra-processed food—came along to rescue us.

FERMENTED OR ROTTEN?

You might think it would be fairly easy to distinguish between fermented and rotten food, but it really isn't—at all. A large part of my research and experiments with food involve trying to find out not where that line lies but if there is a safe-to-eat line between fermented and rotten at all. Several times when I thought I was getting nearer to an answer, that line moved farther away. I also believe that the only way to truly get under the hood on this topic is to experience the foods first-hand—the visceral experience of smelling, feeling and tasting these foods in the presence of people who truly understand them is absolutely essential to getting a grasp on it.

But let's start with a recognized definition of fermentation. Usually, it goes something like this: "the controlled and beneficial action of bacteria on foodstuffs to enhance flavor and extend shelf-life in a safe manner."

"Enhance" is a very subjective word, however. To start with, the actual response of "disgust" and "pleasure" when it comes to food is very much a learned response. It's not hardwired into us as a species at all. Look at the foods kids hate; most of those, over time, will turn into foods they really like. Kids usually despise the stronger tasting stuff—blue

Despite what Big Food, Big Pharma and all the other "Bigs" would have us believe, people did incredibly well at surviving for thousands of years before modern industrial practices came along to rescue us.

cheese, anchovies, chili, seafood and anything fermented (except maybe chocolate, but that’s almost always loaded with more sugar than actual cacao and doesn’t count)—whereas plenty of adults prize these foods.

Look, too, at cultural differences. A favorite pastime of many countries is to make fun of what people eat in other countries. Children of indigenous peoples often eat exactly what the parents eat (and before they get it, it’s often regurgitated after being chewed thoroughly); they don’t have a problem eating what we in the West would consider “extreme” foods. The actual taste and/or smell is totally subjective.

Salt is an important aspect of fermentation in all styles of well-known ferments. Lactic acid bacteria (probably the most common type of bacteria used in popular ferments) are halophilic—meaning they like a salty environment—which gives them a massive advantage over other bacteria that may want to muscle in on the food. In Greenland, however, one of the things that immediately strikes you is the lack of trees. Why is that important in the context of salt and fermentation? The lack of trees makes wood very scarce, which means that fires and the fuel to keep them going are hard to come by—and thus, no heating of seawater to make salt to preserve food. Historically, there would have been driftwood from Newfoundland and Canada, but the supply would have been inconsistent and fairly rare.

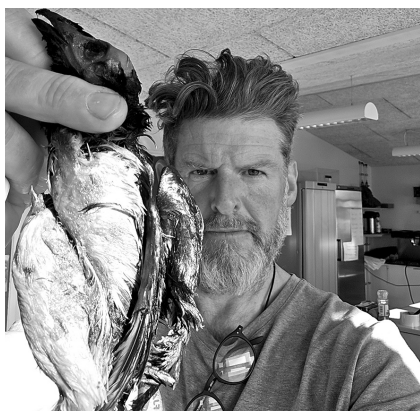
So, how did the Inuit preserve food? Despite Greenland being in the Arctic, the temperature isn’t always freezing cold, so freezing food to preserve it through super-low temperatures

wasn’t a viable long-term option. The answer is that they just kept the food, often for months on end. Most people with a traditional Western mindset would not touch that food, as is evidenced by many polar archives. When presented with two-year-old caribou meat, for example, European explorers and whalers refused to eat it, swearing that it was the most disgusting thing they’d ever seen. Instead, they carried on eating their canned food (often contaminated by lead), slowly dying by the dozen as a result, while the Inuit tucked into their food with gusto, with zero ill effects and plenty of clear benefits. This type of food is something I’ve now eaten many times, with no bad results.

Is this food fermented? It is—but it’s way beyond any classical ferments such as sauerkraut or kimchi. One key difference is that with the classic ferments, the fermentation process is arrested by putting it in the fridge when it reaches the desired taste, whereas fermented seal just has to keep going. Moreover, there are no particularly special processes involved; the only rule seems to be keeping the fermenting food out of direct sunlight. Another key factor, which isn’t really a conscious consideration for indigenous people (because historically, there was no other option except to use what nature provided), is the use of natural materials—mostly skins or woven fibers. Indigenous people developed and used naturally occurring materials and processes to provide them with long-life food. It seems that nature provided all the right tools for humans to survive, even in extreme environments such as Greenland. Perhaps during the immense amount of time we’ve spent on the planet, we’ve simply evolved hand in hand with everything else, so that we’re all a small but significant cog in the gears of the world (see James Lovelock and Gaia).

The rare times when people get sick are when they don’t follow these natural processes. Unfortunately, this is often the result of outsiders changing a process because it doesn’t fit within the parameters of their idea of how food should be made. A classic example is insisting on using man-made materials such as plastic, glass or rubber to wrap food because they’re “easier to clean” or “more sterile,” though they also tend to exclude the oxygen that seems to be a big factor in why these foods are safe to eat.

Where does this leave us in the quest to find the line between fer-



Nearly de-feathered *kiviak*, Qaanaaq, Greenland



Hakarl (fermented Greenland shark), hanging in a shed

mented and rotten? Climatic and environmental factors, coupled with location, time of year, weather patterns and more mundane issues such as ease of transport and availability of containers and salt all have a strong influence on the outcome of any particular preserved food, be it sauerkraut or fermented seal. Even very different fermentation methods can produce results that are safe to eat.

In considering indigenous methods of preserving food, it's worth noting that it is not just the Inuit who widely used a stripped-back method of preserving meat. There are hundreds of examples of indigenous peoples in the tropics using similar methods to preserve meat. As Western culture chips away at the ancient practices of traditional hunter-gatherers, however, they are becoming fewer and farther between.

Numerous studies have shown that energy—and the preservation of energy—is paramount to hunter-gatherers, and that principle would seem to extend to this way of preserving meat as well. When presented with a fresh kill (say, an antelope), there are many instances where the hunter-gatherer will stash the meat underground or hang it up out of the way of other predators and let the bacteria do their thing—often for a week or more. Said meat will not be desirable at all to the average city dweller, but for the hunter-gatherer, the bacteria have been working at that meat, effectively predigesting it and making the nutrients more easily bioavailable. What a great way of preserving energy! Not only do the bacteria get a meal, but the hunter gets a meal that is much more effective and doesn't involve a huge expenditure of energy to break the meat down to digest it.

Why is it that in Europe and America, we don't use this ancient way of preserving meat? The answer is that we used to. It's how we survived and evolved, but in our constant quest to make life easier, we have changed our entire approach to food. On our journey of moving into agriculture and creating cities with support networks, mass-produced food and convenience, we have managed to forget our entire evolutionary journey with food.

AN UNRECOGNIZABLE MICROBIOME

In our modern world, food production has

been so sanitized that bacteria are virtually wiped out and play no part. We have managed to alter the average person's ability to process differing degrees of bacterially altered food. Our bodies struggle to metabolize food subjected to so many processes and chemicals, which puts extra pressure on our immune system and compromises our health.

Our gut microbiome has been weakened to such an extent that it would be unrecognizable when compared to our forebears' microbiome. This particular point is very important—over the course of several generations, the gut microbiome has become seriously depleted in the majority of people. The relationship that humans have had with bacteria over hundreds of thousands of years has, in less than one hundred years, irrevocably changed. The scale of this change is hard to overemphasize. The food we eat today would be unrecognizable to our great-grandparents, let alone our ancestors from way back.

As humans, we cannot evolve quickly enough to adapt to this new human diet. It took over twelve thousand years of dairy consumption for us to adapt to that particular food, and large parts of the global population still can't process it effectively. Imagine how that is now working out for us and our "new" foods, laden as they are with chemicals, sugar and numerous man-made additions. You don't have to look any further than our overstretched and increasingly crisis-ridden health care systems. Global health has been declining rapidly for the last century, and even faster since World War Two. Obesity levels are catastrophically high, which is one of the first indicators that over the next several decades we are going to see an unprecedented health crisis.

NECESSITY IS THE MOTHER OF INVENTION

The more I looked into fermentation and ancestral ways of preserving food, the more "hooked" I became. As the pieces fell into place, my research took me away from Europe, first heading north to Scandinavia and then across the Atlantic. It seemed that the more extreme the environment, the more the methods of preserving food became inventive and extreme.

The people of Greenland have such a great connection to their food and environment that once an outsider expresses an interest, it sparks a fire of pride that is hard not to get drawn into.

My first stop was the Faroe Islands. The national dish, *skerpikjøt*, is lamb that has been fermented for six months or more—no salt or brine, just left out in ventilated sheds. It takes on an incredibly rich (and strong) flavor. Next up was Iceland and *hakarl* (fermented Greenlandic shark). With a super strong ammoniac smell and taste, it's often taken with a shot of hard liquor (*brennivín*) to take the edge off. Keeping on the ammonia theme, Iceland also has a Christmas dish of fermented skate (translated as “rotten skate”).

The Faroe Islands and Iceland were first populated by Scandinavians (although in some places, the Irish were there first) from around 600 AD. The next landmass on my fermenting journey westward was Greenland. The Scandinavians did indeed get there around one thousand years ago, *but* they had been beaten to it by the Inuit. Traveling downward from both

Canada and Siberia, several waves of Inuit had populated the coastal areas over several thousand years. The Greenlandic Norse only lasted about four hundred years before disappearing sometime in the fifteenth century, probably due to a combination of a mini ice age and the presence of more enticing prospects (timber and metals, to name but two) across the water in North America.

The Inuit toughed it out and not only survived, but thrived. Today, Greenland has around a 90 percent indigenous population base. Despite colonization by the Danish from 1721 on, Greenland largely has managed to hang on to its indigenous culture and food traditions, meaning that it is still possible to see its incredible food techniques and foods today. In most other areas of the world, these traditions have mostly disappeared. It is vitally important that this knowledge be kept and taught to younger generations, particularly given that Greenland's traditions result in some of the most powerful and nutritious food it's possible to eat.

KIVIAQ

The rather incredible food of *kiviasaq* is, to me, the Holy Grail of food preservation. I constantly refer back to it when food (and/or life) seems to be getting complicated. Every April, little auk seabirds—black and

FOODS OF GREENLAND



Ammassat (a small fish) fried in seal fat



Cooked seal intestines and meat, Tasiilaq, East Greenland



The author with cooked seal intestines and meat, Tasiilaq, East Greenland



Fermented seal flipper, Tasiilaq, East Greenland

white birds about the size of a partridge—gather by the millions on the sides of the mountains way up north in Greenland. They were my constant companions on the water as I *qajaqed* northward across the treacherous Melville Bay. Hunters catch them by swooping nets on long poles through the flying mass of birds. They are dispatched by pressing on their hearts to stop them.

To make *kiviaq*, the fully intact birds (feathers, guts, heads and legs still attached) are then packed tightly inside a seal—the seal’s insides having been removed to make way for anywhere between three and five hundred little auks. Some swear by adding extra chunks of seal fat in with the birds. The seal is then sewn up and placed underground or in a covered wooden box for several months. When unearthed and opened up, the birds look like wet, black rags. To eat *kiviaq*, you pick (or rather wipe away) the feathers and pull the flesh off with your fingers. You also bite the back of the skull off and suck the brains and eyes out. Depending on the degree of fermentation, the meat varies from pulling off like a long and slow-cooked hunk of meat to being softer, like a paté that can be smeared off and eaten with a finger. Of course, the guts are fair game as well.

What does *kiviaq* taste like? For me, every fermented meat that I’ve

eaten can be best likened to a super-strong blue cheese, one that takes a layer of skin off the roof of your mouth. The smell is stronger than the taste, but it’s not unpleasant and it gets better the more you eat. In Savissivik, the first settlement after Melville Bay, I downed three of the little fellas, which really set me up for the final three hundred fifty kilometers to Qaanaaq. I’ve never had any adverse side effects (which is most useful when you’re zipped up in a dry suit an hour or so away from land).

DIETARY CULTURE CLASH

Although Greenland is geographically large, it has a small population of around fifty-seven thousand. The entire population would comfortably fit into the sports stadium of most large cities. Of this total number, around eighteen thousand live in Nuuk, the capital, and the rest are spread mostly across the west coast, with

FOODS OF GREENLAND



Fermented eider duck egg



Seal intestines, Sermilk Fjord, Tasilaq, East Greenland



Kiviaq, Savissivik



Iginneq (fermented seal fat), Qaqortoq



Kiviaq and fermented eider duck egg, Qaanaaq

I found that I had very high energy levels, and even after ten hours of qajaqing in freezing cold, wet conditions, I had plenty left in the tank.

only a few thousand on the east coast. There are no roads connecting the settlements, and the only way to visit is by boat, plane or helicopter. Because of this remoteness, the Greenlandic are great users of social media, and a much higher percentage of the population watches the nightly news than in most other countries. Thus, despite each settlement's physical isolation, the people are more connected to each other than most people in the world's cities.

As mentioned, Greenland has been controlled by Denmark for the last three hundred years, and this colonization threads comprehensively throughout Greenlandic culture and lifestyles. There has been a historical narrative of denigrating the native diet—with the traditional foods often described as “savage” or “primitive.” Wherever in the world a colonizing power attempts to convert the native population to its own particular brand of culture—whether religion, lifestyle, fashion or diet—the template is always the same.

In Greenland, the people survived and thrived for thousands of years on mostly sea mammal and fish, but now, Greenland is very much walking a line between two different cultures. It is only relatively recently that all the nutrient-poor, chemical and sugar-rich modern foods have flooded their diets and, predictably, this is having dire consequences on the collective health. You can see the clash between the two cultures reflected in the supermarkets. Every settlement has a supermarket packed with all the standard items you would find anywhere. In general, the amount of Greenlandic food in the supermarkets is minimal and very expensive. Among the aisles of imported bananas and vegetables, soda, candies and long-life milk—and tucked in between frozen ready meals and mass-produced, frozen chicken—you may find a small frozen section of Greenlandic fish and maybe some Greenlandic lamb. As just another example of a dysfunctional global food system, some of the fish is sent abroad to be processed and then returns, all nicely packaged and ready for sale at almost double the price of Danish chicken or pork.

Although exactly the same story is playing out in neighborhoods, towns and cities worldwide, it seems more of an affront in Greenland.

You look out of the window and there is only sea, ice and rock. Clearly, there is no agriculture to speak of, and so the difference between the prevailing supermarket food and the environment is stark. A trip to the supermarket is worrying—you see kids buying and drinking multiple sodas, aisles full of Haribo and other candies, and sweet pastries and doughnuts all laid out in attractive glass counters. Given the unchecked and frequently promoted message to “eat a more Danish diet,” you can only worry about what will unfold over the coming decades. Obesity and heart disease already are taking their toll as all these heavily marketed products edge out the traditional foods. Add to this the fact that because of their small population size and remoteness, most settlements cannot support a permanent doctor or dentist. Sporadically, one will visit for a few days, but often the only recourse if you have a medical or dental issue is to travel to the closest big town or Nuuk, and travel is very expensive.

The general state of dental health is reasonably easy to see—especially in a country where people smile a lot—and is a lot easier to gauge than trying to take the measure of the population's health overall. I found that the general state of dental health was poor, and considerably so in the more remote settlements. This is 100 percent down to the diet. Sodas are amazingly prevalent, and it is not uncommon to see people drinking a Pepsi or *Faxe Kondi* (a Danish soft drink) at breakfast or before heading to school, and then several more during the day. Snacks and candies also are ubiquitous and constantly being dipped into. It's pretty clear that sugar is having a big impact on dental health across the country. In the many tiny museums scattered throughout Greenland you can see photos from one hundred or so years ago showing, similar to what Dr. Weston Price discovered, that people eating their traditional diet seemed to have fantastic teeth.

This is obviously a global problem, slightly mitigated in richer countries where people have more access to dentists who can cover up all manner of dental issues, but fillings, crowns, false teeth and dentures only mask the problem—just as expensive pharmaceuticals mask the issue of worsening global health by treating

symptoms without addressing causes. The cause of most health and dental issues is a terrible diet laden with sugar and ultra-processed products that put stress on our physiology and microbiome.

AN EYE-OPENING EXPEDITION

I set off from Qaqortoq in April 2023, not really appreciating the scale of the task before me. Most nights (although “night” is a relative term given that between May and September the amount of darkness reduces to zero), I camped in the wild, only staying in settlements when I came across them. Eighty percent of Greenland is covered by the Greenland Ice Sheet, which means that virtually all the settlements are on the coast. This meant that I had easy access to hunters and fishermen who could readily supply me with seal, whale, walrus and fish. If I knew that I had a stretch of days with no likelihood of human interaction, I cooked up a stew of one or a combination of these, only adding water and salt, and bagged them for easy reheating.

The people of Greenland are incredibly generous; without their help, I would have found it hard, if not impossible, to complete my expedition. They have such a great connection to their food and environment that once an outsider expresses an interest, it sparks a fire of pride that is easy to get drawn into. That pride, long suppressed, is very well deserved. During my travels northward, I found that I could stay true to my intent to eat a completely Greenlandic diet by buying food from hunters and fishermen or, as often happened, people would just give me their traditional foods.

The evening before I set off from the south, the nightly news had featured me on its program and, because I had a live tracker on my website, people often knew where and when I was arriving before I did. Every single settlement I arrived in along those thousands of kilometers had a welcome for me—often with kids waving Greenlandic flags, and without fail at least one local villager clutching a bag of food for me. After days alone in often difficult and very cold conditions, it wasn’t hard to bring me to tears as someone shook my hand and handed me a bag of seal or dried halibut. Time and again, I was invited into homes to sit with several generations as a board of *mattak* was brought out to share with me. *Mattak* is the skin and blubber of whale, served raw with salt, Aromat (a Danish food powder that tastes like a powerful blend of chicken stock, salt and MSG) and soy sauce. (Needless to say, I just opted for the salt.)

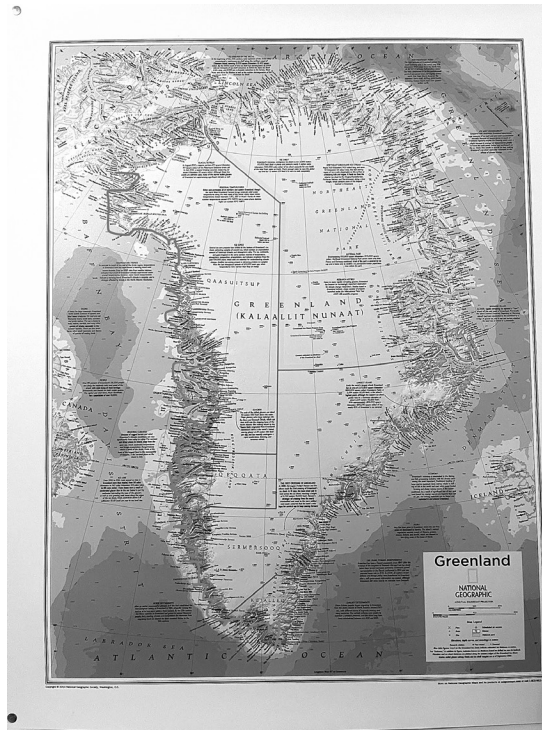
The trip was an eye-opener on many levels. Before starting, I had visions of setting up my tent on a mossy mountainside, the *qajaq* pulled

up above the high tide line, as I prepared a delicious native meal. However, the weather had other ideas. It was incredibly cold, and much more so than the season should have been. When it should have felt like spring, it was more like winter. When temperatures go down to -12C (10F), any water you have freezes solid. After a day’s hard *qajaqing*, you also start to get cold quickly as soon as you stop; getting changed into dry clothes is a priority to stave off hypothermia.

Making camp with the ice shelf at the high-tide mark means having to slip and slide while trying to drag your sixty-kilo-plus (one hundred thirty-two pound) *qajaq* up and over to a safe position. Next, you empty the *qajaq* and set up your tent to get out of the biting wind. Absolutely the last thing you feel like doing is spending any time on a meal, a fact that totally ties in with traditional Greenlandic food. There is no tradition of slow cooking, let alone elaborate meals. Seal and whale are cooked briefly and then eaten plainly. It is only since the Danish arrived

that rice or potatoes and onions have been added to the popular dish of *suaasat* (a seal stew).

I knew that dried fish and meat were a mainstay of Greenlandic food, but the reason for these foods’ importance hadn’t really occurred to me until I got battered for three days and nights in a storm north of Maniitsoq. The weather can get so bad and the storms last for so long that it’s not possible to get out to hunt or fish. In those moments, you need to fall back on a staple such as dried food—kept for exactly that reason. There are incidents of small settlements dying of starvation, either because of insufficient stores or extended periods of terrible weather or a combination of both. Interestingly, the winter and summer dried products are quite different from each other, with the winter dried



The route from Qaqortoq to Qaanaaq

Eating zero processed food—and no food that had come from farther than ten kilometers from where I was—made me feel incredible.

products being much slower to produce and (to me, anyway) the better for it.

In the West’s sanitized and cushioned world of convenience, inclement weather has no impact on our ability to obtain food (with perhaps the biggest challenge being having to don a raincoat on the way to the store). Historically, however, if you were immersed in and dependent on the weather, having a store of dried food would have represented the difference between life and death. Of course, this would have applied not just to Greenland but to our entire evolutionary history.

BEFORE AND AFTER

As soon as I’d committed myself to the epic journey, a lot of planning ensued, mostly involving trying to get free equipment from sponsors. There were also all of the other logistical considerations—transport of gear to Greenland, flights, insurance, tech (satphone), emergency kit and so on. The prospect of spending ten hours each day *qajaqing* alone made me want to try and shoehorn other projects into the adventure, such as collecting seal poo for microplastic analysis. In addition, my inquisitive side prompted me to approach several organizations to see whether there was any interest in before-and-after medical tests for the purposes of comparison. Surely there would be some interesting findings? After all, the ancestral Inuit diet—pretty much a keto diet very high in fat, with a considerable raw and fermented element but no vegetables or fruit and minimal fiber—doesn’t fit into the modern dietary narrative whatsoever.

In England, I like to think that I eat a good, balanced diet, perhaps with a lower amount of ultra-processed food than the average person but with “normal” levels of carbs, fats and proteins. I’ve never smoked and rarely drink, have no known medical issues and have an average weight and exercise regime, so my thinking was that I would be a pretty good test subject. The main issue turned out to be that I was only one person. Normally, a usable study would include a number of test subjects and a control group as well—impossible in this case. However, Kings College London agreed to test me, and the day before heading out, administered blood tests, a

bone density scan, a grip test and other tests, all of which were replicated on my return ninety-five days later. (The test results are available on my website, eatyourenvironment.com.)

As soon as I arrived in Greenland, I immediately went from my fairly typical English diet straight into a 100 percent locally sourced Greenlandic diet. Before donning a dry suit, a few days of transition were absolutely essential to allow my gut to acclimatize to the new diet. I also linked up with the amazing Aviaja Hauptmann at the University of Greenland to test my microbiome, which involved taking stool samples two or three times each week.

During the journey, there weren’t many opportunities to weigh myself, but four weeks in, I had gone from a starting weight of ninety kilos (one hundred ninety-eight pounds) down to seventy-four kilos (one hundred sixty-three pounds), a drop of sixteen kilos (thirty-five pounds). I was worried that having depleted my fat energy reserves, I would “crash” at some point. However, I found that I had very high energy levels, and even after ten hours of *qajaqing* in freezing cold, wet conditions, I had plenty left in the tank. Consequently, I didn’t change my diet or level of physical activity, and as I continued to knock out thirty kilometers per day, my weight remained the same for the duration. My take on this was that my body was finding its balance with the environment in which I was totally immersed—living outdoors twenty-four hours a day and eating food directly in my hunting radius.

A SECOND TEST

Fast forwarding to seven months after the end of the *qajaqing* trip, I got an offer to work in East Greenland for sixty days, cooking at a remote hotel. It being Greenland (plus a part of Greenland I had not yet been to), I jumped at the chance. Foremost in my mind was that I could do exactly the same dietary experiment on myself, but this time without the physical element. How amazing to compare the two projects! I wondered what it would show, thinking that surely *qajaqing* thousands of kilometers would make a massive difference to the medical results. This time, I switched medical test providers, getting even more extensive before-and-after testing

that included a genetic test and testing for heavy metals. Sea mammals apparently are high in those pollutants, so I thought it would be interesting to see whether that translated to an increase in my metal levels. (Again, the test results are up on my website.)

Rather amazingly, I lost *the same amount of weight!* In the seven months between the two trips, I had gone back to my “English” weight of ninety kilos, but over the five weeks in East Greenland, I again lost sixteen kilos and remained at seventy-four kilos for the remainder of my time there. I find this incredible because it indicates that the exercise element had had no impact on my weight loss. I think that when you are 100 percent absorbed in your environment, your body will rebalance and level out to find its optimal harmony. This fits with my long experience of working out and exercise; I have always been pretty active but have never noticed any weight loss when I’ve been exercising. This also agrees with a lot of research concluding that diet is by far the main driver for weight loss.

Interestingly, I had virtually no elevated heavy metal levels (they increased by less than 1 percent). Most of my markers showed even more improvement the second time around than after the first journey. I will be using the same testing parameters and companies to measure my future dietary adventures, which will give me a good baseline from which to test.

As ever with these things, you have to be careful with the questions you ask. The answers may raise more questions than you are prepared for, and those answers may also come with many caveats. As a layman, I find that my mind tends to switch off when presented with test results because I don’t fully understand what they mean; I’m learning, but the results generally get the nutritional therapists more excited. I tend to listen more to what my body is telling me, which I think is a very good lesson. After all, it is what we have been doing for hundreds of thousands of years.

What did my body tell me? Eating zero processed food—and no food that had come from farther than ten kilometers from where I was—made me feel incredible. I wouldn’t have thought it possible to physically and mentally tackle this challenge without some serious low points and potential injuries, but at no point did any of this happen.

AN EXPEDITION RESUMED

My *qajaqing* adventure was brought to an early end. I’d reached Upernavik, about twenty-two hundred kilometers into the planned thirty-two-hundred-kilometer journey and just south of the trickiest part of the trip—the crossing of Melville Bay and the far north, where the sea ice starts becoming an issue. There is only a narrow time window when it’s possible to cross.

My contacts in the north and the satellite imagery showed far heavier-than-normal sea ice over about a fifteen-hundred-kilometer stretch, which would have meant *qajaqing* pretty far out to sea to skirt the impassable ice. The ice was too unstable to travel over, so in the absence of a ground support team, I had to make the call to cut the trip short. I couldn’t afford to wait for the ice channels to open up sufficiently. Although upset at having to cut the expedition short, the fact that it was due to unseasonable ice levels as opposed to personal reasons (physical or mental) made

it more bearable.

I soon forgot all the worst bits and resolved to return the following year to finish the last thousand kilometers, which I successfully completed in August 2024. This time, I did no testing but continued eating only ancestral Inuit food, mostly because of the incredible energy levels it provides. However, I also now find that the food is delicious and goes beyond mere satiation, connecting me to the environment.

LESSONS LEARNED

It is impossible to cover every aspect of this complex and vast subject, but I think I have picked out the most relevant points. This journey completely altered my stance on food and diet, which is something that I never dreamed would happen after so many years in the food industry. If there is one concise snapshot that I can pull out and highlight, it will always come back to *kiviasq* and those wet-rag little auks fermenting inside a seal in northern Greenland. *Kiviasq* spits in the face of modern food with the full weight of hundreds of thousands of years of successful human evolution behind it. In this evolutionary adventure, it would be most accurate to portray us not as masters of nature but as happy and humble participants in an incredibly intricate system. It’s a lesson we would do well to remember. ☯☯

Mike Keen (@eatyourenvironment) is a chef and evolutionary food explorer from Suffolk, England. He spends half of his time in remote regions of the world living through indigenous diets to observe, research and demonstrate how we as a species have evolved with food and the effects it has on our bodies. This is done in the context of the modern global food system and all the associated problems such as diseases, animal welfare, chemical contamination and health care crises. Learn more at eatyourenvironment.com.

Reading Between the Lines

By Merinda Teller

Hip Replacement Surgery in a Throwaway Society

Around the world, osteoarthritis prevalence is rising.

In 2023, *Forbes* reported on the rampant overuse of “unnecessary” and “inappropriate” surgeries in the U.S., worriedly discussing implications related to health care costs as well as patient outcomes.¹ Policy analysts define health care overuse as “the delivery of tests and procedures that provide little or no clinical benefit” or that “risk patient harm in excess of potential benefits.”² Ironically, the events engineered in the spring of 2020 catapulted many procedures into the “unnecessary” category—including the majority of hip and knee replacement surgeries.³ Now, however, business is once again booming, and the temporarily discretionary surgeries are “back and bigger than ever.”⁴

The technical name for joint replacement surgery is arthroplasty, with the goal being “substitution of the joint with an implant able to recreate the articulation functionality.”⁵ The volume of total hip and total knee arthroplasties (THA and TKA) was already surging well before the temporary slowdown imposed by the putative “pandemic,” with some experts dubbing hip arthroplasty “the operation of the century.”⁶ According to the Centers for Medicare and Medicaid Services (CMS), between 2000 and 2019, the annual volume of THA in the Medicare population rose by 177 percent, with hip replacements representing over a third (35 percent) of all joint arthroplasties performed.⁶ With the post-2020 uptick in these procedures, CMS projects further 176 percent and 139 percent increases in THA and TKA, respectively, by 2040.⁶ Shoulder replacements also began accelerating about a decade ago,⁷ and growth rate projections for shoulder arthroplasty now outpace projections for THA and TKA.⁸

The remainder of this article focuses primarily on hip replacement surgery; however, many of the issues discussed also pertain to arthroplasty of the knee and other joints.

CREAKY JOINTS

In the human body, a joint is any place where two bones meet. The main functional joints—also the most common type of joint in the body—are called the synovial joints and are the target of arthroplasty. The synovial joints include “hinge” joints like the knees, ankles and elbows; condyloid joints like the wrists; and “ball-and-socket” joints like the hips and shoulders.⁹ In the case of the hip joint, the femoral head—the “ball” found at the top of the thigh bone that allows for hip motion¹⁰—fits into a rounded socket called the acetabulum.

The joint inflammation or pain known as arthritis—including osteoarthritis, rheumatoid arthritis and osteonecrosis (bone death caused by poor blood supply)—is the primary impetus for surgeons to recommend and patients to request arthroplasty. Around the world, osteoarthritis prevalence is rising.¹¹ In the U.S., data from seven cycles of the National Health and Nutrition Examination Survey (NHANES) for the years 2005–2018 show that self-reported osteoarthritis (adjusted for age) increased linearly throughout the period.¹² According to recent Centers for Disease Control and Prevention (CDC) data for U.S. adults (with type of arthritis not specified), more than one in five women (21.5 percent) has arthritis, as does one in six men (16.1 percent).¹³ When broken down by age group, arthritis affects 4 percent of young adults into their mid-thirties but rises to 11 percent (about one in ten) of thirty-five to forty-nine year-olds, 29 percent (three in ten) of fifty to sixty-four year-olds, 44 percent of seniors between ages sixty-five and seventy-four, and over half (54 percent) of the elderly aged seventy-five or older.¹³ Osteoarthritis is, in the U.S., “the most common cause of walking-related disability among older adults.”¹⁴ Researchers have estimated the prevalence of hip osteoarthritis in North America to be around 8 percent.¹⁵

Given the correlation of arthritis with age, it is not surprising that use of hip and knee arthroplasty increases with age. Referencing the “baby boomer” generation, a 2015 assessment of THA and TKA prevalence noted that “living with a total joint replacement is a remarkably common condition” in the U.S.; however, the researchers also called attention to the younger demographic, in whom joint replacements are increasing.¹⁶ Remarking on factors that have sent hip and knee replacements “trending younger”—such as rising rates of obesity (which puts “extra stress” on the joints) and changes in attitudes and expectations—one health care system blithely observes, “Joint replacement surgery isn’t just for the elderly anymore.”¹⁷

NEW JOINTS FOR HIP VICTIMS

Hip replacement surgery has a colorful if sometimes disturbing history, marked by continual tinkering with materials and techniques—and unrestrained experimentation. As one set of authors mildly puts it, until the advent of modern informed consent, patients did not always know what they were in for when they went under the knife; early generations of practitioners attempting these novel surgeries were prone to making “authoritative decisions that most times were not discussed with the patient.”¹⁸

Medical historians note how the first stirrings of interest in hip surgery arose in the eighteenth and early nineteenth centuries, a violent age that predisposed surgeons to look favorably on “amputations and limb disarticulations.”¹⁹ According to one account, amputation in the pre-anesthesia era had the compelling virtue of being “expeditious” and could be carried out by the less technically adept.¹⁸ At the same time, however, some surgeons recognized the fact that in certain situations, amputation might be overly drastic. Consequently, a subset of daring practitioners began attempting to excise (cut out) joints.

Finding that excision “ameliorated pain and preserved mobility, but at the expense of stability,”¹⁸ surgeons continued to experiment with various hip operations throughout the 1800s, with mixed results. When one surgeon, “a great promoter of hip resection,” tried out his operation on fifty-nine patients in the 1850s, a

third of them died.⁵ Often, the patients—one as young as nine years old—were said to have “hip tuberculosis.”¹⁹ To digress for a moment on the topic of TB, the conventional medical literature claims that although TB most often affects the lungs, it can also “infect the joints” and, in some instances, cause “septic hip arthritis.”¹⁹ The Weston A. Price Foundation and Sally Fallon Morell have disputed the conceptualization of TB as the result of an infectious microbe, suggesting that it may actually be a form of iron poisoning.^{20,21} From this standpoint, it is interesting to note that a 2021 paper discusses a likely role of iron in the development of osteoarthritis “under conditions of iron overload.”²²

Key requirements for the materials used in surgical hip interventions include biocompatibility, the ability to resist heavy stress, and low friction and wear rates,⁴ but as we shall see, up through the present day it has been difficult to satisfy these criteria. In fact, concerning the biocompatibility criterion, doctors already knew in the late 1800s that the human body “could not accept large quantities of external material.”²⁴ Nevertheless, from the 1860s through the 1890s, surgeons became intrigued by the possibility of “treating the joint surfaces, by using different types of materials of biologic interposition tissues.”²⁵ This placement of some type of membrane over an arthritic joint surface became known as “interposition arthroplasty,”²³ a procedure that still remains in the orthopedic surgeon’s toolkit as “a useful nonprosthetic alternative.”²⁴ A Czech surgeon working in the late 1890s experimented with a wide range of interposition materials, including “muscle, celluloid, silver plates, rubber struts, magnesium, zinc, glass, pyres, decalcified bones and wax.”²⁵

It was in Germany in 1891 that a surgeon performed the first documented full-on hip replacement surgery.²⁵ Again seeking to help patients with hip joints “destroyed by tuberculosis,” the prominent surgeon, whose father had been the personal physician of King Charles I of Romania, replaced the femoral head with ivory,²⁵ fastening it to the bone with nickel-plated screws and using “plaster of Paris and powdered pumice with resin to provide fixation.”²⁵

Apparently, ivory did not provide the looked-for results, so the search for other hip replacement materials and techniques continued

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In the 1970s, dissatisfaction with metal-on-metal prompted a further shift toward metal-on-polyethylene prosthetics, now considered by many to be the THA “gold standard.”

apace. By 1918, Johns Hopkins Hospital had established the practice of pig bladder arthroplasty, with doctors reportedly finding pig bladder to be “sufficiently strong to withstand the stresses of weight bearing and intra-articular pressure.”¹⁸ In the 1920s and early 1930s, glass molds made a brief appearance, placed between the head of the femur and the acetabulum.¹⁸ Glass had the significant advantage of being biocompatible but suffered from one major drawback: it “failed to withstand the great forces going through the hip joint and shattered.”²⁵ Acrylic prostheses met with a similarly short-lived fate; when trialed in the late 1940s, they “turned out to be exceptionally susceptible to wear, and failed even before the general acclaim had ceased.”¹⁸

In the 1950s, metal-on-metal prostheses came into vogue,⁴ and in the 1960s, a British surgeon—now credited with being “the father of the modern THA”—refined an approach called “low friction arthroplasty” that combined metal, polyethylene, and acrylic bone cement.²⁵ Although metal proved more durable than glass, when doctors began seeing prosthetic failures and complications due to the “side effect” of “metallosis,” it became evident that the materials were far from biocompatible. As Drugwatch explains:

“Metallosis is a type of metal poisoning that can occur as a side effect of joint replacement devices with metal components, such as metal-on-metal hip replacements or other metal implants. These devices are made from a blend of several metals, including chromium, cobalt, nickel, titanium and molybdenum. When the metal parts rub against each other, they release microscopic metal particles into the blood and surrounding tissues. . . . Metallosis develops as these metal ions build up in the bone, muscle and other tissue around the implant.”²⁶

In a study published in 2021 that elaborated on the mechanisms of metallosis, University of Connecticut researchers explained that “[b]odily fluids are electrochemically active and react with biochemical implants.”²⁷ When implants release metallic particles, “[t]he body’s normal defense mechanism becomes activated, which can elicit a cascade of events, leading to inflam-

mation of the immediate surrounding tissues and eventually implant failure.”

Due to the problem of metallosis—which resulted in recalls, lawsuits and thousands of people being injured—the Food and Drug Administration (FDA) no longer allows metal-on-metal THA, but many individuals still harbor the all-metal implants. Strangely, FDA does allow metal-on-metal “hip resurfacing.”²⁸ (The difference in the two procedures is that whereas THA removes both the femoral head and the socket, hip resurfacing leaves the femoral head in place but covers it with a metal cap.²⁹) According to a 2012 review article cited by Drugwatch, hip resurfacing patients are equally prone to metallosis, with patients experiencing potential symptoms ranging from “a feeling of instability, an increase in audible sounds from the hip, and pain that was not present immediately after surgery” to bone loss and tissue necrosis.³⁰

In the 1970s, dissatisfaction with metal-on-metal prompted a further shift toward metal-on-polyethylene prosthetics, now considered by many to be the THA “gold standard.”²⁵ However, case reports indicate that this has not eliminated the threat of metallosis. According to a 2022 study, the release of metal ions and nanoparticles from metal-on-polyethylene constructions can produce “[a]dverse local tissue reactions,” including “periprosthetic solid and cystic masses known as pseudotumors”; the pseudotumors, in turn, “can result in pain, swelling, extensive destruction to surrounding hip soft-tissues, and compression syndromes on neurovascular, gastrointestinal, and genitourinary structures.”³¹

In the 1980s, ceramic-on-ceramic and ceramic-on-polyethylene implants entered the picture, offering the advantages of hardness and apparently inert debris alongside the disadvantages of being expensive and requiring superlative surgical technique.⁴ Another variable that affected the ever-changing surgical picture in the ‘80s was the shift toward noncemented rather than cemented fixation.³² The non-cemented approach rapidly gained ground and is now used in over 90 percent of hip replacements, but it, too, is being called into renewed question, with some surgeons suggesting that cemented techniques still produce superior outcomes.

Nowadays, orthopedic surgeons use various combinations of metals, ceramics and plastic

materials, but the profession also is excited by what it perceives as hip arthroplasty's "high-tech future."⁵ In early 2024, Henry Ford Health (one of the nation's leading academic medical centers) bragged about technological advances that are improving joint replacement surgery, enthusiastically citing developments such as robotic placement of implants, "personalized" 3D-printed implants and Bluetooth-enabled "smart sensors" that allow surgeons to track patients' steps and range of motion as well as "how frequently they're getting up and moving around."³³ And if patients are not doing what they are supposed to be doing, the Big Brother sensors pave the way to harass them and get them "back on track."

FROM BAD TO WORSE

Hip replacement surgery comes with other risks in addition to the problem of internally migrating metallic particles. The conservative Mayo Clinic lists seven major risks, several of which may lead to further surgical intervention.³⁴ In addition to the anesthesia risks that come with any form of surgery (in the case of THA, it is either general anesthesia or a spinal block), risks include:

1. The danger of blood clots, addressed with blood-thinning medications that have their own set of risks and "side effects"

2. Trauma at the incision site or tissue (called "infection"), leading to the prescribing of heavy-duty antibiotics or a recommendation for more surgery
3. Fracture of healthy parts of the hip joint during surgery, which, if large, "might need to be stabilized with wires, screws, and possibly a metal plate or bone grafts"
4. Hip dislocation within a few months of surgery, potentially requiring a brace or more surgery
5. Nerve damage (meaning numbness, weakness, or pain) at the area of implant insertion³⁵
6. Loosening, causing pain that, again, possibly points to more surgery
7. Changes in leg length

Unfortunately, both TRA and hip resurfacing can fail outright—and the health care system's only answer to failure is "revision surgery"—meaning another round of hip replacement surgery.³⁶ Some authors refer to revision surgery as a "salvage procedure,"³⁷ with outcomes that "are often worse than after primary surgery."³⁸ Given that THA is one of the "top five most common and fastest-growing procedures" in the U.S., it stands to reason that the frequency of revision surgery will also continue to rise—and research bears this out.

A study that looked at national inpatient

It would appear that facilities owned by private equity may be hawking unneeded care to boost profits.

WHAT CAN BIOFILMS TELL US?

Biofilms—"highly organized" communities of microorganisms—"represent a predominant form of microbial life that is ubiquitous in natural ecosystems."⁶⁰ A biofilm can consist of "a mixture of bacteria, fungi, archaea, protozoa, and yeasts."⁶¹ Scientists view biofilm formation as "an ancient and fundamental part of the life cycles of many microorganisms," and important for the growth and survival of bacteria in "diverse environments."⁶²

In the context of medical devices, however, modern medicine views biofilm formation as something more akin to a hostile takeover due to microorganisms' ability to "adhere to and grow on device surfaces," creating a "biofilm structure" that may eventually reach a stage of "irreversible attachment."⁶¹ Conventional medicine warns: "When the biofilm on the surface of implanted medical devices reaches a critical level, it can induce an inflammatory response in the host and may even cause implant failure."⁶¹ With hip and knee replacements, a common postoperative complication is infection,⁶³ "on top of which the formation of a combined bacterial biofilm may lead to osteomyelitis" (bone infection).⁶¹ Flummoxed by "the notorious difficulty [of] eradicating" biofilms,⁶⁴ medicine is, as is its wont, eagerly exploring aggressive methods of biofilm inhibition or attack, with future directions pointing toward "novel coatings for prostheses" that contain "surface-tethered antibiotics and metal oxide nanoparticles."⁶³

From a "new biology"⁶⁵ or terrain theory perspective, might there be a different way to interpret the formation of biofilms on hip and other joint replacement devices? In terrain theory, "the body is always in an active pursuit of returning to, or maintaining, a state of equilibrium" wherein disease and symptoms "are not the problem, but an adaptive answer to the problem."⁶⁶ The well-documented sophistication⁶⁷ of biofilms suggests that biofilm formation following joint replacement surgery may be part of the body's response to the trauma of invasive surgery and the insertion of high-tech agglomerations of foreign materials. It is a question worth exploring.

data from 2006 through 2014 identified a 28.5 percent increase in revision surgery over that period, with a postoperative complication rate of nearly 40 percent.³⁷ More than one in four first-go-round THA recipients—27 percent—also experienced complications. The younger someone is when they undergo THA, the higher their risk of revision (a pattern that is even more pronounced for knee replacements), prompting some researchers to propose delaying primary surgery by five years in those younger than age seventy-five.³⁸

A final risk—relevant to far more than just arthroplasty—concerns the aggressive incursions of private equity into the health care space over the past decade.³⁹ Over that period, private equity has spent one trillion dollars to finance health care acquisitions, translating into a six-fold jump in private equity buyouts of physician practices, and private equity ownership of 30 percent of the nation’s for-profit hospitals.⁴⁰ One of the key features of this ownership pattern has to do with the fact that private equity firms have very short-term goals that often focus on generating a generous return by quickly “flip[ping] the asset.” To achieve that kind of return requires immediately jacking up profits, which means “rapidly cutting costs, raising prices, or increasing the number of services provided.”³⁹

In that context, it is interesting to note the findings of a study published in *JAMA Health Forum* in early 2022. The researchers found that health care “overuse” (which, as discussed at the outset of this article, often means provision of “low-value” or unnecessary services that can be “physically, psychologically, and financially harmful to patients”) was significantly higher in investor-owned facilities and systems.⁴¹ Stated another way, it would appear that facilities owned by private equity may be hawking unneeded care to boost profits. Hip replacement surgery earns health facilities more in the U.S.

(over forty thousand dollars per operation) than in any other country in the world (in Poland, the surgery costs around five thousand dollars).⁴²

Disturbingly, another *JAMA* study published in December 2023 looked at how private equity ownership affects hospital quality of care—and the results were hardly reassuring.⁴³ According to that study, “Private equity acquisition was associated with increased hospital-acquired adverse events, including falls and central line-associated bloodstream infections” as well as more surgical site infections. Although there is a growing trend to provide joint replacements on an outpatient rather than inpatient basis,⁴⁴ individuals contemplating these surgeries in either type of setting would do well to do their due diligence and look at who owns the facility or system where they plan to receive care.

ADDRESSING ROOT CAUSES

The topic that few doctors seem interested in pursuing is what people can do to prevent arthritis and preserve joint health in the first place, thereby obviating any future perceived need for arthroplasty. The obesity rate in the U.S. is twice the average of other countries belonging to the Organisation for Economic Co-operation and Development (OECD),⁴⁵ so if it is true that obesity is “the greatest modifiable risk factor” for osteoarthritis,⁴⁶ then eating the kind of diet that ensures a healthy weight—a Wise Traditions diet—seems like a sensible place to start. A practicing sports medicine doctor shared an anecdote illustrating the merits of this approach in a 2011 letter to the Weston A. Price Foundation; therein, she described her delighted discovery that a “WAPF-style protocol” helped patients with pain and joint problems and made a “huge difference” in their recovery.⁴⁷

In a 2014 *Wise Traditions* article titled “Nutrition: The Anti-Aging Factor,”⁴⁸ author Sylvia Onusic unabashedly stated that “probably the most important factor in aging and living long with a good quality of life is nutrition.” An interesting section of the article also describes how fluoride “hastens aging,” notably causing “breakdown and irregular formation of collagen in the skin, along with weakened tendons, ligaments, muscles, cartilage and bones, causing cases of irreversible arthritis.” A number of studies have confirmed that elevated fluoride levels increase arthritis risks.⁴⁹ The fact that the United States fluoridates more than 70 percent of its water supplies could have something to do with the outsized prevalence of arthritis in the U.S. population. As the Fluoride Action Network observes, “Americans ingest daily doses of fluoride that overlap doses that cause joint pain.”⁵⁰

In the human hip, the “smooth and spherical head of the femur fits perfectly into the natural seat of the acetabulum” and the entire joint “is

BORON FOR ARTHRITIS


In addition to protecting your joints with a Wise Traditions diet—including plenty of gelatin-rich bone broth and fat-soluble vitamins, especially vitamin K₂—boron works well for eliminating joint pain and the cost is mere pennies.

Here’s the recipe: dissolve one teaspoon boron powder or laundry borax in one quart of water. Every morning put one teaspoon of this solution in a small glass and add a little water. Then, down the hatch.

Your editor can attest to the magical power of boron solution, having eliminated debilitating knee pain in just two weeks with this remedy taken daily. Don’t take more than this recommended dose, as too much boron can be toxic.

wrapped in very resistant ligaments that make the joint stable.⁷⁴ To date, it does not appear that medical science has come up with anything close to this level of perfection. Although modern medicine touts hip replacement surgery as (surprise, surprise) “safe and effective,” one group of clinicians notes that “because there are many hip replacement component types and many techniques for surgical installation of these products, there is concern that medical research on the long-term effectiveness of the varying techniques is inconclusive.”⁷⁵ Specifically, there are indications that both doctors and patients may be underreporting adverse events and that some surgeons may be representing patient outcomes “as being much better than they actually [are] to support the use of a specific implant or specific technique.”⁷⁶

In all fairness, the majority of patients report being pleased with the results of hip arthroplasty—from 70 to 93 percent, depending on the study.⁵²⁻⁵⁴ Achieving pain relief is a key variable influencing patient satisfaction.⁵⁵ For individuals in the throes of painful arthritis who are less inclined toward surgery, there are alternatives that may be worth exploring. As one website about hip replacement surgery comments, “Surgery is permanent—there is no going back once you undergo an operation.”⁷⁷ Alternative modalities that may provide relief include traditional Chinese medicine,⁵⁶ homeopathy,⁵⁷ yoga⁵⁸ and DMSO.⁵⁹

Clinicians who recognize that hip replacement can be “a very effective procedure for many people” point out that people do not just “wake up one morning with advancing bone-on-bone hip osteoarthritis”—osteoarthritis is generally the end result of a much lengthier process.⁵⁵ If that is the case, why not celebrate the perfect hips that we were born with and do what we can to nurture and protect them?

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Technology as Servant

CLIMATE CHANGE PART III: THE EMPEROR'S NEW CLOTHES

By James Kirkpatrick

Mark Twain was fond of saying, “History doesn’t repeat itself, but it often rhymes.” I find this maxim holds true when thinking about the tremendous societal and cultural changes brought on by our current age of the Internet and mass media saturation. When looking for historical examples to help illuminate the current state of affairs, I am often reminded of a small mechanical advancement five hundred years ago, when the synthesis of small combinations of different technologies into a new medium of communication—the Gutenberg printing press—ultimately had enormous implications and underpinned a wholesale restructuring of society for hundreds of years to come. That development was not so dissimilar to the changes driven today by the Internet age.

THE INTERNET AGE AND THE CLIMATE CHANGE NARRATIVE

As with Gutenberg’s printing revolution, the invention of the Internet enabled the ultra-cheap reach of information on a global scale. When the cost of distributing information is dramatically reduced, the gatekeepers of that information increase both in number and in importance. In Luther’s time, the gatekeeping of informa-

tion defaulted to the clergy on both sides of the Catholic-Protestant divide. In modern times, the gatekeeping function has been transferred from the clergy to “the experts”—and there are a lot of them, so much so that the challenge for lay people (myself included) becomes which experts to trust. As has been the case throughout human history, at the end of the day, gatekeepers are people, and people respond to incentives. In my opinion, we should evaluate the trustworthiness of individual “experts” less on what they specifically say and more on whether their incentives align with our own value system. But as they say, the devil is in the details, and the challenge is that most of our “experts” are appointed rather than elected and as such are under no obligation to truthfully declare what their individual incentives actually are.

Researchers (a type of “expert”) now perform and present climate “science” with hundreds (if not thousands) of climate-change-related papers each year, but many of the papers are written in a jargon-rich gobbledygook that makes them all but indecipherable to the common citizen. Take, for example, the following section from the “authoritative” scientific paper published twenty-five years ago by Michael

Many of the papers are written in a jargon-rich gobbledygook that makes them all but indecipherable to the common citizen.

FIGURE 1. Michael Mann squelches climate change dissent

Prof Michael E. Mann
@MichaelEMann

Sad tale how #JudithCurry went from mainstream climate scientist to full-on conspiracist & climate change denier: blog.hotwhopper.com/2015/11/some-h...

10:36 AM · Nov 7, 2015

Prof Michael E. Mann
@MichaelEMann

Pielke Jr has less than zero credibility on anything related to climate science.

5:26 PM · Sep 7, 2019

Prof Michael E. Mann
@MichaelEMann

Prof Michael E. Mann
@MichaelEMann

Ryan Maue's h-index of 10 is exceedingly low for an atmospheric science thirteen years out from his Ph.D. It's precisely what you might expect to see for someone whose primarily role is fossil fuel industry propagandist rather than serious scientist.

Google Scholar

Ryan Maue
Meteorologist
Verified email at my.fu.edu · Increased
Meteorology

TITLE	CITED BY	YEAR
Historical global tropical cyclone landfalls J. Maue, R. Pielke, Jr. Journal of Climate 20 (15), 3742-3758	167	2012
Recent historically low global tropical cyclone activity J. Maue Geophysical Research Letters 38 (14)	127	2011
Estimating local memory of tropical cyclones through MPI anomaly evolution J. Maue, R. Pielke, Jr. Monthly Weather Review 139 (7), 2009-2020	123	2011
Northern Hemisphere tropical cyclone activity J. Maue Geophysical Research Letters 38 (25)	127	2011
A census of atmospheric variability from seasons to decades J. Maue, R. Pielke, Jr., R. Higgins, M. A. Alexander, H. C. Stearns Geophysical Research Letters 40 (24), 17,209-17,217	35	2013
Uncertainty in atmospheric temperature analyses J. Maue, R. Pielke, Jr., R. Higgins Tellus A: Dynamic Meteorology and Oceanography 60 (4), 588-603	30	2008

Cited by: 645 (All) 204 (Since 2018)
Citations include: 10 7 5
Changes: 10 5 5

Public access: 2 articles 2 articles
Full available: available
Not available: available

Based on funding mandates

The leaks revealed that the most prestigious scientific journals have been subjected to heavy and punitive pressure to publish only those papers that conform to the narrative.

Mann and company; this is the paper that provided the basis for the “hockey stick” graph that many global climate change adherents point to as definitive proof of man-made climate change driven by carbon dioxide emissions:

“In the reconstructions from 1820 onwards based on the full multiproxy network of 112 indicators, 11 eigenvectors are skillfully resolved (nos 1–5, 7, 9, 11, 14–16) describing ~ 70–80% of the variance in NH and GLB mean series in both calibration and verification. (Verification is based here on the independent 1854–1901 data set which was withheld; see Methods.) Figure 3 shows the spatial patterns of calibration β , and verification β and the squared correlation statistic r^2 , demonstrating highly significant reconstructive skill over widespread regions of the reconstructed spatial domain. 30% of the full spatiotemporal variance in the gridded data set is captured in calibration, and 22% of the variance is verified in cross-validation.”¹

In the twenty-five years since this paper’s publication, the problem of scientific support for the theory of human-induced climate change being written in indecipherable techspeak has, if anything, gotten worse. Several factors have contributed to the worsening situation: the need (for the purposes of upholding the official climate change narrative) to make the basic science even less discernible, given that skeptics of human-induced climate change are actually reading these papers and asking questions; the use of artificial intelligence (AI) large language models (LLM) to write papers; and the presence of industrial-scale paper mills, largely based in India and China, that churn out thousands of papers a year, “flooding the zone” with noise. This allows unscrupulous actors in the media or other large “non-profit” institutions to use the published “science” to draw whatever conclusions they think will cause the largest media sensation, thereby drawing eyeballs, generating clicks and leading to more advertising revenue for the media company.

Ample evidence also indicates that within the scientific community, there exists a core

clique of human-induced-climate-change zealots who are highly credentialed, hold a strong degree of influence within the broader scientific community and are quite ruthless toward anyone who asks questions about their central position. In November 2009, an anonymous hacker or insider leaked a trove of emails and documents from the University of East Anglia’s Climate Research Unit (CRU) in an event dubbed “ClimateGate.” Although the email leaks stopped short of proving that the basic science behind human-induced climate change is some grand conspiracy, in my opinion they did show that an inner clique of climate scientists (of which Mann is one) is using a large number of statistical tricks to force conclusions that fit their prime narrative. The leaks also revealed that the most prestigious scientific journals have been subjected to heavy and punitive pressure to publish only those papers that conform to the narrative, while bullying or outright smearing scientific colleagues who have dared to ask questions or form their own conclusions based on alternative work.

After publication of the ClimateGate emails, several skeptics did write articles or items in the spirit of scientific inquiry that asked questions or challenged the professionalism of the inner clique. As their reward for disputing the consensus, the mysteriously deep-pocketed Michael Mann sued them for libel and bled them financially dry through fifteen years of constant litigation. To this day, Mann continues to serve as the modern incarnation of a grand inquisitor, using his credentials to mock or outright condemn dissenting opinion on various social media platforms (see Figure 1).

Another issue to note regarding the scientific community focused on human-induced climate change has to do with their parasitic marriage with the mainstream media and prominent non-governmental organizations (NGOs). Both types of organizations translate dubious and agenda-driven “science” into a high-volume, mass communication narrative. This results in a forced consensus and an obsessive focus by the media on the apparent association between human-induced climate change and natural disasters (discussed further in the next section).

A CONTRIVED CONSENSUS

As one of its main talking points, the climate change narrative argues that there is almost universal consensus within the scientific community that the main driver of climate change—and of the one to two degrees Celsius of warming that the earth has experienced over the past one hundred fifty years—is entirely due to man-made greenhouse gas emissions. One example is a piece of advertising published in 2013 by the Consensus Project,² frequently used in the mainstream media and social media to block dissent and questions regarding global climate change.

The Consensus Project used a 2013 review by Cook and colleagues to buttress its reported 97 percent consensus rate, a study that apparently reviewed nearly twelve thousand peer-reviewed climate change abstracts published over two decades (1991–2011).³ (Wikipedia happily reports that the consensus on anthropogenic or human-caused global warming reached 100 percent in 2019, with a slight regression to 99 percent in 2021.⁴) However, this type of analysis has several problems. First, the data points are incredibly easy to cherry-pick; the reader must rely on the ethical compass of the authors to ensure that they did not selectively omit non-consensus papers. Second, as the leaked ClimateGate emails showed, during the Cook study’s two-decade time frame, there definitely existed a vocal and powerful clique of climate scientists who were manipulating the peer-review process and exerting bullying pressure on leading scientific journals about what to publish and what to bury.

Lastly, the conclusion reported by Cook and co-authors—that “the number of papers rejecting the consensus on [anthropogenic global warming] is a vanishingly small proportion of the published research”—is misleading.³ Of the twelve thousand climate science abstracts reviewed, the majority (66.4 percent) actually offered no opinion on human-induced climate change.⁵ Thus, the correct interpretation of the study used to develop the Consensus Project’s graphic is that just 33.6 percent of abstracts (about four thousand) explicitly discussed anthropogenic global warming (AGW), and in 97 percent of those, the authors endorsed

human-induced climate change. Two-thirds of all abstracts “expressed no position” on the subject whatsoever (Figure 2).

In fact, many prominent scientific voices reject outright the notion of carbon-dioxide-driven global warming. Leading dissenters include Judith Curry,⁶ Freeman Dyson,⁷ Ian Plimer,⁸ the Nobel-prize-winning physicist Ivar Giaver,⁹ former Greenpeace president Patrick Moore,¹⁰ and interestingly enough, one of the Obama Administration’s main science advisers, physicist Steven Koonin.¹¹ However, the output of this cohort of scientific voices tends to be excluded from the “consensus” argument.

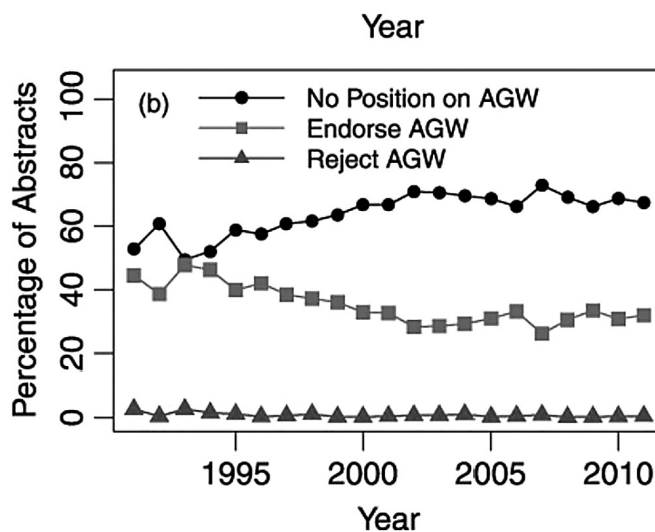
“GLOBAL TEMPERATURE”: NO SUCH THING

The main tool that proponents of the human-induced climate change narrative use to continually reinforce their argument is their claim of a steady rise in global temperatures. As I discussed in Part I of this series,¹² this increase is often framed in terms of a global average or mean temperature—which they present as the paradigm of scientific rigor. This calculated global average temperature is then represented as a difference or anomaly in a time series of similarly averaged temperatures as shown in a figure from the National Oceanic and Atmospheric Administration (NOAA) (see Figure 3).

These adherents imply that, given the certainty with which these global measurements are cited, the world has a precisely calibrated and logically designed system of temperature monitoring stations. To produce this type of precise result, however, one would expect to find an official temperature monitoring station every fifty to one hundred miles extending across the earth both laterally and longitudinally. The simple reality is that there is no such system and no such thing as a global average or mean temperature.

A simplified mathematical example can serve to illustrate this point. Imagine that all of Earth’s population lives in two temperature concentrations. The average temperature for Group A is thirty degrees Fahrenheit, while the average temperature for Group B is ninety degrees

FIGURE 2. Climate experts’ position on “anthropogenic global warming” (AGW)



Fahrenheit, putting the average temperature of this simple Earth at sixty degrees Fahrenheit. Does this have any relevance or meaning for either of the two population groups?

Prior to the 1950s, reliable instrument-based temperature measurements existed only in Europe and North America and select coastal portions of Asia and the Southern Hemisphere; temperature data from the communist or former-communist countries (Russia and China) are highly suspect. Even today, no official temperature monitoring exists for large swaths of the globe, including the oceans, high mountain ranges, the Sahara Desert and the Amazon rainforest. In short, this type of “global average”—like so many other aspects of the climate change discussion—is highly susceptible to cherry-picking, requires large data inferences and is prone to whole-scale data manipulation and other statistical tricks.

Even with the above caveats, the United States is considered to have the most extensive, complete and usable large-scale and long-term temperature data—the “gold standard,” if you will. However, closer inspection reveals that there are significant issues even with the U.S. temperature data. Although the U.S. does have a system of temperature and meteorological instrumentation stations that conforms to an excellent scientific standard known as the U.S. Climate Reference Network (USCRN)—consisting of one hundred fourteen stations in the contiguous U.S., twenty-one in Alaska and two in Hawaii—this system has been in service only since 2002, so at best it contains just twenty-two years of data.

The interesting thing about this data set is that it shows no easily discernible warming trend (see Figure 4). As has become standard with these large average temperature measurements, the figure shows recent

average temperatures as an anomaly compared to some historic average data. In this case, the reference temperature data set stretches from 1981 to 2010, which is odd given that the USCRN temperature stations have only been in service since 2002. This means that what we are seeing in Figure 4 is an apples-to-oranges comparison; that is, what this is showing is average data from the USCRN (2000–present) data stations as a difference to some other data that have not been designed and maintained to the same standard as the USCRN data stations.

Outside of the USCRN, there are some nine hundred other U.S. temperature monitoring stations, which often have much longer data series than the USCRN set. This larger temperature and weather monitoring system, the Automated Surface Observing Station (ASOS), is administered by the National Weather Service (NWS), the Federal Aviation Administration (FAA) and the Department of Defense (DOD) and in all likelihood provided the reference data set referred to in Figure 4. However, the ASOS system has a bias problem, as the vast majority of ASOS stations are located at airports, where you have miles and miles of solar-radiation-absorbing black asphalt runways and hundreds of jet combustion engines exhausting hot flue gas. This makes all measurements at these stations highly susceptible to an airport heat effect version of the urban heat effect, artificially raising the surface temperature compared to the non-airport surrounding area.

That points to the other general problem with temperature measurements. When not located at airports, most temperature measuring stations are located near or in large urban concentrations, where the design, population and concentration of mechanical heating and cooling equipment trap heat and artificially raise the temperature compared to proximal non-urban areas. The urban heat island effect can add up to ten degrees Fahrenheit to the ambient temperature. Urban areas have only grown in size and number since 1850. Thus, when urban area data points are used in large-scale temperature averages, they artificially bias the average temperature higher.

FIGURE 3. Temperature anomalies as reported by NOAA (1850–2023)

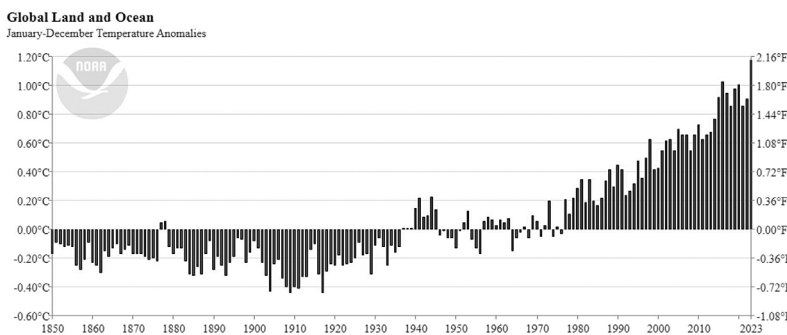
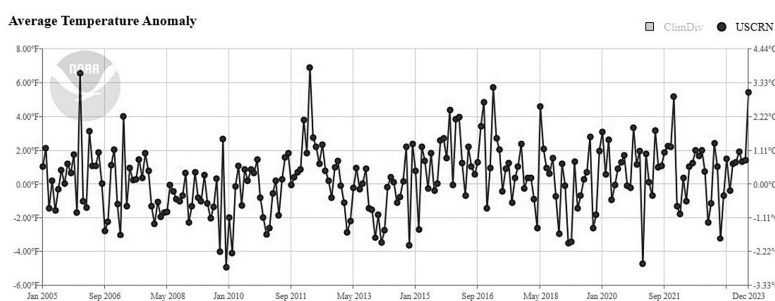


FIGURE 4. Average temperature anomaly, U.S. (2005–2023)



NATURAL DISASTERS AND HEAT WAVES

Now, let’s consider natural disasters such as hurricanes, tornadoes and fires as well as phenomena like heat waves. We are all well accustomed to the media frenzy that kicks in whenever a major hurricane storm forms in the Atlantic. Nonetheless, the data show no measurable increase in hurricane storm formation, land fall frequency or intensity since the U.S. Civil War, and the trendline is similar for Pacific hurricanes and tropical cyclones (Figure 5). What has changed since the Civil War is the sizable increase in the population living along the U.S. Gulf Coast and in Florida due to the advent of air conditioning.

As for tornadoes, at first glance the raw data suggest that tornadoes in the U.S. have indeed become more frequent over the last twenty years. However, the reality is that this increased tornado frequency is only observable in smaller tornadoes (categories EF0 and EF1 measured

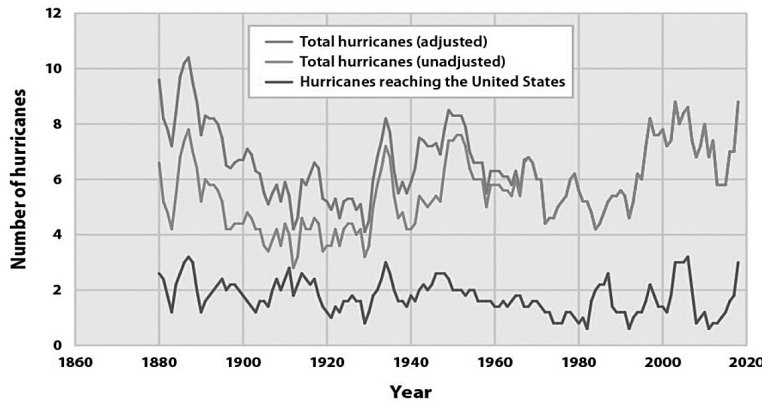
with the Enhanced Fujita Scale) (Figures 6A and 6B). It is only in the past forty years (since the 1990s) that improved instrumentation and weather monitoring have made it possible to measure these “weaker” tornadoes reliably, which suggests that these smaller tornadoes likely were there all along. Stronger Midwest tornadoes (EF3-EF5) show a *decreasing* trendline frequency over the past seventy-five years.

Wildfires are, for the purposes of human-induced climate change propaganda, one of the most abused natural phenomena. Almost without fail, every May through August a deluge of headlines proclaims “the worst wildfire season in history,” along with pronouncements that climate change is leading to more frequent and severe wildfires that are burning hotter, followed by the claim that the wildfires are themselves making global warming worse. The large Canadian wildfires that resulted in eerie sunsets and affected air quality as far away as New York City and Philadelphia in the summer of 2023 are a typical example of what has become an annual rite of passage. For several months, almost daily front-page headlines described the extent of the wildfire and the “record-level” acreage burned (Figure 7), with the sole cause of each new inferno confidently attributed to climate change.

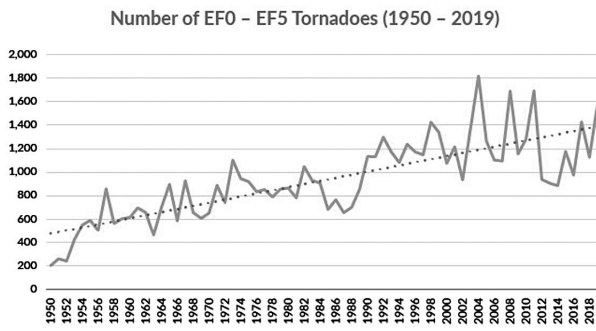
Wildfires in California, Australia, Greece and other fire-prone regions have demonstrated a similar media pattern; about six months after the fires have been controlled and tamed, a small story appears, buried well beneath the fold, stating that the fires actually were caused by arsonists, poor campground management or inadequate electric utility line management. In other words, the cause is human activity or poor human oversight but has nothing to do with the concentration of carbon dioxide in the atmosphere. True to this pattern, here is the small excerpt published on February 9, 2024 regarding the 2023 Canadian wildfires:

“On Jan. 15, a Quebec man, Brian Paré, pleaded guilty to 13 counts of arson and one count of arson with disregard for human life. In May, with 12 active fires already burning in Quebec, Paré, a conspiracy theorist, began setting his own fires with the intention of finding out ‘whether the

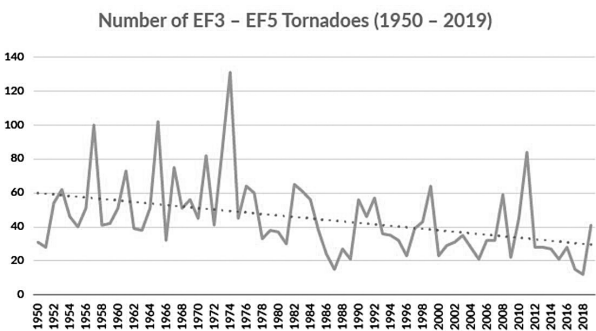
FIGURE 5. Number of hurricanes in the North Atlantic (1878–2020)



FIGURES 6A and 6B. Number of EF0–EF5 tornadoes (1950–2019)



Source: NOAA, www.spc.noaa.gov/wcm/#data



Source: NOAA, www.spc.noaa.gov/wcm/#data

forest was really dry or not,' Quebec Prosecutor Marie-Philippe Charron told the court. Paré claimed on social media posts that the previous fires had been set by the Canadian government to convince people to believe in climate change, the Canadian Press reported.”¹³

Another interesting detail about the annual claims of “record-setting” wildfires is the use of a common media disinformation tactic—the truncated time-series distortion. In Figure 7, the display of “Canadian Acreage Burned” goes back only twenty years. The U.S. Department of Agriculture’s Forest Service, through the National Interagency Fire Center (NIFC), has long served as the custodian of data regarding wildfire acreage burned in the U.S., with records going back to the early 1900s. In March 2021, however, the NIFC scrubbed their dataset and removed all wildfire data prior to 1983, resulting in the pattern shown in Figure 8. That figure shows a steady increase in wildfire acreage burned over the past forty years, which fits the narrative that an increasing concentration of atmospheric carbon dioxide results in an ever-increasing wildfire risk.

However, this slice of data paints a grossly misleading picture. When you look at the full dataset going back over a century, you see that wildfire acreage burned in the U.S. in recent years is as low and controlled as it has ever been, representing about 20 percent of the peak burned acreage of the 1920s and 1930s (Figure 9).

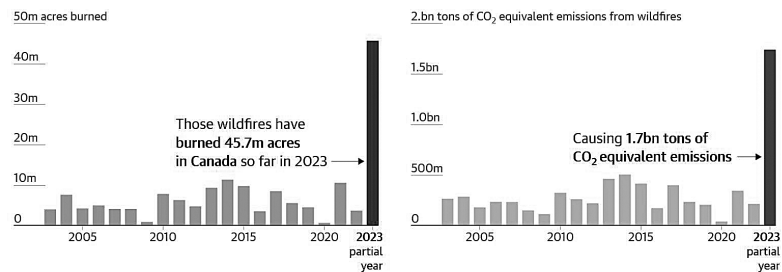
Another thing to note on wildfires is that America’s urban sprawl vastly expanded over the twentieth century. Thus, just as with hurricanes, when wildfires occur, they are much more likely to threaten health and property than was the case one hundred years ago.

Often ignored in wildfire discussions is the fact that government agency policies play a large part in the severity and likelihood of wildfires. Controlled burning of dry undergrowth was standard U.S. Forest Service policy for much of the twentieth century, but because fire always results in combustion and the release of carbon dioxide, environmental groups have placed controlled burns under scrutiny and pressure,

with the result that burns have fallen out of favor as a standard tool of the Forest Service. Not performing controlled burns allows undergrowth to accumulate in U.S. forests; thus, when human ignorance or a random lightning strike start a fire, there is more fuel available to increase the size of each individual conflagration.

Heat waves furnish a final example of climate-change frenzy, with every heat dome that descends heralded as the second coming of the apocalypse and characterized as stronger, more severe and deadlier than ever. As we have already seen, long-term data paint a different picture, showing no appreciable increase in heat wave severity or frequency in the U.S. over the past one hundred thirty years. The peak of U.S. heat

FIGURE 7. 2023 Canadian wildfires



Guardian graphic. Sources: Fire perimeters from Canadian Wildland Fire Information System. Acres burned from Canadian Interagency Forest Fire Centre as of 31 October 2023. Emissions from European Centre for Medium-Range Weather Forecasts as of 26 October 2023.

FIGURE 8. Total acreage burned, U.S. (1990–2020)

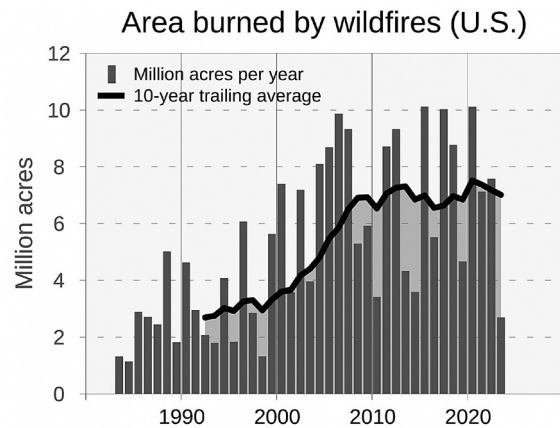
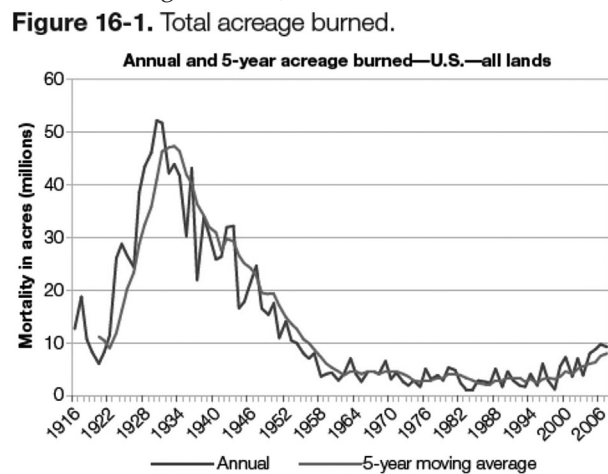


FIGURE 9. Total acreage burned, U.S. (1916–2006)



waves happened in the 1930s during the Dust Bowl era (Figure 10). And unlike the consequences of hurricanes and fires, the advent and widespread implementation of air conditioning has dramatically reduced the consequences of heat waves.

SEA LEVEL CHANGE, POLAR ICE CAPS AND POLAR BEARS

This aspect of the climate change discussion is a complicated one and challenging to simplify into layman’s terms. The general hypothesis is that as Earth warms, whether from natural or human-induced causes, the two polar ice caps (Arctic and Antarctic) and associated ice sheets will melt, with the incursion of excess melt water resulting in a sea-level rise predicted to inundate and flood coastal areas. In the mainstream media, this trend is usually communicated in one of two ways, either by forecasting an extreme erosion of coastline by some arbitrary date in the future (such as 2050 or 2100) or by publishing sensationalist headlines like “Scientists Worried as Iceberg the Size of Texas Breaks Away from Antarctica.”

Upon closer inspection, the ice and/or sea-level change discussion runs into a few problems. The main one is measurement-related, as we do not have even semi-credible records of ice extent in the Arctic or Antarctic regions from before the satellite era (pre-1980), and the way that ice extent is measured is a bit subjective anyway. Usually, polar cap ice extent is measured as “sea ice extent,” which is defined as the area of the ocean that is covered by ice that is at least 15 percent concentrated. The problem with this measurement method is that it does not actually measure the ice volume or mass at the poles; instead, it gives you a rough estimate of how much of the surrounding ocean is frozen or partially frozen. A second issue is that sea ice extent has huge seasonal variability between summer and winter (reversed seasons for the Southern Hemisphere).

Finally, sea ice extent only has a tangential connection to sea level rise—only when ice mass is moved from land to the oceans can it possibly be an influencing factor in average sea level rise, as water is semi-unique in that its liquid phase is denser than its solid phase (ice). In and of itself, sea ice extent does not tell you how much ice is moving from land into the ocean. Tracking since the 1980s shows that sea ice extent in the Arctic is decreasing, and in the Antarctic, it has been more or less unchanged for the last forty years. This is consistent with the fact of a

slightly warming Earth, but by no means is it an indication of impending catastrophe.

For most of us in our everyday lives, what really matters is sea level change as measured by tidal gauges. The data in Figure 11, consistent with a slightly warming Earth, show that on average, sea levels have increased by about two hundred millimeters (mm) or about eight inches over the past one hundred twenty years. This works out to one and a half millimeters per year on average, about the thickness of a fingernail.

Such change is by no means unmanageable or outside of human experience. Long-term sea-level change derived from geological proxies shows that as Earth emerged from the last glacial maximum (roughly twenty thousand years ago) over a period of about six thousand years, global sea level increased by roughly one hundred twenty meters, or at a rate of twenty millimeters per year (Figure 12). This constitutes a rate of roughly fifteen times the current level during the age of anatomically modern humans—all prior to the Industrial Revolution—and at a purported atmospheric carbon dioxide level roughly 50 percent below current levels. If the human-induced global warming narrative were scientifically sound, these inconvenient facts would not be possible.

Finally, for anybody who came of age in the late 1990s, it should sound familiar that one of the earliest mascots of the human-induced climate change movement was the polar bear. According to the narrative’s logic, melting ice caps and a warmer world decrease the amount of northern-latitude sea ice; polar bears need sea ice to hunt seals for survival, so once the sea ice is gone, the polar bear will disappear, too. You

FIGURE 10. Annual heat wave index, U.S. (1895–2021)

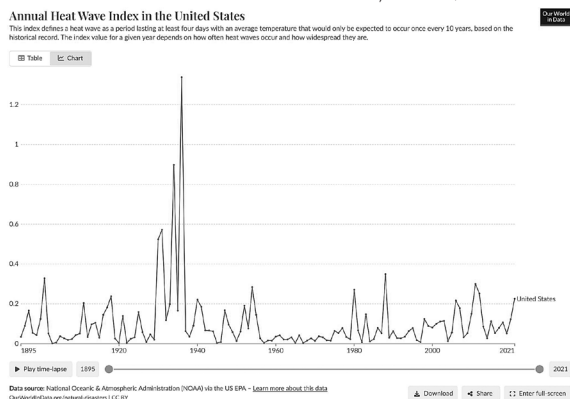
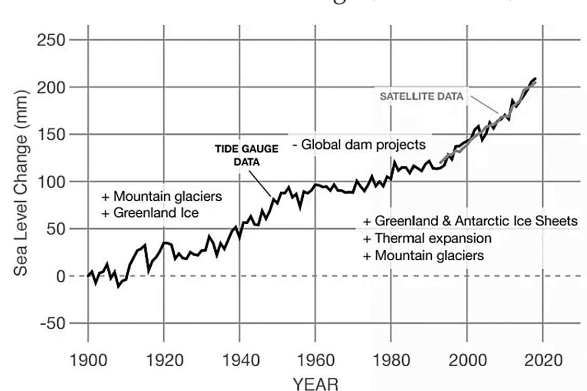


FIGURE 11. Sea level change (1900–2020)




might have noticed, however, that you have not heard nearly as much about the blighted cause of the noble polar bear in recent years. There is a good reason why the polar bear cause has fallen out of vogue: over the past twenty-five years, polar bear populations in the northern latitudes have done nothing but grow and expand (Figure 13).

A CONSISTENT PATTERN

As should be evident from these myriad examples, there is a consistent pattern emerging in how the human-induced climate change narrative is communicated to the public. The pattern relies on inflammatory and fear-inducing-by-design headlines that, if taken literally or on faith, imply some calamitous outcome to some portion of humanity. If you have the time or inclination to research the actual article, you usually find that the conclusion either has no connection to the underlying scientific “research” or uses information manipulation tactics—such as time series truncation, Y-axis manipulation, deceptive averaging, or reference data series that are not shown—to deliberately convert what is often honest scientific inquiry into outright propaganda.

In other words, we are looking at a classic “the emperor has no clothes” situation. However, unlike in the Hans Christian Andersen folk tale, we don’t have a brave little girl to point out the obvious reality of the situation. (Well, we kind of do—she just happens to be advocating for maintaining the illusion. And Greta is from Sweden; Andersen was Danish.) In place of brave little girls, we are forced to rely on the rare truth-telling and uncompromised “experts.”

I would be more inclined to trust and believe the human-induced climate change “experts” if they would start answering dissenting questions or at least rectify some of the blatant inconsistencies in the mainstream media narrative. Here is a good one to start: if atmospheric carbon dioxide is the main control of Earth’s climate, and if current atmospheric carbon dioxide levels are the highest they have been in millions of years through the combustion of hydrocarbons, why was Arctic ice cap melt and sea level rise fifteen times higher ten thousand years ago, when atmospheric carbon dioxide was half the current level?

In the fourth and last installment of my global climate change series, I will come to the rubber-meets-the-road moment of our discussion: the cost. What is being asked of ordinary citizens to combat the purportedly existential threat of human-induced climate change? 

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FIGURE 12. Post-glacial sea level rise

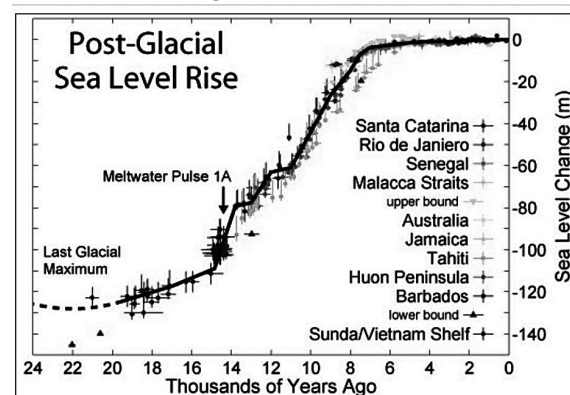


FIGURE 13. Global polar bear population size estimates (1950–2015)

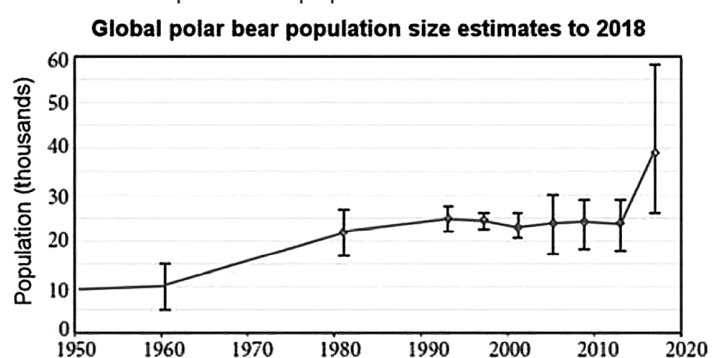


Figure 1. Global polar bear population. Source: Susan J. Crockford, *The Polar Bear Catastrophe That A Warming Policy Foundation*, 2019.

Wise Traditions Podcast Interviews

INTERVIEW WITH LAURIE A. COUTURE
NURTURING OUR SONS

HILDA LABRADA GORE: When children “act out” or “act up,” it doesn’t mean that they have poor behavior, a learning disability or a mental illness. It indicates that they are in distress—and it’s up to us to investigate the cause of the behavior and try to meet their needs. When it comes to boys, normal behavior is too often pathologized and medicated. Laurie A. Couture is a licensed mental health counselor and the author of two books—*Instead of Medicating and Punishing*¹ and *Nurturing and Empowering Our Sons*²—both of which focus on “parenting and educating the way nature intended.” Laurie suggests approaches to support boys’ health, including simple dietary changes. She also offers advice for protecting and nurturing sons and goes over the benefits of Eye Movement Desensitization and Reprocessing (EMDR) for releasing children’s trapped trauma.

Laurie, can you kick things off with a story about one or more families you have worked with where you have seen a shift or turnaround in a child’s behavior and health?

LAURIE COUTURE: That’s a great way to start off. Due to privacy laws, I can’t discuss specific cases, but I can say that there have been many wonderful cases of success. When you walk parents through the secure attachment cycle,³ you help them with their own trauma, and then you help them work in real time with their child’s behavior.

For example, in the waiting room of the clinic where I used to work, there were times when a child started acting out and throwing toys. The parent would start being punitive, shouting or getting physical with the child. In one case, I took a hard hat that happened to be there and put it on my head. I got down on the ground and started throwing the children’s chairs, saying, “Are we doing a demolition? Let’s do it.” The children thought, “What is up

with her?” You say something like, “Let’s do some demolition,” and then you’ve got the child’s attention. You realize that what they really need is connection.

When I worked with parents, it was a beautiful thing to watch them learn that the acting out is nature’s alarm signal that is telling them “My child needs something,” and then to see the parent stop and respond to the situation in a way that met the child’s need.—rather than react in an abusive or aggressive way, I watched the progression not just with my clinical clients but also with my coaching clients. I was able to do that myself in homeschooling my own son, doing something different from when he was in public school before I adopted him [at eleven years old]. I see all these beautiful stories in my head.

HG: I love that image of nature’s alarm signal. When we choose to medicate children who we say are “acting out” or “behaving poorly,” we’re doing the same thing we do with Tylenol to eliminate a headache—we’re treating the symptom and not the root cause.

LC: When our children act out or when they have emotional, behavioral or learning problems, that is nature telling us that something in the child’s environment is not meeting their needs. They are not at homeostasis. It’s not bad behavior, a learning disability or a mental illness—the child is in distress. It’s on us as adults, parents and caregivers to put on our Sherlock Holmes hats, get to the bottom of that behavior, figure it out, fix it and meet the needs. By drugging our kids with psychiatric medications, all we’re doing is suppressing the symptoms, not to mention harming their bodies and their brain chemistry.

HG: How many kids would you say are on psych meds in the United States?



Hilda Labrada Gore is the host and producer of the Wise Traditions podcast for the Weston A. Price Foundation. Hilda is a certified integrative nutrition health coach who has traveled extensively—to Mongolia, Peru, Ethiopia, Ecuador, Kenya, Australia and many other countries—to continue uncovering ancient health practices. Besides WAPF podcast interviews, she shares information from experts, experiences and epic adventures on her Holistic Hilda YouTube channel, social media platforms and in person as a speaker at conferences and retreats. Hilda has energy to spare in part because she keeps her feet on the ground and her face to the sun.

What is the biggest damage that these psychotropic drugs do? They let adults off the hook for not meeting the needs of children and ignoring the alarm signals.

LC: These numbers are according to a CDC report that I looked up, but I believe the number is higher because they only studied schoolchildren. What the CDC showed in a report from June 2023 is that 8.2 percent of children ages five through seventeen years old are on psychotropic drugs,⁴ and the majority of those children are boys. This does not take into account the two- to four-year-olds or those in school who are eighteen through twenty. That's 8.2 percent of schoolkids ages five through seventeen. That's astronomical. It sounds like a low number, but that's millions of children. We're saying that millions of children are somehow, by their label, "defective" or "disordered." I can't believe that our system can't understand that. It's the systems and institutions themselves that are the problem, not our children.

HG: What are some of the ways in which these drugs and mental health labels negatively affect our children, and particularly boys?

LC: Psychotropic drugs come in a variety of different classes. There are stimulants, neuroleptics, hypnotics and selective serotonin reuptake inhibitors (SSRIs). Every single class of these drugs harms children on every developmental level: epigenetic, neurological, physical, psychological, behavioral, social and sexual. Every aspect of their development is harmed. These drugs can also increase suicidal and homicidal ideation in children. In other words, these drugs are not safe. There is no such thing as a "safe" psychotropic drug. They're not sugar pills.

What is the biggest damage that these psychotropic drugs do? They let adults off the hook for not meeting the needs of children and ignoring the alarm signals. The reason why boys are more affected by this is that more boys than girls are labeled with fraudulent disorders like "ADHD" (attention-deficit/hyperactivity disorder) and "conduct disorder," which are collections of symptoms of trauma or other medical/neurological issues. Boys are more likely than girls to be medicated for behavioral and emotional issues. They are labeled, and their behavior is pathologized as if it's an anomaly instead of normal childhood behavior.

It's important to understand that these alarm

signals that kids give off—labeled as ADHD and mental illness—are collections of symptoms of trauma or of the environment not meeting children's needs. They could be a medical issue or a food allergy. There are a number of things they could be. Medicating these kids is extremely dangerous and can be fatal because you are not looking at what these other underlying issues are. I've worked with children showing some of these symptoms. Luckily, I used my intuition and had different evaluations done. I was able to save their lives from potentially fatal conditions.

HG: Can you give an example of a child and condition that could have led down the wrong path if you hadn't evaluated them well?

LC: There were a few cases of kids who had actual physical brain issues; these were potentially fatal conditions had they not been found. When these conditions developed, the children began to act out and show symptoms. Had they gone to a different therapist, they would have been referred for medication. But it didn't seem right. When I looked at the history, I didn't see any obvious psychological trauma, so I referred the children to neurologists who found out the terrifying news. Some of these kids needed emergency surgery. Lives were saved. Eyesight was saved. I had other kids who had issues similar to muscular dystrophy or autism. I also saw a lot of different food sensitivities and food allergies, and foods that were damaging these kids.

There are so many reasons why kids give off emotional, behavioral and learning alarm signals. We should never take that lightly and go to a therapist who says they will do individual therapy. They are going to play Tiddlywinks and Monopoly, and then put them on a psychiatric drug with a fifteen-minute appointment. It's terrible. I have witnessed psychiatrists write out a script for a child who said, "I feel sad today." Maybe they felt sad because something happened at school or their pet died—and the psychiatrist wrote out a script. This is the reality. Children need to be medicated in order to endure the conditions of public schools.

HG: That's a powerful statement. My husband was a coach and athletic director for many years

in public schools, and there was a high school student who was misbehaving and grabbing food off the teacher's desk. They found out that this kid was simply hungry. It wasn't complicated. If they had not paid attention to his home life and who this individual was, he could have ended up in one of these therapy sessions where they were giving him drugs or writing him off, when the solution was very simple.

LC: He could also have ended up in juvenile hall. I have known many cases of children and adolescents who have been brought in due to theft, and the reality was that they were hungry. Their families didn't have enough money for food, or they were being starved at home. Child abuse factors into so many of these cases of kids acting out. Symptoms of mental illness are almost always due to trauma in children if they do not have a medical condition. They almost always relate to trauma or an environment that is deeply distressing, either at home, school or somewhere else. We should never be sweeping this under the rug saying, "The child has a brain disorder." Nature does not make 8 percent of children have brain disorders, which is upwards of twelve million children.

HG: Tell us what role diet plays in the well-being of these children.

LC: I believe that diet is an important piece. Even though I'm not a dietician, I have developed the Couture protocol.⁵ A part of that

protocol focuses on making sure children have a full workup on food sensitivities. I want children to eat an ancestral diet and especially get refined sugar and soy out of their diet. We know that refined sugar is disrupting the gut microbiome, contributing to chronic inflammation in kids' brains and bodies and affecting their immune systems, which causes autoimmune disorders. All of this inflammation leads to mental health issues.

The soy in the food supply since the year 2000 has wreaked havoc on our children. What I've noticed, especially with boys since that time, is that the shape of boys' bodies is changing. It's feminizing. It's also affecting the seven- or eight-week fetal window where boys are exposed to androgens in utero. Soy will negatively affect that. It's important to understand that genistein in soy (an isoflavone) is an estrogen product and an endocrine disruptor.⁶ I am convinced that it's at the root of the transgender phenomenon in children, especially in the 2000s and 2010s with boys. The issue with girls is more of a social contagion, but I am also convinced that the soy and too much estrogen in girls are wreaking havoc on them as well.

We have two generations, the Millennials and the Gen Z kids, who have been exposed to this estrogen in the food supply. Everything processed—even if you get it in a so-called "health food store"—has got soybean oil, soy lecithin and tocopherols, which are almost always soy. Soy is sometimes disguised as vitamin E. It's in sunscreen and many products. I had to go to

Symptoms of mental illness are almost always trauma in children if they are not a medical condition. We should never be sweeping this under the rug and saying, "The child has a brain disorder."

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Not only is soy feminizing the bodies of boys, it is leading to obesity in kids in general.

great lengths with my son to make sure that I was not exposing him to soy because he had a soy allergy. He would get rages from soy.

This is one of the ways that I got involved in eating in a more ancestral, Paleolithic way. We noticed that my son had a soy allergy. From that point on, we were really looking at things. My grandmother had just passed away, and she used to eat restaurant food by the truckloads. Every meal was at a restaurant. While I have lots of fond memories of going to restaurants with her, in the end, the restaurant food did her in. After her death, I said, “Nana, I need you to direct me to the best way to eat,” because I used to eat terrible mainstream food. I thought it didn’t matter because I’m naturally thin. I never gained weight, so I could eat as badly as I wanted, but what was happening was—as somebody with autism, autoimmune issues, asthma and Crohn’s disease—my health was out of control.

Once my son and I started the Paleolithic diet—and I don’t mean the trendy paleo diet, because this was before the trend, I mean the way hunter-gatherers ate—our health made a one-hundred-eighty-degree turn. My son’s behavioral issues from his abuse history before the adoption made a one-eighty. I am convinced by not only the anecdotal evidence but the research and also the work that I’ve done with my own clients in referring them to holistic dieticians and food sensitivity testing. When sugar, soy, grains, dairy and yeast were removed from their diet, the changes I saw in those kids were amazing. The rage episodes that can happen when you give some of those toxins to kids are unbelievable.

HG: Can you drill down further about foods that you wouldn’t touch with a ten-foot pole?

LC: I would not touch with a ten-foot pole any refined sugar. I eat no refined sugar and no grains. I know that the Weston A. Price Foundation supports sprouted and unrefined grains, and that’s awesome, but I can’t do that. I also cannot eat any dairy, and I do not have any yeast or soy. That would be pretty much anything processed. There are some “paleo treats” that I can eat. I have to admit that I have a little bit of an addic-

tion to some of the chocolate paleo treats that use fruits to sweeten them. The most important thing is you’ve got to be sure there’s no refined sugar, no soy and nothing in it that is going to be inflammatory. The way that the mainstream eats grains and dairy is very inflammatory and they are toxins. It’s different from the way the Weston A. Price Foundation recommends it be done with raw milk and sprouted grains.

Unfortunately, refined sugar, refined grains, dairy and soy are also contributing to the obesity epidemic in our culture and in children. I have seen it in children especially since soy was introduced into the diet. Not only is soy feminizing the bodies of boys, it is leading to obesity in kids in general.⁷ I have noticed that. If you go back and look at newspaper clippings, videos, movies and books about your local community from the 1980s, you’ll see hardly any fat bodies. The obesity epidemic is a recent phenomenon, and it’s only gotten worse in the last couple of decades.

HG: Society wants to normalize being overweight. They say, “Stop the fat shaming.” I’m all for positive body image and whatever shape someone is, but there’s something unhealthy that we’re trying to cover up or disguise by changing our language.

LC: It’s also deadly. It’s not about fat shaming. We shouldn’t be shaming anybody. It’s about saying, “This is not nature’s intent.” In everything I do, I cut through all the politics and all the nonsense by asking one thing: “What does nature intend?” Nature does not intend for us to be overweight. Nature does not intend for children to be sitting at desks for six hours a day, tapping on tablets, staring at screens and working on papers. Nature intends for children to be outside, moving their bodies and playing.

When I was working in the clinic with kids in school, it was so heartbreaking because these kids were sitting all day long. It was all ages, from preschool to high school. They are all sitting and either tapping on tablets or doing paperwork, and then they have to go home and do homework. When they are finally free, they want to sit in front of a screen because they have

no energy for anything else.

Having been an unschooling-homeschooling mom, we would go to homeschool groups or large unschooling or homeschooling conferences. It was amazing because every single age—from the youngest children to the twelfth-graders who were nineteen years old—were running nonstop all day long. From morning until night, those kids never stopped moving. It was such a joy to see my son say, “Hi, mommy. Bye, mommy,” and zip right past me. He would come get a quick hug and then run off again. They were indoors, outdoors and all over.

Here’s the interesting thing. When there was a sit-down activity that captivated them—something fun, artistic, a music jam or one of my son’s chain mail workshops—those kids could sit without a problem. The reason was that no one was forcing them to do so. They were doing it because they were captivated and because they had the freedom to run around. When they were finished with it, they’d get up and run. That is how children used to be in Paleolithic tribes—hunter-gatherer children. This is what nature intends. School, which is diametrically opposed to the needs of children, doesn’t know this.

I recently came across something that was a head shaker to me. This is from one of those free little things you get in health food stores where they want to sell you a bunch of supplements. It said that according to the American Heart Association (AHA)—and that organization is supposed to be for heart health—“Active children have better bone health, physical fitness, brain function, attention and academic performance.” We agree with this so far. It continued, “They stay at a healthier weight and have fewer symptoms of depression. Therefore, the American Heart Association offers the following guidelines.” The AHA then goes on to say that three hours a day of active play is a good goal for ages three to five, and for school-age kids and teens ages six to seventeen, the goal should be just sixty minutes (one hour) per day of moderate to vigorous intensive activity.⁸

This is shocking when you think of Paleolithic children. What that tells me is that according to the American Heart Association,

95 percent of your child’s day can be sedentary. That’s what that is saying. Let’s reverse that—from ages two to nineteen, what our kids need is to be moving nonstop. They probably should only be getting an hour of sitting down quietly. What our mainstream is doing to us and our children is harming us. It’s killing us. It’s leading to these emotional, behavioral and learning problems that kids have.

HG: I know your most recent book is about nurturing and empowering boys. Why did you focus primarily on boys?

LC: In my work with children over so many years, I noticed that there were certain problems that were unique to boys. For example, they are pathologized in school. Natural boy behavior is drugged and medicated instead of seen as a natural part of who boys are. Research shows that boys are starved of skin-to-skin contact and emotional and physical nurturance. Boys go through circumcision, which traumatizes them to some degree. They are the neglected victims of sexual assault. They suffer the most child abuse and neglect. They’re dealing with body shame, but it’s not being recognized by pop culture or the helping fields. Boys are the primary victims of suicide in the zero to twenty-four age group. It’s not that newborns are committing suicide, but according to the CDC, boys ages zero to twenty-four years old make up 78.5 percent of suicides. In the ten to twenty-four age group, boys make up 81 percent of suicides. Also, boys hear incessant anti-male vitriol in the media. Boys are being neurochemically hijacked by video games, porn and screens. Even in the movies, there is this idea of rebooting all the movies to reboot the males out. The boys are noticing all of this.

In addition, there are hundreds of philanthropic, private, federal and grassroots initiatives and programs to help girls and young women, but there are none to help boys and young men. Any initiatives that do exist are very negative toward boys and young men. I’m a child advocate first, and I fight for all children, but I also focus on those who have no voice. I realized that since the 1990s, boys’ voices have been drowned out almost to the point where by

Nature does not intend for us to be overweight. Nature does not intend for children to be sitting at desks for six hours a day.

Start advocating for your sons and aligning with nature's intent. Nature intends for boys to be moving, playing and kinesthetically learning.

the 2020s, boys are being wiped right out of the conversation.

HG: I recently watched a pop culture movie because I was curious why it was so popular. I was scandalized and horrified at the way they were depicting boys as they turned into men. It was as though they were simply accessories to a woman's life. They were very much emasculated and maligned. It was sad.

LC: I think I know which movie you're talking about. The fact that little girls are being fed this garbage and boys are watching it is devastating to male-female relationships. This type of hatred and sexism against boys, young men and grown men is devastating to both girls and boys. It is harming their relationships with one another. It is harming them romantically when they get to young adulthood. It is causing boys and young men to feel like they don't belong in this world, and they don't have much hope for the future.

HG: You've talked about the trauma that is inculcated into boys' brains as they're being programmed and hearing these messages. How can we avoid traumatizing boys further?

LC: First of all, we have to stop exposing them to these media. We need to get them off the screens and get them out in nature.

Second, we need to get them out of the public schools and place them in schools that honor natural boy and child behavior. Those could be child-centered schools, nature-based schools, arts-based schools or, better yet, homeschooling. The public schools have proven themselves time and time again to be a toxic environment for boys.

Third, we have to get away from mental health treatments that pathologize boy behavior and put chemicals into them or use behavioral modification to help their symptoms. Instead, we want to focus on attachment treatments that help repair the parent-child relationship and use treatments like Eye Movement Desensitization and Reprocessing (EMDR) to help heal boys' traumas.⁹

Fourth, we need to get them off of toxic

diets with sugar, soy and all the ingredients that are not even food.

Finally, what we need to do as parents is to start advocating for our sons. Speak up when you see these media messages. Don't walk away from it. Years ago, when all of the "Girls Rule and Boys Drool" merchandise was in many stores, parents would walk right by it and not say anything. I would always discuss it with my son, nephews and niece. We talked about how hurtful it would be if boys were looking for the counterpart to that and couldn't find it. There would be a "Girls Rule" shirt or hat for girls, but my son would notice that there was no counterpart for boys. Is that fair? Is that kind? Start advocating for your sons and aligning with nature's intent. Nature intends for boys to be moving, playing and kinesthetically learning. These are some of the ways that we can stop traumatizing them. Simply stop shaming them. Stop exposing them to this.

HG: Can you elaborate on what EMDR is?

LC: Eye Movement Desensitization and Reprocessing is a neurosomatic or brain-body treatment that targets trauma in the limbic system. If you drilled your fingers through the middle of our brains, the limbic system would be there. It is the "fight, flight or freeze" part of the body. That's where trauma gets stuck. Talk therapy doesn't work because it can't grasp trauma in the limbic system. It only works on the prefrontal cortex. In people under twenty-six years old, the prefrontal cortex is the least developed part of the brain. It doesn't finish developing until about twenty-six years old. That is an "under construction" part of the brain, so talk therapy is developmentally inappropriate for kids.

In a nutshell, EMDR hooks trauma and allows it to digest. It pulls in and consolidates the files, if you will, that get scattered around in the cells of the body and around the limbic system, and moves them to the prefrontal cortex where the brain can then store them as part of our narrative. At night, whenever we go to bed, it's almost like our brain tries to do a little EMDR on us during REM (rapid eye movement) sleep, which is stage-four sleep. Our eyes move in

this algorithm or code that trips up this system to help us reconsolidate, process and digest all of the residue of the day. It helps us learn and understand, gain insights and make use of everything that we have processed. EMDR takes that algorithmic mechanism of REM sleep—although we are not sleeping when we do it. It uses the bilateral stimulation of the eyes and directs it, through a protocol, very specifically toward a trauma. It's highly effective and rapidly successful in remedying traumas and healing traumas that sometimes are years or decades old. When my son was doing EMDR, he was the most stable. He had many years of thriving when he did EMDR. I've done it myself—because when we are trained in EMDR, we have the opportunity to do it ourselves—and I would not be the person I am today if it wasn't for doing my own EMDR treatment.

I highly recommend EMDR as the primary treatment for children as well as skilled, gentle attachment-focused family therapy. That means family therapy that works on the attachment cycle. The purpose of it is to help parents and children reconnect at the heart. The purpose of therapy should not be about going behind closed doors with a therapist who is one-on-one inventing. That's not developmentally appropriate for children.

HG: I'm going to invite readers to investigate EMDR and gentle attachment therapy as ways to help boys be boys and nourish and nurture them. Finally, if the reader could do one thing to improve their health, what would you recommend that they do?

LC: It's going to be a three-way tie. I would say eat a Paleolithic or hunter-gatherer diet, homeschool your children (or, if you're an adult, get out in nature and off screens) and heal your trauma with EMDR. Those are the three things that would be life-changing. ☯

This was Wise Traditions Podcast episode 476 (May 20, 2024).

EDITOR'S NOTE: *The Weston A. Price Foundation does not advocate any particular type of schooling.*

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Lab Report

THE OLIVE OIL CONUNDRUM

Sally Fallon Morell

I have a relative in California who grows olives and sends me a case of his olive oil every year. As I expected, in the fridge this olive oil turns into a thick semi-solid. An oil like olive oil, with its high content of monounsaturated fatty acids and low level of polyunsaturated fatty acids can be expected to be liquid at room temperature and semi-solid when chilled.

Then another friend sent me a bottle of her olive oil—authentic olive oil from one-hundred-year-old mission olive trees. Imagine my surprise when I discovered that the oil remained a liquid in the fridge! It didn't noticeably thicken at all, yet I knew it was pure olive oil.

RANGE OF OMEGA-6

This mystery sent me scouring the Internet, where I found a 2021 article from Spain, “The Oleic/Linoleic Acid Ratio in Olive (*Olea europaea* L.) Fruit Mesocarb Is Mainly Controlled by OeFAD2-2 and OeFAD2-5 Genes Together with the Different Specificity of Extrplastidial Acyltransferase Enzymes.” The upshot of this long title: the amount of omega-6 linoleic acid in olive oil can vary greatly, from just over 3 percent to as high as 27 percent! (See Table 1.)

Most tables list the omega-6 content of olive oil at 11 percent because that is a typical reading of the Arbequina variety, one of the most common olive cultivars. This is in line with the omega-6 content of lard and palm oil. But at the upper level of 27 percent, the composition of olive oil is similar to that of sunflower and canola oils! (See Table 2.)

The researchers attribute the fatty acid profile of each cultivar to genetics rather than climate and other environmental factors, but one analysis found that the omega-6 content of the Arbequina variety could range from 7.2 percent to as high as 23 percent.

Olive oil contains mostly monounsaturated oleic acid and saturated palmitic acid—these

TABLE 1: Range of omega-6 fatty acids in olive oil

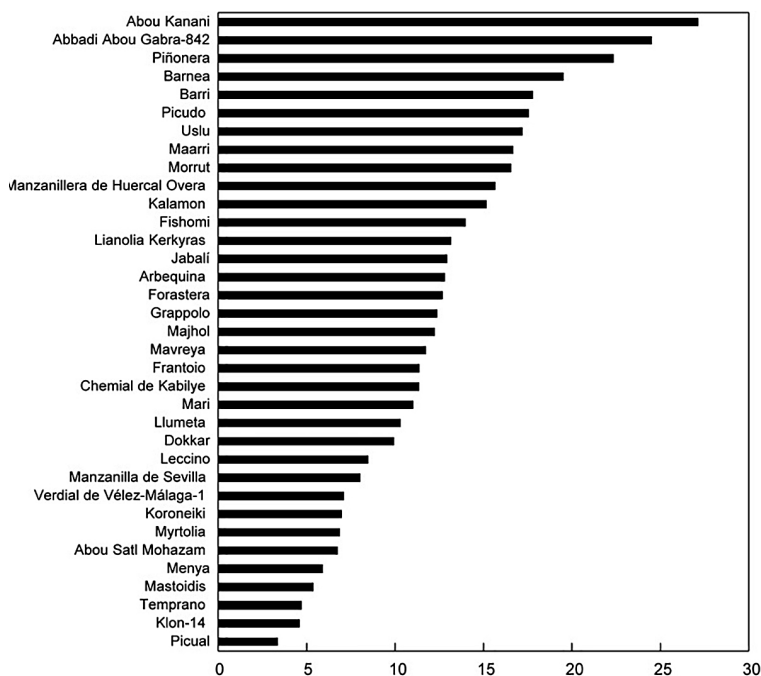
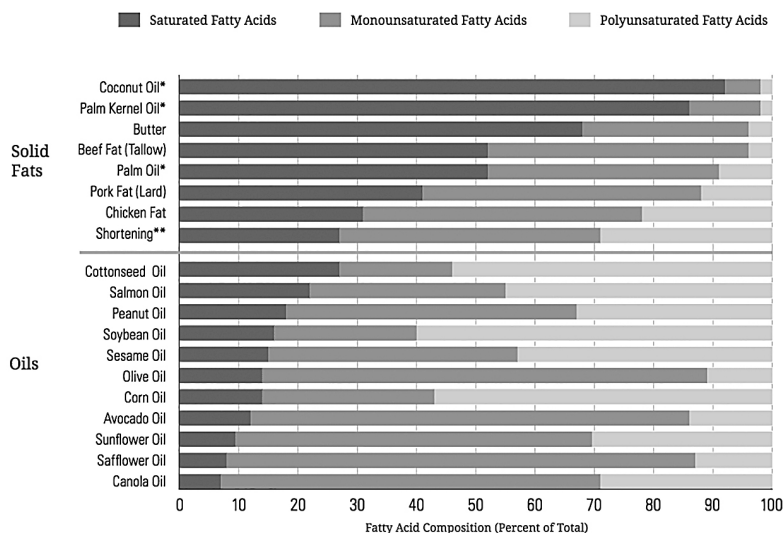


TABLE 2: Fatty acids of common fats and oils



are the two fatty acids that could be expected to cause the oil to jell in the fridge. But the amount of these two fatty acids can vary greatly. Oleic acid can range from 55-83 percent, and palmitic acid from 7.5-20 percent.

Note that these values have nothing to do with the oil’s “authenticity.” The North American Olive Oil Association (NAOOA) states that “An often perpetuated myth related to olive oil is the ‘Fridge Test’—a supposedly simple home test for olive oil authenticity.” This is indeed correct. While it is important to purchase authentic olive oil, even extra virgin olive oil (not processed with chemicals or heat), these labels do not tell you whether or not the oil has a low omega-6 content and high monounsaturated and saturated fat content.

TESTING

We sent twenty-four samples of olive oil to OmegaQuant laboratories in Sioux Falls, South Dakota for testing. The results are shown in Table 3.

As expected, there was a range of values for

polyunsaturated omega-6, from 4.2 percent to as high as 15.86 percent. The total of saturated and monounsaturated fatty acids ranged from 90.47 percent to 78.08 percent. We created an index by dividing the total percentage of stable saturated and monounsaturated fatty acids by the percentage of omega-6 fatty acids (Column E divided by Column F), which ranged from 21.55 (best) to 4.92 (worst).

THE FRIDGE TEST IS NO GUIDE

Imagine our surprise when we found no relationship between the jelling qualities of the olive oil and the index. For example, the olive oil with the best index (sample 14) did not jell at all, while the samples with the lowest index jelled within two weeks, and the sample with the worst index (sample 24) jelled within a week.

We do not have an explanation for this discrepancy—it may have to do with the presence of polyphenols, or with the arrangement of fatty acids in the triglycerides—but obviously we cannot use the “fridge test” to determine the quality of olive oil. We will have to rely on laboratory testing.


The good news is that most of our samples tested at 12 percent omega-6 or below (about the level found in lard, a fat traditionally used in cooking). We will continue our testing program and include only those brands that test at 12 percent omega-6 or below in the shopping guide. If you have a brand you would like for us to test, please send a small bottle to the Foundation. 

TABLE 3: Fatty acids in olive oils

Sample ID	C16:0	C18:1n9C + D	C18:2n6 E/F	Jelling Qualities	
14	14.31%	76.16%	90.47%	4.20% 21.55	Did not jell
19	11.36%	78.02%	89.38%	4.94% 18.08	Not tested
16	10.49%	78.82%	89.32%	5.28% 16.92	Did not jell
15	13.52%	76.18%	89.70%	5.39% 16.64	Did not Jell
17	11.53%	77.74%	89.27%	5.54% 16.11	Jelled in 2 weeks
8	10.77%	78.28%	89.05%	5.80% 15.36	Did not jell
6	10.90%	78.07%	88.97%	6.24% 14.27	Did not jell
2	12.73%	75.52%	88.24%	6.22% 14.19	Jelled in 1 week
7	12.24%	75.35%	87.58%	6.58% 13.32	Jelled in 2 weeks
13	13.25%	75.03%	88.28%	6.76% 13.06	Not tested
5	12.87%	74.65%	87.53%	7.51% 11.66	Not tested
18	10.74%	77.13%	87.87%	7.63% 11.52	Jelled in 2 weeks
21	12.58%	75.06%	87.64%	7.65% 11.45	Not tested
3	12.33%	74.81%	87.15%	7.75% 11.25	Jelled in 1 week
11	12.29%	74.45%	86.74%	7.75% 11.20	Not tested
22	10.47%	76.67%	87.14%	7.96% 10.95	Not tested
20	12.36%	73.55%	85.92%	8.33% 10.32	Jelled in 1 week
9	12.58%	73.38%	85.95%	8.74% 9.84	Jelled in 2 weeks
4	13.71%	71.58%	85.29%	9.91% 8.61	Not tested
12	15.07%	69.35%	84.42%	10.60% 7.96	Not tested
23	8.37%	74.81%	83.18%	11.39% 7.30	Jelled in 2 weeks
10	12.70%	70.48%	83.18%	12.26% 6.78	jelled in 2 weeks
1	14.35%	67.08%	81.43%	12.73% 6.40	jelled in 2 weeks
24	16.06%	62.02%	78.08%	15.86% 4.92	Jelled in 1 week

All Thumbs Book Reviews



***Fearless Fermenting:
How to Boldly Craft Fermented Foods Which
Nourish Your Body, Heal Your Gut, and Feed
Your Soul***

**By Austin Durant
Author Academy Elite**

Austin Durant's *Fearless Fermenting* is equal parts practical, educational, humorous and enlightening. His folksy style is reminiscent of Bill Bryson's *A Walk in the Woods*, the story of a woefully unprepared man who hikes the Appalachian Trail. Like Bryson, Durant educates and entertains as he covers all things fermented and fermenting. He leaves no stone unturned, and, if you're like me, you'll leave no page unturned.

Right out of the gate, Durant charms us with the story of his grandfather spoon-feeding him "jet fuel" (some kind of salt and vinegar tonic) as a kid. Durant loved it, and evidently it primed his palate for the intoxicating flavors found in most ferments. He explains why we should fearlessly ferment and eat more fermented foods—in brief, because fermentation is a natural, healthy and ancient practice.

After getting introduced to sauerkraut as a young man, Durant was off to the races. He started making kraut and seeking out experts to teach him. This led him to ask, "Am I the Forrest Gump of fermentation?" presumably because he ended up popping up all over the place, influenced by his great love for the art of fermentation. (Yes, among other notable fermenters, he learned from Sandor Katz.)

Durant's book bubbles over with word play and levity. There is a graphic that looks like the Pac-Man video game to illustrate the role of probiotics, prebiotics, psychobiotics and postbiotics. But humor and wit do not make this a lightweight tome, because Durant also gets into the science of fermentation. One section focuses on the distinction between wild and cultured ferments. Wild ferments like pickles get their microbes from the food or the air. Cultured ferments like yogurt "didn't get their

name because they went to finishing school." Rather, "they're ferments that need a little help to get started." Durant also gets specific about how fermentation works, likening it to a "bacterial relay race" where salt serves as a microbial inhibitor, regulating which microbes thrive and which stay away. (Salt also has preservative and drying effects.)

After Durant equips us to start fermenting, we are invited to enter the "FerMatrix," a helpful (and fun) way to rate the complexity of making particular ferments. Durant applies his unique rating system to all of the book's recipes. The FerMatrix considers variables such as wild versus cultured, number of ingredients, brine, climate control, average number of days required for fermentation, number of fermentation phases, total prep time, equipment needed, starter maintenance requirements and a hazard factor. The FerMatrix score included with each recipe lets readers know what the ferment requires in terms of time and effort. Whether you want to make water kefir (rated 12), roasted French fries (7), mustard (10) or pumpkin kimchi (13), it's laid out for you with a colorful graphic indicating how "spicy" of a challenge you will face.

Durant offers encouragement and tips throughout. For kombucha, these include evaluating the best container for building up carbonation and troubleshooting problems (e.g., moldy SCOBY, too sour, never fermenting). Other suggestions focus on the best kind of milk for cultured dairy and best practices for storing and maintaining sourdough starter. He also discusses water filtration options and how to set up a fermentation-friendly kitchen.

This book is clearly designed for novices (who need encouragement to be "fearless") but also provides depth for experienced fermenters who may want to try a new ferment or learn some of the science. I am inspired to enter the FerMatrix and journey on, fearlessly. That's one reason this book deserves a hearty thumbs up.

Review by Hilda Labrada Gore

Durant explains why we should fearlessly ferment and eat more fermented foods—in brief, because fermentation is a natural, healthy and ancient practice.

All Thumbs Book Reviews

***Can You Catch a Cold?*
Untold History & Human Experiments
Written and published by Daniel Roytas**

In today's culture, this book's title may seem like a dumb question. It is difficult for the average person to believe that what they have been told all their lives is wrong. In the case of contagion, surely there must be a mountain of scientific evidence that the common cold is contagious. Have you looked? Author Daniel Roytas has.

He found many studies that tried to assess how contagion works with colds and flu. The U.S. military did intensive studies unsuccessfully attempting to prove the Spanish Flu was contagious. The Russian flu pandemic of the late 1800s started in several widely separate places at about the same time—a strange pattern for contagion. The Common Cold Research Unit in Salisbury, England spent six and a half years attempting to infect different animal species with a cold. In one trial, subjects were inoculated with combined nasal washings of twenty-six sick people. Regardless of the results, what exactly would that prove? As the old joke goes, you can pick your friends, you can pick your nose but you can't pick your friend's nose. A study like that does not remotely resemble what goes on in real life. Despite all these studies and more, researchers were not able to prove anything about contagion. Many studies failed to make even one healthy person sick. Others managed to induce illness in a small percentage of cases, but did not use a double-blind or placebo-controlled design.

Studies that injected saline solution mixed with a sick person's snot up a healthy person's nose made a minority of test subjects sick, but other studies using just saline solution had the same result. About all that you can conclude is that hosing your nose with saline solution is not a good health move. No studies used purified virus. An untold number of contagion

studies were never published. Studies that attempt unsuccessfully to make people sick are not very interesting. "Yes, we tried to make all these people sick and, well, nothing happened." Studies like that often end up at the bottom of a drawer or trash can.

Florence Nightingale wrote: "Facts are everything—doctrines are nothing. See what harm the German pathologists have done us. There are no specific diseases. There are specific disease conditions." She concluded that "the doctrine of contagion" is "a grand thing for weak minds." A physician named Dr. Rodermund gave the weak minds a grand scare when he smeared smallpox pus all over his face and hands and then exposed at least three dozen unsuspecting people to that pus. He was arrested but ultimately released when police couldn't come up with anything to charge him with. He didn't hurt anyone or make anyone sick, and he wasn't trying to do so. He knew from experience that no one would get sick. He was trying to demonstrate that smallpox contagion was a weak-minded figment of the imagination.

Roytas goes through several theories that try to explain what does cause colds. He makes good points about how powerful the placebo effect is (adverse events produced by negative expectations). People who are told they have cancer and have weeks to live are often remarkably compliant about dying right on schedule, even if an autopsy shows no cancer or obvious physical reason for them to be dead. Other theories include temperature or humidity changes, and ammonia or ozone in the atmosphere. Strangely, unless I missed it, there is no mention of radiation. The Naval Medical Research Institute published a paper in the 1970s covering more than twenty-three hundred references on biological responses to radiofrequencies that overlap with what we now call 5G. Many of the symptoms match cold or flu. Anyway, the information in this book is very good and the thumb is UP.

Review by Tim Boyd



All Thumbs Book Reviews



An End to Upside Down Medicine: Contagion, Viruses, and Vaccines—and Why Consciousness Is Needed for a New Paradigm of Health
By Mark Gober
Waterside Productions

If you think that bacteria cause diseases, you may want to think again. In *An End to Upside Down Medicine*, Mark Gober asserts that bacteria appear at the scene of underlying toxicity or injury as part of the body’s cleanup crew. Thus far, no agency has provided convincing evidence that bacteria cause disease.

If you think that researchers follow the scientific method when they claim to isolate viruses, rethink that one, too. Like other critics of virology, Gober asserts that studies that do not physically isolate viruses cannot claim that those viruses exist—and if the existence of a virus has not been proven, a nonexistent thing certainly cannot be proven to be an intracellular parasite that causes disease in its host. It follows that drugs invented to help the body fight the unidentified virus are an impossibility.

One virus never proven to exist is polio. Gober explains the flaws in the research allegedly proving its existence and cites the plausible perspective that links “polio’s” typical symptoms to toxic pesticides such as lead arsenate, benzene hexachloride and DDT. Jim West compiled data suggesting that polio cases tracked closely with pesticide use from 1940-1970. Crediting polio vaccines as the savior fails to consider the reduced use of toxic pesticides.

Eleanor McBean, in her 1956 book *The Poisoned Needle*, concluded that the “Spanish flu” was caused by vaccine-induced poisoning. Her research indicated that the flu only hit the vaccinated; those who refused the shots escaped it.

There are also other ways to understand smallpox; as Gober notes, the treatments of choice for smallpox (mercury, arsenic, antimony) were toxic. As soon as those treatments stopped

being used, smallpox started to go away. Gober considers alternative theories for other conditions, too, including chickenpox (is a hormonal element involved?), hepatitis (the role of alcohol consumption is known) and rabies. He cites Dr. Samantha Bailey’s speculation that “rabies” could be a neurotoxin secreted from the animal.

The WHO states, “Black Death is an infectious disease caused by bacteria. . . usually found in small mammals and their fleas,” but Gober discusses evidence from Dawn Lester and David Parker (authors of *What Really Makes You Ill: Why Everything You Thought You Knew about Disease Is Wrong*), who dispute the theory that fleas spread disease to rodents and from there to humans. A compelling counternarrative is that major environmental events caused “corruption of the air and earth”; Mike Baillie, professor at Queen’s University in Belfast, believes the Black Death was caused by high levels of ammonium released due to the impact of comet debris and a major earthquake on January 25, 1348.

Finally, if you think vaccinated populations have better health outcomes than the unvaccinated, Gober suggests questioning that assumption as well, observing that the “solutions” (that is, vaccines) proposed for many diseases create more problems than they solve. *Vax-Unvax* by Robert F. Kennedy Jr. and Brian Hooker assembles considerable evidence on that point, but the medical establishment has a clear vested interest in perpetuating the myth that “germs” rather than medical poisons kill people.

Gober’s common-sense recommendations are to consider factors such as sanitation, toxins, electricity, radiation poisoning, overall lifestyle, nutrition, environmental changes, medications and vaccines. He also proposes that one person’s sickness could cause a physiological change in someone else via an unseen energetic connection. I am not sure about that, but my thumb is up for this look at the flaws in modern medicine.

Review by Craig Soderberg

Eleanor McBean concluded that the “Spanish flu” was caused by vaccine-induced poisoning. Her research indicated that the flu only hit the vaccinated; those who refused the shots escaped it.

All Thumbs Book Reviews

Fowl! Bird Flu: It's Not What You Think
By Dr. Sherri J. Tenpenny
Insight Publishing

“When we give government the power to make medical decisions for us, we, in essence, accept that the state owns our bodies.” That quote, included in this book, comes from a wise man named Ron Paul. Say I own a volleyball (and I do). What can I do to that volleyball? I can use it for its intended purpose (and I do). I can run over it with my car. I can burn it. I can vaccinate it. I don’t do any of those things, but I could do whatever I want because I own it. Giving government that power means they can do anything to us, including vaccinate.

Tenpenny does an excellent job of explaining the fact that vaccines are about money, not health. Safety and effectiveness are of no concern, so “don’t ask about that, slave.” Many ask the forbidden question anyway. That is similar to a wife asking her husband whether a given dress makes her look fat. If you have to ask the question, apparently there is a problem. Most men know that if they tell her she looks like a fat pig, that is probably not the winning answer. Likewise, big pharma knows that telling everyone that their shiny new vaccine might damage or kill is not going to help sales.

What to do? If you are big pharma, what do you do? You claim to spend millions on safety studies and generate a sh—uh, toilet-load—of data. When asked for the data, you refuse to release it for seventy-five years. By that time, everyone will forget—because they will be dead.

If I want to slam a nail into a block of wood and someone suggests I use a hammer, I don’t need to do a million-dollar study using advanced math and statistics to tease out whether the hammer will be slightly better than nothing. We won’t talk about how big pharma insists on legal immunity if their product kills people, or the billions it has paid to a small number of victims.

Perhaps it is time for the human race to wise up before the big pharma wolves completely devour us. . . like a bunch of fat pigs.

After explaining how legislation has been passed to ease the way to mandatory vaccines and vaccine ID cards, Dr. Tenpenny does a deep dive into what bird flu is and what really causes it. The popular claim is that the illness is caused by viruses with designations like H5N1. Whether they really are viruses or cooties, Tenpenny points out that the cooties exist in every chicken, healthy or not, wild or caged, and are not the cause of bird flu. So, what is? As of 2005, so-called bird flu was most pervasive in Vietnam. During the war, Vietnam was hosed down thoroughly with Agent Orange, which contains dioxin, a very persistent toxic chemical. Tenpenny correlates bird flu to dioxin and nuclear waste exposure. Birds in confinement are much more susceptible. Wild birds are victims, not vectors of disease. Sick birds don’t fly far, and dead birds don’t fly at all. There is no contagion. We are looking at extensive environmental contamination.

Much of *Fowl!* reads like it could be a response to today’s headlines, which are slowly but surely stoking fears of a bird flu pandemic. As I write, millions of birds have been slaughtered, which does not help anything and is a tragic waste. It is also destroying small family farms, and by extension, us. That’s an even bigger waste. Here’s the kicker: Tenpenny wrote this book in 2006. Unfortunately, it appears to be out of print now. Although she speaks of viruses as real, in fairness, nobody including WAPF would have disagreed in 2006. We have seen this scam before. Maybe we won’t fall for it again. My thumb is UP for this book.

Review by Tim Boyd



Tenpenny correlates bird flu to dioxin and nuclear waste exposure. There is no contagion.

All Thumbs Book Reviews



Under a Rock:
An Electrosensitive Survival Guide
By Julia Lupine
Independently published

Have you ever gotten a headache after being on a computer for too long? Felt a tingling or buzzing sensation after using your cell phone? Experienced inexplicable nausea in a friend's home or in a particular city? Each of these could be a symptom of sensitivity to non-native electromagnetic frequencies (EMFs).

Under a Rock offers insights on what it's like to experience the aforementioned symptoms, along with much more dramatic ones including (but not limited to) brain fog, confusion, physical weakness and rashes. Lupine and others with electromagnetic high sensitivity (EHS) are the canaries in a coal mine. Even if we do not consider ourselves particularly affected by non-native fields, Lupine's first-hand account of what it is like to live "disabled by wireless fields" is a cautionary tale for all of us.

Just because someone is symptom-free does not necessarily mean they are unaffected or protected. That's where this book comes in,

helping us understand the fields we are exposed to and offering tips to shore up our environment to mitigate the damage they cause. Among the wireless fields that assail us are those created by cell phones, Wi-Fi and power lines—Lupine dubs the conveyors of these fields "dark force machines." While that may sound dramatic, she provides evidence to back up the gravity of the situation, describing the detrimental and nearly ubiquitous nature of what currently surrounds us (and will continue to do so if Musk and Zuckerberg have any say in the matter. . . and they do).

Lupine discusses the array antennas (designed to "blend in" alongside office buildings) and cell towers ("disguised" as pine trees) that were installed in 2020, when most of us were in lockdown mode. Since then, countless satellites have been launched to make sure there are no "dead zones anywhere in the world for your cell phone" (Musk's stated objective). However, the worst "dark force machine" of all, according to Lupine, is the smart meter attached to most buildings, constantly monitoring electricity use while sending out signals "like bullets" to our brains and bodies. Radiation breaks down the myelin sheath around our nerve cells, she

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

explains. Happily, animal fats help rebuild that protective sheath. Sauerkraut, miso and other fermented foods enhance the microbiome and help mitigate radiation damage, too.

Things I really appreciated about the book are Lupine's careful definition of terms (for example, AC and DC electricity, attenuation of frequencies and 5G), as well as the practical ideas she offers for protection. She recounts the benefits of mushrooms, which can help reverse the "malnutrition" of EHS, and goes over how to use mushrooms like chaga, lion's mane, cordyceps and reishi in tinctures and teas. She likens her personal hacks for avoiding danger zones in a home to playing the game "The Floor is Lava!" as a kid. She also talks about the power of distance from towers and routers, and makes building material recommendations for those who want to build a bunker of sorts. The most natural materials are best for creating a barrier from electric and radio waves (magnetic waves are more difficult to mitigate). Rock, sand, wood, natural fibers and cardboard are especially helpful and, for DIY types, she goes

into detail about how to build a protective space.

Lupine's information on EMFs, their troubling influence on our health and lives, and what to do about them comes across as accurate and well-researched. A word of caution: the book contains sarcasm, a frequently snarky tone and the occasional curse word. It's not G-rated. If you prefer to avoid profanity, this book is not for you, but if you want to learn to lessen your EMF load and can overlook the profanity and snark, then it *is* for you.

Under a Rock begins with Lupine smashing a cell phone to smithereens with a rock in the middle of the desert. After reading the book (or this review), you may want to do the same. However, Lupine reminds us not to overreact or freak out: "Don't panic. Just pay attention. Stop supporting wireless technology with your dollars." This book merits a thumbs up, as does Lupine for persevering and making it her mission to alert the world to the mess we are creating for humankind and all creatures that inhabit the planet.

Review by Hilda Labrada Gore

Vaccines Are Dangerous: A Warning to the Global Community

By Curtis Cost
Secrets Publishing, Inc.

In his 2010 book *Vaccines Are Dangerous*, Curtis Cost debunks the "vaccines are safe" narrative while also covering a myriad of other topics related to Big Pharma corruption. Packed with scientific studies and research, the book dives first into HIV/AIDS, discussing the theories, narratives and defective testing methods and exposing the horrific lies about Africa. Passionate to unmask the truth, Cost goes on to cover the swine flu hoax as well as the histories of many other diseases such as polio and measles.

An underlying theme is Cost's outreach to Black and Latino communities (Cost being Black himself). Chapters like "Genetics is a Black issue" and "A message to Black and Latino ministers" urge those communities to stand firm against the narratives they're hearing about health and vaccines. In his author's note, Cost writes, "The goal of this book is to help save the lives of innocent children, women and men in this country and around the world, and to especially warn those in the African and Latino communities because they are the least informed about the dangers of vaccines."

Contrary to WAPF dietary principles, the last part of the book unfortunately falls into mainstream ideas about raw food diets. Cost recommends against most cooked foods, salt and all cow's milk (calling the latter "poison" and advocating for rice or almond milk as alternatives). The book also does not question germ theory. Otherwise, however, Cost's book is a well-researched source of information about vaccine dangers and Big Pharma cover-ups. A qualified Thumbs Up.

Review by Celia McGovern

All Thumbs Book Reviews



Lights Out: Sleep, Sugar, and Survival
By T.S. Wiley with Bent Formby, PhD
Atria Books

In the 1980s, Nancy Reagan encouraged us to “just say no” to drugs. In *Lights Out*, authors Wiley and Formby urge us to “just say good-night.” There’s a parallel between the two messages. Originally published in 2001, *Lights Out* still packs a powerful punch today. Backing up each of its premises with scientific studies and data, the book questions presuppositions and erroneous strategies for regaining health based on conventional medical and governmental agency guidelines.

Sleeplessness is crazy-making, disrupting our hormones and brain function. Sleeplessness leads to type II diabetes, obesity and cancer. Sugar consumption (and not just refined sugar) is just as troublesome for our health. The overconsumption of carbohydrates causes issues with insulin resistance, weight gain and hypertension. Sadly, these conditions are simply “the short list.”

The crux of *Lights Out* is that we are charting a perilous course when we shortchange ourselves on sleep and overindulge in sugar. Wiley and Formby make a compelling case that lighting up our world and making sugar constantly available has negative effects. We seem to have adopted the mantra “lights on, sugar in” as the societal norm. They suggest that the advent of processed foods and artificial light has unwittingly turned us from a predominantly healthy population into a people riddled with health problems.

Our bodies cannot handle the constant inputs of artificial light and perpetual carbohydrate intake. Our lit-up environment—where nighttime effectively has been eliminated—puts our bodies on high alert. Our cortisol shoots up and stays up. We are wired and ready to go during daylight hours—but with laptops, Netflix and LED lights at every turn, there is no relief or

“sunset” in sight. This state inevitably leads to dis-ease and depression. We then self-medicate with sugar (often in the form of bread, pasta, candies and pastries), and sometimes turn to pills, all-too-readily allowing the prescriptions for the latter for our children. The authors cite an alarming statistic from 1996, noting that our children received over seven hundred thousand prescriptions for Prozac that year. (As of 2021, 8.2 percent of five- to seventeen-year-olds—about one in twelve—had taken medication for mental health in the past year.)

The book goes into detail about how carbs and light impact our hormonal balance (serotonin and dopamine) and energy production in the mitochondria. Wiley and Formby explain that when the days are longer in the summertime, we will naturally consume more carbohydrates in the form of fruits and vegetables, as our ancestors did. The problem is that our brightly lit modern lives unwittingly deceive our bodies and lead them to believe it is always summer and never winter, throwing off many basic bodily functions. This cycle of more light, more carbs and less melatonin is leading to premature sickness and death.

Wiley and Formby also critique conventional approaches to treating cancer, diabetes and even alcoholism. For example, they mention a Native American man dealing with alcohol addiction on his reservation. He stops drinking only to eventually start again. Occasionally, he temporarily replaces the alcohol with cigarettes, Pepsi and television. The authors put it this way: “Genetically, [Native Americans] have no tolerance for sleep loss and the sugar cravings or depression that follows. They are living in an alien environment for their group genetics. *Our environment.*”

The authors include extensive endnotes that refer readers to articles, scientific studies and other resources for further investigation. There is also a bibliography and a glossary of terms for quick reference. Thankfully, the authors

Tim's Video Reviews

A Farewell to Virology (PT 1):

Dr Mark Bailey / Steve Falconer

<https://www.bitchute.com/video/5EAWnkwUuJWJ/>

If you are a devout follower of scientism or establishment pseudoscience, there is nothing to see here. You might want to return to your cat vids and have a nice day. Cat videos are one of the most searched for terms on the web (I saw that on the Internet, so it must be true). Someone who is suspicious might think I keep mentioning cats in an attempt to lure traffic to this page. Would I do that? Cat. Cat. Cat.

For those who can't ignore the absurdities and logical fallacies that pass for science, this is a great video. In 2022, Mark Bailey wrote an essay explaining that virology is not valid science. When you try to track down the source of claims that viruses have been isolated, all you find are fingers pointing to someone else. Christine Massey queried over two hundred government and scientific agencies around the world looking for proof of virus isolation. Nobody could give it to her.

When you do reach one of these legendary sources, you find enough circular reasoning to make anyone dizzy. You find terms that have been redefined. You find the dreaded homunculus argument. That sounds like some scary monster from a 1950s B movie named *The Homunculus That Ate New Jersey*. What it really means is that you can't define a word using the same word—like saying the definition of red is something that is red. There is no consistently agreed upon definition of isolation in virology. One virologist interviewed in this video tried to define “isolate” as a noun: “isolate: a virus we have isolated from an infected host and propagated in culture.” Whoever came up with that definition is an idiot, which is defined as someone who is an idiot.

The process used to isolate a virus goes something like this: hork a

loogie into a petri dish, filter, put the resulting yuck in a cell culture, starve the cells and add antibiotics. When the cells die, assume it must be because of the killer virus. (It couldn't possibly be from starvation or antibiotics.) Stefan Lanka proved that the dead cells were not necessarily the victims of killer viruses. The culture includes a mix of Vero cells (kidney cells from a green monkey) and bovine tissue—all stuff with its own DNA. Along with this monkey business, lung loogies can have a combination of lung tissue, bacteria, pollen and even bugs, all of which have their own DNA. If you perform a PCR test to detect any DNA fragment, you are probably going to find it, especially if you run the test through many cycles.

This is not just some academic detail that doesn't matter to most people. This fake science is being used to convince people to shut down farms and destroy our food supply to prevent some imaginary cootie from killing us all. The thumb is UP for this video. Cat.

The Future of Food

The Corbett Report, Episode 460

<https://corbettreport.com/future-of-food/>

Food weaponization might sound like a wild conspiracy theory, but there is a lot of history and a lot of evidence to think about. The

also offer a prescriptive chapter with concrete suggestions. Their primary conclusion? For physical, mental and emotional homeostasis, prioritize sleep. Turn the lights out, just as the title suggests. And for hormonal balance and a healthy lifespan, avoid sugar like the plague. I do not agree with a couple of their recommendations (such as the suggestion to avoid drinking milk), but in general, I find myself in agreement with many of their statements. To wit:

“There never really was any scientific basis for the low-fat movement, only a financial one. When it comes to obesity, diabetes, heart disease, cancer, and depression, everything we believe is a lie. No fat, no future. We've created morning at midnight. And it's driving us mad. Preventative medicine is thought of as alternative medicine in this country. And young doctors aren't taught the art of healing; they're taught pharmacology.”

The final chapter reminds us to stay skeptical of authority. The authors quote William Burroughs, who once said “Paranoia is the highest form of consciousness,” and encourage us to ask questions, explore and seek solutions since “no one is guarding your health and survival except you.” This book deserves a hearty thumbs up. ☺☺

Review by Hilda Labrada Gore

Tim's Video Reviews

idea is not new. Attacking armies have always known that blockading a city will starve out the residents. The English created the conditions that led to the Irish potato famine. The Soviets took food from the Ukrainians to force through a campaign to collectivize agriculture in the USSR and silence the peasants who were rebelling against that policy. Up to ten million Ukrainians died.

Today, governments all over the world are making it harder to produce food. Their excuse for this is the very flimsy climate change narrative. In place of real food, we are being pressured to eat lab-grown “food” and “plant-based meat” along the line of Impossible Burgers and Beyond Meat. Food scientists are working on a process to convert plastic into protein (I thought the fast-food purveyors had already done that) and speak in glowing terms of Star Trekkian ideas like 3D-printed food. Just speak clearly to the food synthesizer and, after a few seconds of futuristic sound effects, there's dinner. If that becomes the norm and if there's a Scotty up there somewhere, please beam me up.

Meanwhile there has been a suspicious rash of mishaps at food production facilities around the U.S. in recent years. It gets even more suspicious when you see that sixty-five international policymakers, academics, businesses and others got together in 2015 to simulate how the world would respond to a future food crisis. They specifically looked at what might happen in the 2020s with toppling governments, extreme weather events and spiking prices.

The Corbett Report video brings up a local news story about high school students “spontaneously requesting” cricket powder dumplings in their school lunch. Oh, look at that. My BS-o-meter just slammed hard to the deep end and started smoking. I wish they'd quit doing that. I've lost more meters that way. As we've found our way into a world of words like “misinformation” and “malinformation,” let me pour a little more fuel on the fire. The only way high school students would request bugs in this country is

after a long, tedious process of miseducation or maleducation. Even then, I'll bet most of them are not down with the idea of eating crickets.

The good news is that this agenda is not going too well. There have been massive protests, especially in Europe. The legacy media that promote the agenda are dying, as more and more people turn to independent online sources of information. This video packs a lot of information into about thirty-nine minutes and comes with a transcript for those few, hardy souls who prefer reading. The thumb is UP.

Energy/Empire:


Part 2 Ideological War on Sri Lanka

Written by Fox Green Space Commune

<https://www.youtube.com/watch?v=azZ8n1Uj9LA>

In 2021, the Democratic Socialist Republic of Sri Lanka banned chemical fertilizers cold turkey. Shortly after that, Sri Lanka's economy completely collapsed, and the president who made that decision had to flee the country. This video seems to suggest that the fertilizer ban was the sole cause of the economic collapse. However, they also go on to explore counterarguments. One argument is that, clearly, you cannot transition from industrial to organic overnight, no matter how dedicated or good you are. Cuba also made the transition, albeit much more slowly. Although Cuba is not a leading example of prosperity, its economy did not crash spectacularly like Sri Lanka's. The video completely ignores other possible factors such as socialism. If you don't think socialism could be a factor in economic collapse, I must congratulate you on learning nothing from 20th-century history.

The video then gets busy pointing a finger at Vandana Shiva and her role in destroying Sri Lankan agriculture. She is anti-GMO. She says GMO stands for “God, Move Over.” She has ties to people in high places. She promotes food sovereignty, organic agriculture and ending chemical fertilizers by 2030. She is accused of letting religious beliefs influence her thinking. I am not a die-hard follower of Vandana Shiva, but that last one especially forces me to throw the red flag.

Throughout much of this video, it is not clear what the main point is, but the filmmakers assert that organic advocates admit that organic agriculture cannot feed the world. I disagree. An organic—or better—farm may not be able to operate on the massive scale of an industrial farm, but that just means we need more farmers. Of course, that will take time, but it can be done and will work much better than chemical industrial farming. Because producing real food is a lot of work, governments can stop wasting time tracking unemployment—there will be none. Current economic systems in most countries are biased heavily in favor of large-scale industrial farming, and that bias needs to go away before other options can be given a fair chance. My thumb is DOWN for this one. 

Course Reviews

HEALING THE NEXT GENERATION

Homeopathic Training Course by Anke Zimmermann

We have had many requests to review diet and health courses available to the public. We are pleased to offer this first of a series of reviews.

I first met Anke Zimmermann when I consulted with her almost twenty-five years ago. At that time, she was licensed as a naturopathic doctor (ND). Over the years, it has been my honor to watch her transition from a successful licensed ND to an even more successful homeopath who now specializes in treating behavioral issues in children around the world. Anke is well known to readers of *Wise Traditions* for her fascinating articles on homeopathy.

Anke's homeopathic training course, "Healing the Next Generation: Integrated homeopathic care for children with autism and other complex developmental and behavioural challenges,"¹ is open to both health care practitioners and parents of children with behavioral challenges. This allows for open discussion between those prescribing and those implementing the protocols. This unique and effective way of teaching gives practitioners insights into parents' expectations and experiences, while giving parents an idea of what their homeopathic or naturopathic doctors are doing and why.

Now a naturopath myself, I already felt inspired to help children with these issues prior to taking this course, while also feeling overwhelmed by the complexity of these cases and the challenges of managing their care effectively. This course helped me overcome my hesitation. I am now more confident in taking on these types of cases and am seeing impressive results after applying the tools I learned from Anke. I am certain that anyone who takes this training will be equally empowered to treat children with deeply complex health conditions.


Each cycle of the "Healing the Next Generation" course meets once a month for six months for a total of thirty-six to forty-two hours. In typical Anke style, the course is well-designed.

I've taken a lot of courses over the years, and it is rare to find a teacher who is as organized as Anke. It was obvious that a great deal of planning had gone into each day. Anke clearly wants attendees to be successful and makes every effort to provide tools for good patient outcomes.

The course features an impressive combination of instructional methods, including videos showing what parents deal with on a day-to-day basis and research on how modern medicine and pharmaceutical interventions, current food production practices and living conditions may compound toxic exposures. We were also taught the most commonly used homeopathic remedies in complex cases and how to recognize the need for them in our patients. This was on top of Anke taking one or two live cases each day, with the full consent of her patients, and discussing with us the best treatment plan. We were even included in follow-up consultations and shown what to look for in the patient's progression, as well as learning how best to handle difficulties and how to adapt to unexpected outcomes. I found Anke's emphasis during case-taking on understanding the impact of previous generations to be particularly profound; her case-taking methods illustrate how trends in prior generations may affect the health of the children under our care.

Taking cases live and having live follow-ups is a unique aspect of this course and made the process much more tangible. Often, in professional courses, students are shown the purified case—and anything that doesn't support the positive outcome is purged. This leaves one feeling unsure of how to handle difficulties when they arise. Live cases give students the ability to see how the practitioner works in a "real world" environment. I also appreciated how the discussion of techniques to begin the journey of detoxification and support clients' development taught the best hierarchy in treatment protocols. If the selected remedy doesn't work (which does sometimes happen), the course allows participants to see that and learn how to rework a case to come up with an alternative.

Anke is a gifted homeopathic doctor, and watching her take a case and devise protocols was in itself an education. Course participants also received all of her intake package information and were given absolute freedom to use these in their own practice. Anyone who takes this course is sure to learn more than they could imagine. After six months of monthly meetings, I found myself wishing that I could enroll in Anke's next course offering to keep learning and improve my skills in "Healing the Next Generation." Dear reader, I can confirm this course is well worth taking!

Course details are available at ankezimmermann.net/homeopathy-training-autism-management-and-more.html. 

Review by Margret Holland, ND

Vaccination Updates

VOICES OF TRUTH: EIGHT UNSUNG HEROES OF VACCINE RISK AWARENESS

By Kendall Nelson, Director, *The Greater Good*

The Covid-19 pandemic operation offers a prime example of how media distractions can distort public perceptions.

In a world where fact and fiction often blur, discerning reality has become increasingly challenging. Artificial intelligence and corrupt media outlets contribute to a landscape where truth is obscured and misinformation reigns. AI-generated deepfake videos and sophisticated AI-driven text generation can create highly convincing but false narratives, making it nearly impossible to tell what is real.

The vaccine movement, in particular, has a propensity for co-option by bad actors with substantial platforms, which can make it difficult for even the most diligent insiders to determine who is friend or foe. We find ourselves in an era of limited hangouts, designed to provoke infighting, while the true power brokers accumulate more wealth and control. These distractions serve to divert our attention away from some of today's most critical issues—including vaccine-related harms, expanding social control mechanisms and the cleverly disguised war of central bankers on the people.¹

The Covid-19 pandemic operation offers a prime example of how media distractions can distort public perceptions. Sensationalist media coverage, conflicting information and polarized debates have overshadowed critical discussions about public health responses and the ethical implications of pandemic policies. Amid this chaos, discerning the truth has become an arduous task. Even so, global “real world evidence” for the Covid-19 shots clearly shows that the injections have had a negative impact and correlate with excess mortality.² This alarming finding underscores the need for transparent and comprehensive discussions about the long-term effects of all vaccines.

In this challenging landscape, the vaccine risk awareness movement shines with the efforts of determined heroes who have been unwavering in their commitment to educate the public. Their selfless advocacy, often at great personal

risk, underscores their dedication to protecting both individual freedoms and public health. In this article, I highlight eight heroes—some who are widely recognized for their work, and others who may be less familiar. All eight share a common thread of bravery and integrity; their tireless efforts and profound impact make them deserving of our respect and attention. In addition to fighting for the safety and well-being of our children, they also champion the broader principles of human dignity and autonomy. These voices are crucial to the ongoing dialogue about vaccine safety and public health, representing the very essence of true advocacy in our times.

BARBARA LOE FISHER

Barbara Loe Fisher is the godmother of the vaccine risk awareness movement, having co-founded the National Vaccine Information Center (NVIC) in 1982 after her son had a severe reaction to the diphtheria-tetanus-pertussis (DTP) vaccine. Her advocacy for informed consent and medical freedom explicitly mirrors the principles championed by America's founding fathers.³ Like the signers of the Declaration of Independence in 1776, Fisher deeply believes in the unalienable rights to life, liberty and the pursuit of happiness, including the freedom to make autonomous decisions about personal health without undue influence or coercion. She has eloquently emphasized the importance of open dialogue and informed decision-making in democratic societies.

Throughout her nearly four-decade-long tenure at NVIC, Fisher has been stalwart in defending against the encroachment of mandatory vaccination and the erosion of individual rights. Her leadership at NVIC has been instrumental in educating the public about vaccine risks and the need for transparency in public health policy-making. Fisher's steadfast opposition to

the weaponization of the mandatory vaccination system that began two centuries ago with compulsory smallpox vaccination⁴ underscores her commitment to preserving individual liberties and protecting bodily autonomy.

During the events surrounding the declaration of a Covid-19 pandemic, Fisher was a vocal critic of what she calls the “Public Health Empire” and its overreach, highlighting the parallels between current events and historical struggles for freedom. Fisher’s enduring dedication serves as a poignant reminder that the fight for individual rights and medical freedom is ongoing. We celebrate her pivotal role in the vaccine risk awareness movement and honor her lifelong commitment to ensuring that individuals retain control over their own bodies and medical decisions.

LESLIE MANOOKIAN

As the president and founder of Health Freedom Defense Fund (HFDF), Leslie Manookian, too, is a staunch defender of health freedom and bodily autonomy. With over two decades of dedicated advocacy, Manookian has been a formidable force in the fight for individual rights and ethical medical practices. Her journey began with our co-created documentary, *The Greater Good*, which brought critical awareness to the debate surrounding vaccines.

At HFDF, Manookian and her team uphold the foundational belief that every person has the inherent right to make informed decisions about their health without coercion. Central to their mission is the defense of bodily autonomy and the principles of freedom and integrity. Manookian’s leadership has been instrumental in challenging unethical mandates and policies. For example, a recent landmark victory in the Ninth Circuit Court overturned a dismissal of a lawsuit against the Los Angeles Unified School District’s compulsory Covid vaccination policy.⁵ In addition, HFDF secured another significant win in achieving a settlement

in the case *Petroff vs Vallow, Disney Television Studios Inc., and The Walt Disney Company*.⁶ The lawsuit challenged Disney subsidiary 20th Television Animation’s Covid shot mandate, implemented in April 2022. By settling the case, Disney avoided senior employee depositions, prevented the public disclosure of sensitive internal documents and averted what would have been a very embarrassing and damaging trial.

One of Manookian’s earliest and significant legal successes was the pivotal lawsuit against the federal travel mask mandate promulgated by the Centers for Disease Control and Prevention (CDC).⁷ HFDF and Manookian challenged the CDC mandate, highlighting the agency’s lack of statutory authority, the absence of scientific justification and the failure to subject the mandate to public scrutiny. Their efforts resulted in the restoration of the right to travel mask-free, setting a crucial precedent for limiting executive overreach during emergencies.

These achievements underscore Manookian’s commitment to upholding constitutional rights—reinforcing the principle that government actions must adhere to legal scrutiny and respect constitutional limits—and to ensuring that individuals retain the freedom to make choices about their own bodies. Beyond her legal victories, Manookian is a passionate advocate for transparency and accountability

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Sharav emphasizes that modern technology has often eclipsed the essential study of history and philosophy, corrupting genuine science and medicine.

in public health policies. She has consistently emphasized the importance of public input and scientific rigor in shaping regulations that affect millions of lives. Her work resonates deeply in a time where personal freedoms are increasingly challenged, reminding us that constitutional protections remain essential even in times of crisis. Manookian continues to shape the discourse on informed consent and individual rights, making her a pivotal figure in the movement for ethical health care practices and constitutional governance.⁸

VERA SHARAV

Vera Sharav stands as a beacon of both truth and resilience, a hero on a sacred mission born out of the horrors she endured as a Holocaust survivor. Her life is a testament to the unyielding human spirit and the necessity of remembrance and vigilance. As the founder of the Alliance for Human Research Protection (AHRP)⁹ and producer of the 2023 documentary series *Never Again Is Now Global*,¹⁰ Sharav reminds us that the past's darkest chapters can repeat themselves if we are not vigilant. Sharav's mission is to honor those who did not survive by ensuring that their stories and the lessons of history are never forgotten.

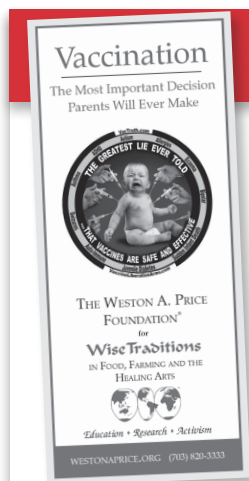
Sharav's wisdom was born from profound suffering and a unique understanding of the fragility of human rights and the ease with which societies can descend into barbarism. Her message is not just a recollection of past atrocities but a dire warning against the perils of blind obedience and the perversion of science and

medicine. From an act of defiance as a six-and-a-half-year-old child—a moment of disobedience that saved her life—she formulated her belief that dissent can be a powerful force for survival and integrity.

Sharav emphasizes that modern technology, while transformative, has often eclipsed the essential study of history and philosophy, corrupting genuine science and medicine.¹¹ She draws parallels between the elitist and racist ideology of eugenics that gained popularity in the early twentieth century, which aimed to eliminate individuals deemed inferior, and public health and policy decisions today that similarly devalue human life. Sharav sees a disturbing continuity in the way medicine has been weaponized, even as spiritual and moral values are discarded. Her warnings about the current state of the world—where doctors and medical institutions once again serve government dictates rather than ethical principles—are a call to action. In her eyes, we are at a catastrophic juncture in human history, witnessing global crimes against humanity driven by a new breed of predators who wield biotechnology and surveillance to control and dehumanize. Sharav's determination to speak out against these dangers and to remember and resist makes her a hero in the truest sense of the word.

ANDREW WAKEFIELD

Andrew (“Andy”) Wakefield's bravery reshaped the discourse around vaccine safety and autism. Trained as an academic gastroenterologist in London, Wakefield's career took



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a dramatic turn in the 1990s when he began investigating gastrointestinal issues in autistic children who had recently received a measles-mumps-rubella (MMR) vaccine. His early research suggested a potential link between the vaccine, intestinal inflammation and neurological injury—an inquiry that would redefine his professional trajectory and ignite a firestorm of debate.¹²

In February 1998, Wakefield and his colleagues published a study in *The Lancet* of twelve children who had experienced both developmental delays and gastrointestinal problems.¹³ As a case series, the paper made no claims about a causal link between the MMR vaccine and autism, but the authors advocated caution, recommending separate vaccines over the combined MMR shot until further research could clarify the safety concerns the study had raised.

The fallout was swift and severe. Accusations of scientific misconduct, led by journalist Brian Deer and amplified by media outlets, cast a shadow over the study's findings. (Twelve years later, in 2010, the journal went so far as to retract the paper.) Despite subsequent legal battles and the eventual exoneration of his co-authors in the *Lancet* paper, Wakefield lost his medical license and faced professional ostracism. Undeterred, he relocated to the United States, where he co-founded the Autism Media Channel and continued his advocacy through films like *Vaxxed: From Cover-Up to Catastrophe*, which Wakefield directed. *Vaxxed*, in turn, stirred global controversy by featuring a whistleblower who alleged that the CDC had suppressed data linking vaccines to autism. This assertion resonated deeply with parents and activists. Despite attempts to suppress the documentary, its impact was profound, fueling public skepticism and fostering a grassroots movement demanding transparency and accountability in vaccination policies.

The controversy surrounding the *Lancet* paper and subsequent events catapulted Wakefield into the spotlight as a leading voice challenging vaccine orthodoxy, earning him both staunch support and vehement opposition. Today, Wakefield remains a central figure in the vaccine

debate, advocating for informed consent and challenging the medical establishment's handling of vaccine-related risks. Now a committed filmmaker, his films include *1986: The Act* (a forensic examination of the 1986 National Childhood Vaccine Injury Act and its consequences) and the 2024 film, *Protocol 7* (about the fraud and corruption surrounding the mumps component of MMR vaccines).¹⁴ He is also the author of *Waging War on the Autistic Child: The Arizona 5 and the Legacy of Baron von Münchhausen*¹⁵ and *Callous Disregard: Autism and Vaccines – The Truth Behind a Tragedy*.¹⁶ In his prologue to the latter, Wakefield states, “If autism does not affect your family now, it will. If something does not change—and change soon—this is almost a mathematical certainty.”

Wakefield's perseverance in the face of personal and professional adversity underscores a commitment to scientific integrity and the belief that parents' concerns about public health policies merit serious consideration. His legacy prompts critical reflection on medical ethics, individual rights and scientific inquiry.

ANNE DACHEL

Anne Dachel is a formidable advocate in the autism community, renowned for her commitment to shedding light on the alarming rise in autism and related disorders. Through her website, Loss of Brain Trust, Dachel highlights the stark differences between children today and those of previous generations.¹⁷ She meticulously documents the growing prevalence of disabilities and chronic illnesses among children, emphasizing the impact on the education system and the catastrophic costs to society. The site also draws attention to the fact that issues once primarily associated with those considered to have autism—such as sensory problems, repetitive behaviors, anxiety and social skill deficits—now increasingly affect mainstream students. Dachel boldly challenges the gaslighting that blames these issues on poor parenting, presenting a compelling case for broader environmental influences.

As of the CDC's data from 2020, autism is reported to affect one in thirty-six American children¹⁸—including one in twenty-two boys and 8 to 10 percent of Black and Latino communities—versus an already high rate of one in two hundred fifty children back in 2002.¹⁹ At least 54 percent of U.S. children suffer from one or more chronic illnesses,²⁰ even as the CDC continues to add more vaccines to its already burdensome schedule.²¹

In addition to her website, Dachel is a prolific writer on Substack. Her in-depth analyses of the autism crisis cover a wide range of topics, from the skyrocketing autism rates and their societal and economic impacts to the controversial narratives surrounding “neurodiversity.” Dachel is unafraid to confront the harsh realities and challenges faced by the autism community and advocates for a deeper understanding of the disorder's causes and more effective treatments. Her writings on Substack serve as a powerful platform for raising awareness and driving change, emphasizing the urgent need for a reevaluation of how society addresses autism.

As a vocal critic of the mainstream media's reluctance to explore the environmental causes of autism and the potential for biomedical treat-

The prevailing assumption that aluminum adjuvants are safe is not backed up by rigorous scientific evaluation.

ments, Dachel is additionally active in her role as media editor at *Age of Autism*, the “Daily Web Newspaper of the Autism Epidemic.”²² She and her *Age of Autism* colleagues are dedicated to giving a voice to parents and individuals who believe that autism is a man-made, preventable disorder, with a willingness to challenge prevailing narratives and expose the bureaucratic inertia and medical malfeasance that hinder progress. Dachel’s passionate advocacy and relentless pursuit of the truth make her a heroic figure in the fight to understand and address the autism epidemic.

CHRISTOPHER SHAW

Dr. Christopher Shaw has made significant scientific contributions through his groundbreaking research on vaccine adjuvants, particularly aluminum. As a professor in the Department of Ophthalmology and Visual Sciences at the University of British Columbia (UBC), Shaw has had a distinguished career marked by over one hundred peer-reviewed articles and numerous book chapters.²³ His research primarily has focused on neurological diseases, including, most recently, the neurological disease spectrum of ALS-parkinsonism dementia complex (ALS-PDC) of Guam and the Western Pacific. His laboratory was among the first to develop animal models that mimic the behavioral and pathological features of these diseases, paving the way for a deeper understanding of gene-toxin interactions and potential therapeutic interventions.

In 2007, Shaw and his student Mike Petrik conducted a pivotal study on aluminum adjuvants in vaccines, initially expecting to find no significant effects. However, their results

showed notable motor neuron loss and motor function changes in the test subjects, which contradicted the conventional view that vaccines and their aluminum adjuvants are safe. This discovery led Shaw to further investigate the potential neurotoxicity of aluminum adjuvants, resulting in a body of work that highlights the possible connections between these substances and various neurological disorders, including Gulf War syndrome and autism spectrum disorders.

Shaw has collaborated extensively with fellow UBC researcher Dr. Lucija Tomljenovic, producing critical studies questioning the safety and widespread use of aluminum adjuvants in vaccines. Their research highlights the fact that even after almost ninety years of use, the aluminum compounds’ mechanisms of action remain poorly understood, and data on their toxicology and pharmacokinetics are lacking. As the two researchers argue, the prevailing assumption that aluminum adjuvants are safe is not backed up by rigorous scientific evaluation. Instead, their research indicates that aluminum adjuvants carry “a risk for autoimmunity, long-term brain inflammation and associated neurological complications and may thus have profound and widespread adverse health consequences.”²⁴

In 2020, Shaw co-founded (with John W. Oller, PhD) and is senior editor of the *International Journal of Vaccine Theory, Practice, and Research*, which encourages “[f]act-based research papers on all facets of funding, distribution, regulation, marketing, promotion, and environmental impacts of vaccines.”²⁵ Through his relentless pursuit of scientific inquiry, Shaw has become a key figure in the movement to rigorously assess vaccine safety and base public health policies on solid scientific evidence.

CHRISTOPHER EXLEY

Professor Christopher Exley, formerly of Keele University in the UK, is a world-renowned expert on aluminum and its toxic effects on the human brain.²⁶ With a prolific career spanning over thirty-six years, he has published approximately two hundred peer-reviewed scientific papers, written numerous book chapters and edited compilations on aluminum in various

biological and medical contexts. Affectionately known as “Mr. Aluminum” by his peers, Exley has made significant strides in understanding aluminum’s impacts on human health, particularly in relation to neurological diseases.²⁷

Exley’s research group began focusing on aluminum adjuvants in vaccines around 2009, prompting Exley to conclude by 2020 that the vaccine adjuvants represent “an acute exposure to aluminium.”²⁸ He also notes that the claim that aluminum adjuvants have an “excellent safety profile” is “pure aluminium-industry speak,” whereas aluminum adjuvant safety in humans “has *never* been tested for any vaccine in use today.”²⁹ Exley’s studies have shown that elevated levels of aluminum in the brain are linked to conditions such as autism,³⁰ early-onset Alzheimer’s disease³¹ and multiple sclerosis,³² underscoring the need for a thorough evaluation of aluminum’s role in these and other neurodevelopmental disorders.

Notwithstanding his significant scientific contributions, the senior management at Keele University took actions that ultimately made it impossible for him to pursue his studies on human exposure to aluminum.³³ Though a highly respected expert in his field, Exley’s career was destroyed for exposing some uncomfortable truths. Exley has persisted in his efforts to educate the public and the scientific community about the dangers of aluminum exposure, sharing his thoughts in his *Dr’s Newsletter* on Substack³⁴ and in his 2020 book, *Imagine You Are an Aluminum Atom: Discussions with Mr. Aluminum*.^{35,36} He continues to advocate for more comprehensive research into the toxicological and pharmacokinetic properties of aluminum compounds, underscoring the urgency of addressing the “true pandemic” of aluminum exposure that affects countless lives globally.³⁷

DR. LAWRENCE B. PALEVSKY

Dr. Lawrence (“Larry”) Palevsky has distinguished himself as a pediatrician unafraid to challenge the mainstream medical narrative on vaccinations, despite his conventional training. With a medical degree from the New York University School of Medicine and over three decades of experience in pediatric care, Palevsky has developed a holistic approach to

children’s health that prioritizes natural healing processes over pharmaceutical interventions.³⁸ His extensive background includes work in pediatric emergency and intensive care, neonatal intensive care and both inpatient and outpatient pediatric medicine.

Palevsky is outspoken about his belief that vaccines pose significant risks to children’s health. He regularly lectures on the dangers of vaccines, describing them as toxic substances. He emphasizes that the current medical paradigm often pushes for the suppression of symptoms through vaccines and medications; these, he argues, disrupt the body’s detoxification processes. Palevsky instead advocates a medical approach that respects and supports the body’s processes and allows children to experience and recover from illnesses naturally, which in his view is essential for the development of a strong and resilient immune system.

In Palevsky’s podcast collaboration with like-minded professional Dr. Sherri Tenpenny, “Critically Thinking with Dr. T & Dr. P,”³⁹ the two discuss vaccine-related issues and alternative health practices. Through his many speaking engagements, his bravery in speaking out against established medical practices has made him a significant and influential voice in the vaccine risk awareness movement.

CONCLUSION

In the complex landscape of modern public health, where powerful entities wield substantial influence and often seek to obscure truth, the voices of these eight vaccine risk-awareness heroes offer a vital counterbalance. Their collective efforts embody a shared commitment to challenging the status quo, advocating for transparency and safeguarding individual freedoms—serving as a powerful reminder of the importance of critical thinking.

Thanks to the courage of these and other remarkable heroes in confronting injustice and safeguarding personal freedoms and ethical principles—even in the face of overwhelming challenges—we can envision a future where our highest aspirations for vaccine awareness and medical freedom become reality. In this ideal scenario, legislative reforms will dismantle corporate protections and enshrine medical freedom in our Constitution. We will regain control from global organizations and redirect resources to support those affected by past injustices. Medicine will become truly personalized, with doctors prioritizing patients’ needs and embracing transparent, ethical practices. Genuine research will thrive, free from regulatory capture, leading to innovative breakthroughs and a healthier society. Children will be liberated from chronic illnesses and disabilities.

As more whistleblowers emerge and more people stand up against atrocities past and present, we are moving closer to this transformative vision. Let us unite our efforts, stay attuned to what is real and trust our intuition over fiction. Together, we can make this vision a reality. ☯☯

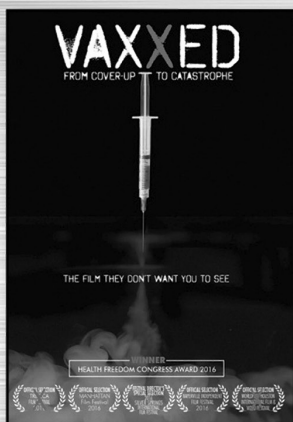
As a documentary filmmaker, Kendall Nelson directs, produces and distributes media that matter. With over twenty years of television/film experience, her commitment is to bring about awareness through her work, including advocating health freedom, simple living and real food.

She is an Idaho chapter board member of the International Women's Forum.

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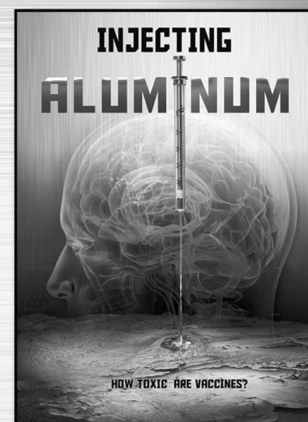
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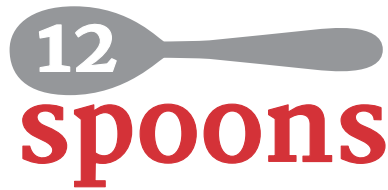
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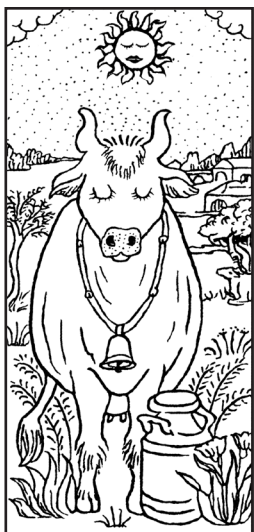
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- 1 Serves mostly fresh food prepared on site from scratch.
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- 3 Offers some pastured meat, eggs, or dairy.
- 4 Serves some organ meats (liver, pate, sweetbreads, etc.).
- 5 Uses natural fats for cooking (butter, lard, tallow, duck fat, olive oil, etc.).
- 6 Makes bone broths/stocks for soups, stews, gravies, sauces.
- 7 Makes own seasoning mixes (no MSG or flavoring packets).
- 8 Makes own salad dressings using olive oil or cold-pressed sesame oil.
- 9 Offers genuine sourdough bread.
- 10 Offers lacto-fermented beverages such as kombucha or kvass.
- 11 Offers lacto-fermented condiments.
- 12 Serves naturally sweetened desserts (using raw honey, maple syrup, date sugar, etc.).



A Campaign for Real Milk

INDUSTRIAL FOOD SAFETY: 2024 IAFP MEETING RECAP

By Pete Kennedy, Esq.

The International Association for Food Protection held its annual meeting from July 14-17. The IAFP meeting is the largest food safety conference in the world; this year, over three thousand people from industry, government and academia attended. The meeting is *the* conference for the industrial food system; this year, as in the past, Merck Animal Health and Cargill were major sponsors.

Labor shortages and broken-down supply chains over the past few years have made the food safety regulators' jobs more thankless than ever. The regulators might have to deal with a foodborne illness outbreak that contains ingredients obtained from multiple countries where the traceability is difficult. The FDA Food Safety Modernization Act (FSMA), which went into effect in 2011, was supposed to reduce the number of foodborne illnesses in the U.S. A

high-ranking FDA official provides a regulatory update at the meeting each year; until the 2023 conference, that official acknowledged that the number of foodborne illnesses has remained flat. The past two years, the official giving the regulatory update hasn't covered the matter; with the noticeable deterioration in quality in the conventional food supply, the likelihood is that foodborne illness has not declined.

A solution to the food safety problem would be to decentralize food production and deregulate both food production and distribution at the state and local levels—a move attendees at the conference do not consider; their job is to figure out and implement improvements to food safety under the existing industrial paradigm. Nevertheless, the IAFP meeting is an important event to follow; it can serve as an incubator for laws and policies that have an effect on the local

REMEMBERING DEPARTED FRIENDS

MARIA ATWOOD

July 29, 1940 - July 30, 2024

An enthusiastic Colorado chapter leader since 2006, Maria created a cooking class video on traditional food preparation called "Cook Your Way to Wellness." She also wrote a popular blog for Selene River Press. She was dedicated to promoting wholeness and natural remedies as opposed to conventional remedies like antibiotics.



Maria had great sympathy for those suffering chronic and end-stage illness. She wrote: "I now see death and chronic illness as part of life, and I'm grateful I was trained for this special task. I spent two years working with the terminally ill, and I think all practitioners should volunteer at least six months in this setting. It forever changes your perspective and allows you to see firsthand what's vitally important to those we serve."

JOAN McGOVERN TENDLER

October 8, 1953 - July 17, 2024

Although an architect by training, and a talented musician, Joan also applied her keen mind to the study of nutrition. She was a chapter leader since 2021 for Milwaukee, Wisconsin. Her article, "Why We Need a High-Lysine Diet," published in *Wise Traditions* Summer 2023, was an important contribution to our understanding of how plant-based diets can undermine our health. Then, earlier this year, while dealing with a terminal illness, Joan wrote "The Curse of the Cottonseed" for the Summer 2024 journal, just a few months before her death. We are grateful to Joan for the effort she applied to share her knowledge with the world before her passing.



food system. The following is a review of some topics covered at this year's meeting.

HIGHLY PATHOGENIC AVIAN INFLUENZA (HPAI)

With reports on the bird flu “pandemic” appearing in the media daily, a panel consisting of federal government regulators (FDA, USDA, CDC) and individuals from academia and industry convened to discuss what to do about the outbreak of HPAI they claimed had first spread to dairy cattle toward the end of March.¹ The panelists lamented how the public was not listening to their warnings not to consume raw milk; in May, one polling firm estimated that demand for raw milk had risen as much as 65 percent since the onset of the “pandemic.” The panel members spoke about how social media such as TikTok and Instagram are influencing the public to purchase raw milk. One panelist thought the public was buying raw milk out of fear. Another panelist was closer to the truth when he acknowledged that mistrust of government, academia and industry has led to an increase in the consumption of raw milk. “Accurate science” was what the panel thought could stop or slow down the increase in raw milk consumption.

Another reason brought up in the discussion about why the consumption of raw milk was going up was a fear of industrial food and not knowing where your food was coming from. One panelist thought the consumer would support locally produced pasteurized milk. A panel member resolved to gather more information on why consumers think raw milk is the right thing. The panel agreed that HPAI was going to be around for a while and that it would be important to harmonize messaging with partners whether they be in the federal government, state government or in industry.

Reports are that labs are using the notoriously inaccurate PCR test to test for HPAI; numerous labs during COVID were running the test at forty cycles or more where the chances of a false-positive test result were high. Two employees of a lab exhibiting at the IAFFP conference tradeshow guessed that their lab was running the PCR test at forty-five cycles to test for HPAI. Interestingly, an official with the Massachu-

setts Department of Agriculture and Natural Resources stated, “PCR tests are only viable up to thirty cycles, so their state labs would likely run no more than thirty cycles.”² Massachusetts has been the only state so far to require raw milk dairies to test for bird flu; so far, all milk samples tested have been negative for HPAI.

CRONOBACTER

Another talk relevant to raw milk was a panel discussion on *Cronobacter*³, a pathogen found mainly in powdered infant formula. A speaker at a past IAFFP conference disclosed that there is a 20 percent mortality rate for infants infected with the pathogen. A panelist at the 2024 conference stated that *Cronobacter* can survive in the powdered formula up to five years. Another panelist said that *Cronobacter* has characteristics of both salmonella and listeria. Takeaways from the panel discussion were that *Cronobacter* is ubiquitous in the environment and that there's still lots to be learned about the pathogen.

In 2022 an Abbott Laboratory plant in Michigan shut down after infant formula produced in it was linked to deaths and illnesses caused by *Cronobacter*. Shortly after the shutdown, traffic to a page on raw milk infant formula on the Weston A. Price Foundation's website went up 1,000 percent as demand for raw milk surged. Much of the panel discussion centered on how difficult and complex the cleaning process is in a plant producing powdered infant formula; profit margins are high so firms in the business have an incentive to stay in even though the risks are considerable compared to most foods. It would not be surprising if future problems with *Cronobacter* occur in infant formula plants, directly leading to further jumps in the demand for raw milk.

FOOD FRAUD

One of the more eye-opening sessions at IAFFP was a panel discussion on food fraud⁴—something that affects 10 percent of the commercial food supply according to a panelist. Food fraud is especially present with honey, oils, spices, fish and juices. Food fraud is the intentional adulteration and mislabeling (misbranding) of products; one trick of the trade is altering expiration dates on the label. A another

The panelist lamented how the public was not listening to their warnings not to consume raw milk; in May, one polling firm estimated that demand for raw milk had risen as much as 65 percent since the onset of the “pandemic.”

Protecting against food fraud is a complex and arduous process for a business.


is putting a low-quality product in the packaging and labeling used by a competitor and passing that product off as the competitor's. Undeclared allergens on food labels are also a problem.

Protecting against food fraud is a complex and arduous process for a business. Different sectors within a firm work on it from product development to quality assurance to procurement. Tracking supply chains, vulnerability (to fraud) assessments, verifying authenticity (such as, GMO-free, organic, country of origin), lab testing ingredients or finished food products, and being in compliance with legal requirements are all part of the process. The world of food fraud is a great incentive for buying directly from a farmer you know and trust.

CELL-CULTURED MEAT

Investors have spent billions on cell cultured meat (CCM) but so far there is very little product on the market. Pre-market approval from FDA is necessary to sell cell-cultured meat; that agency has joint jurisdiction with USDA in regulating that product. A speaker in an IAFP session on cell-cultured meat ⁵ said that FDA had only granted approval for two cell-cultured poultry products and no approval for any beef or pork products yet. Another speaker remarked that price and perfection for cell-cultured meat are not there. The legal framework to navigate to get approval is difficult. A typical CCM product will have anywhere from 60 to 100 inputs (ingredients); FDA evaluates each to determine whether it is a food additive recognized in the law or, in most cases, whether it is GRAS (generally recognized as safe). One speaker remarked


that the infrastructure for the CCM industry is lacking; there is no large-scale commercialization of the product. Another said that pathogens such as *Campylobacter*, *Salmonella* and *E. coli* in CCM are a problem. There was a comment that, with the expense of manufacturing CCM, there was little product available. One of the speakers disclosed that the U.S. is a test market for CCM and that much of the investment in the product was European. The upshot of the session was that CCM is not having success getting established in the market; the speakers at the session spent little or no time addressing the complete lack of demand for CCM.

The IAFP conference is an affirmation of how important it is to build a parallel food system; the pace which favorable laws and infrastructure for a prosperous local food system is rounding into place needs to increase. 

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DELAWARE - RAW MILK BILL PASSES LEGISLATURE

On June 27 the Delaware House of Representatives passed Senate Bill 273 (SB 273), sending the legislation on to the governor for signature. SB 273 allows the direct-to-consumer sale of raw milk and raw milk products by licensed dairies; the bill calls for inspection and testing requirements as well as for the dairy to prepare “a risk management plan that covers sanitation, handling and testing methods.”

The legislation called for the Department of Agriculture to write and adopt regulations to administer and enforce SB 273. The path of the bill and its passage out of the legislature was another sign of how opposition to raw milk has declined. The drivers for the bill were Grade A dairy farmers, Stephanie and Greg Knutson; in the past decade, Delaware has lost three-fourths of its Grade A dairies. Delaware Secretary of Agriculture Michael Scuse testified in favor of the bill at Senate and House committee hearings and on the Senate floor. A Delaware Farm Bureau representative testified in favor of SB 273 as well; the Department of Health was neutral on the legislation—something that rarely happens in any state.

As of September 10, Governor John Carney still had not signed the bill. Secretary Scuse had said he wanted to write regulations for SB 273 before his own term expired in January.

LOUISIANA - RAW PET MILK SALES NOW LEGAL

On June 19, Louisiana became the forty-seventh state to legalize the sale or distribution of raw milk when Governor Jeff Landry signed House Bill 467 (HB 467). The new law legalizing sales of raw pet milk in the state went into effect on August 1.

Raw pet milk producers received good news from the Louisiana Department of Agriculture and Forestry (LDAF) when the department moved to exempt them from all regulatory requirements except a labeling requirement and testing for *Salmonella*. LDAF’s decision saved producers hundreds of dollars in registration and other fees. LDAF indicated that if raw milk dairies wanted to produce other dairy products or mix any other ingredients into raw milk, they would be subject to registration and other applicable regulations in the state’s commercial feed code.

MASSACHUSETTS – FIRST STATE TO TEST RAW MILK DAIRIES FOR BIRD FLU

In the five months since bird flu was purportedly discovered in dairy workers, constant fearmongering from government agencies and the media has yet to provide a shred of evidence that bird flu is a threat to human health. Nevertheless, in August, possibly due to pressure from the federal government, Massachusetts became the first state to require raw milk dairies to submit a sample to the Massachusetts Department of Agricultural Resources to test for H5N1.

As of the end of August, none of the dairies submitting samples had received a positive test result. Unfortunately, several raw milk dairies in the state have already been hurt by the climate of fear the government and media have tried to create over bird flu. On July 19, Agri-Mark dairy cooperative sent a letter to its members and informed them that they would no longer be allowed to sell raw fluid milk for human consumption; the new policy went into effect on September 1.

NEVADA - HOW THE DE FACTO RAW DAIRY BAN WORKS

There are currently forty-seven states that allow (through statute, regulation or policy) either the sale of raw milk for human consumption, the sale of raw milk for animal consumption or the distribution of raw milk through herdshare agreements. The outliers are Hawaii, Nevada and Rhode Island; sales of raw milk are legal by statute in Nevada, but reality couldn’t be more different. Nevada has established a de facto ban through its laws that make it impossible for producers to legally sell raw milk.

A Nevada dairy cannot produce raw milk to be sold unless there is a county milk commission to regulate production and distribution; even if there is a county commission, the sale of raw milk and raw milk products the farm produces is legal only in that county, nowhere else in the state.¹ Currently, only one of the sixteen counties in the state, Nye County, has a milk commission. A bill allowing statewide sales of raw milk, certified by a county milk commission, was vetoed by Governor Brian Sandoval in 2013.

The Nye County Raw Dairy Commission (NCRDC) formed in 2012.² Under state law, the commission must “adopt written regulations, which must be approved by the Director [of the Nevada Department of Agriculture] governing the production, distribution and sale in the county of certified raw milk and products made from it. . .”³ It is the com-

mission that certifies the raw milk and raw milk products so they can be sold. The director, as far as is known, never approved the regulations the Raw Dairy Commission drafted and adopted in November 2015⁴ (per agenda and minutes for 11/18/2016).^{5,6} If the director had approved, a Nye County dairy would have had to comply with not only the commission’s regulations but also dozens of regulatory requirements issued by the Nevada Department of Agriculture that are found in the state administrative code, including extensive physical facility requirements—all this to sell milk in a county of around 56,000 people.⁷ Nevada’s population is 3.2 million.⁸

Herdshare agreements aren’t an option for raw milk producers in Nevada. Anyone selling or dispensing raw milk must have a permit issued by the state and be in compliance with all county and state regulations. Nevada law defines “sold or dispense” to mean “any transaction involving the transfer or dispensing of raw milk by barter or contractual agreement or in exchange for any form of compensation, including, but not limited to, the sale of shares or interest in a cow, goat or other lactating mammal or herd.”⁹

Sales of raw milk for animal consumption are legal but only if there is an “approved denaturant”¹⁰ added to the milk; all the approved denaturants are toxic. There isn’t much opportunity for dairy farmers in Nevada these days, especially small-scale operators. There are around twenty Grade A dairies left in the state, ranging in size from five hundred to twenty-five thousand cows.¹¹ Nevada dairy farmers have lost millions of dollars in raw milk sales to neighboring California; 2025 should be the year when the booming demand for raw milk moves the legislature to pass a law that actually gives raw milk producers a chance to make a living.

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Winter 2017	The HPA Axis; A Primer on the Thyroid; Recovery from Bioidentical Hormones; WAPF in Peru.
Spring 2018	Mercury Issue: Mercury as Anti-Nutrient; The Thimerosal Travesty; Poisoning Our Children; The Cutler Protocol.
Summer 2018	Treating GERD; Gallbladder Health; Herbal Bitters; Hidden Histamine Problems; Constipation.
Fall 2018	Seniors on Drugs; Chronic Hyperinsulinemia; Dangers of Daily Aspirin Use; Incontinence; Nepal.
Spring 2019	Surviving in the Aluminum Age; The Cannabis Craze; Fluoride Dangers; Risks from Tablet Use.
Summer 2019	Rancidity Testing of Cod Liver Oil; Getting Informed about 5G; The Ketogenic Diet; Ukraine's Traditional Foods.
Fall 2019	Why We Cook; Mitochondria and Health; Prenatal Ultrasound, Not So Sound; Dissecting Fake Burgers.
Winter 2019	Dietary Support for the Alcoholic; Vitamin B6 and Nutritional Dependencies; Switzerland's Sourdough Bread.
Spring 2020	Vitamin A-Mazing; Sunlight and Vitamin D; Vitamin K2 MK-4, Dr. Price's X Factor.
Summer 2020	Is Coronavirus Contagious? Air Pollution, Biodiesel, Glyphosate and Covid-19; The Current Health Crisis.
Fall 2020	Toxic Iron, Arsenic and Anthrax, Traditional Foods of Morocco; Modified Food Starch.
Spring 2021	Bringing Up Baby; MSG-Glyphosate Connection; Advice for the EMF-Sensitive; Colonoscopy Risks.
Summer 2021	Hidden Food Ingredients; Glyphosate and the Gut; Questioning Covid; Foodways of the Australian Outback.
Fall 2021	Sound Frequency Therapy; Covid Vaccine Shedding; Outlawing Meat in India; The Batwa Pygmies of Uganda.
Winter 2021	Money and Public Health Policy; Cell Phones and Thyroid Cancer; DIY Covid Treatment; Low-Fodmap Diet.
Spring 2022	The Great Virus Debate; Solving the Mystery of TB; RFK, Jr. Speech; Covid and Mechanical Ventilation.
Summer 2022	Devil in the Garlic; MSG and Obesity; Sunscreen Dangers; Reducing EMF Exposure; Mediterranean Diet.
Fall 2022	Salt, Dopamine and Health; Gallbladder Health; Lung Health; A Soy Prison Saga.
Winter 2022	Optimal Hormonal Development in Your Child; Living in the Plasticene; Gender Surgery; Scottish Porridge.
Spring 2023	What Makes Us Sick?; Transcending the Narrative; The Kazakh Eagle Hunters; Medical Testing.
Fall 2023	Vitamin A for Fertility; Vitamin K ₂ , MK-4; Dr. Price's Remedy; Weight-loss Drugs; Adrenal Fatigue.
Winter 2023	An Update on GAPS; A Cannabis Suicide; The Lyme Disease Lie; Dangers of Stevia.
Spring 2024	The Gut Microbiome, Oxalate and Your Kidneys; Reducing Anemia in India; Snapshots from Omo Valley Tribes.
Summer 2024	The Curse of Cottonseed; Staying Out of the Emergency Department; Contagion in Jewish Law.

HEALTHY BABY ISSUE: Traditional Remedies for Childhood Illness; Baby Food and Formula; Vitamins for Fetal Development; Wrong Advice in Baby Books; Vaccinations; Baby Food; Gut and Psychology Syndrome.

HEART DISEASE ISSUE: What Causes Heart Disease? Benefits of High Cholesterol; Oiling of America and more.

All articles from all journals are posted at westonaprice.org.

Back issues are \$12 (includes shipping). Discounts: \$8 for 10-49; \$5 for 50 or more.

FREE JOURNAL COPIES: Request a free issue from between 2015-2020 on the westonaprice.org homepage.

Members willing to share the journal, may request copies (1, 2, 5 or 19 copies) by emailing info@westonaprice.org

HEALTHY 4 LIFE DIETARY GUIDELINES AND RECIPE BOOK in English, French, Spanish and Italian

\$10 each (includes shipping) or \$6 each for 10 or more.

11 DIETARY PRINCIPLES: \$10 each (includes shipping) or \$6 each for 10 or more.

TIMELESS PRINCIPLES OF HEALTHY TRADITIONAL DIETS 28-page booklet in English, French and Spanish

\$1 each (includes shipping), 60¢ each for 100 or more.

2024 SHOPPING GUIDE 99-page booklet listing 2,000 products in categories: *Best, Good, Avoid*

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LISTEN TO THE PODCAST OFFLINE - FLASHDRIVE WITH 3 MONTHS WORTH OF PODCASTS

TRIFOLD FLYERS

Suggested donation for flyers is 25¢ each (includes shipping), 15¢ each for 50 or more

The Dangers of Industrial Fats and Oils
Dangers of Vegan and Vegetarian Diets
Myths & Truths About Cholesterol
A Campaign for Real Milk

Cod Liver Oil, Our Number One Superfood
How to Protect Yourself Against Cancer with Food
Nutrition for Mental Health
A Message to Grandparents
Covid-19: Contagious Virus or 5G Microwave Technology?

Butter Is Better
Soy Alert!
Sugar Alert!
Vaccination Dangers

Order online at westonaprice.org or by phone (703) 820-3333 OR send checks to The Weston A. Price Foundation.

Healthy Baby Gallery



The mother of this beautiful boy reports that she thinks of the Weston A. Price Foundation with gratitude for the food she gives to her son, who is “absolutely healthy” and “so smart and energetic.”

She adds that she recently found him eating butter directly from the package, “so I guess we can officially call him a Wise Traditions Diet baby.” Her son is an Andean boy whose father is from the Peruvian mountains visited by Dr. Price.



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>



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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BOOK TOUR

California chapter leaders greet Sophia Eng on her book tour for *Nourishing Asian Kitchens*.

From left to right: Joy Ferrar (Pasadena); Elaine Lou (Mountain View/Palo Alto); Sophia Eng (E. Tennessee); Elissa Hirsch (San Mateo County).

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SARASOTA, FLORIDA

Ashleigh and the Sarasota chapter presented a sourdough demo. Attendees learned how to make their own bread as well as nutritious things to make with the discard.

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CONCORDIA, KANSAS

Chapter members gave out free samples of healthy homemade snacks and lemonade at their local farmers market, raising awareness of the WAPF diet, with some families expressing interest in attending chapter meetings. The chapter also gave out *Wise Traditions* journals and feels good that important health information is now in the hands of many.

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DETROIT, MICHIGAN

The Detroit chapter started in 1999! Pictured here (from left to right) are current and past chapter leaders and team members who help run the chapter: Susan Randall (current leader), Kathy Bolton, Lisa Capraro (past leader), Joan Hartzell, Lisa Imerman (past leader) and Tony DiVito. Joan Hartzell, who has been the energy behind keeping the chapter viable, is retiring after twenty years of chapter support!

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MONMOUTH COUNTY, NEW JERSEY

At the chapter's monthly meeting, chapter leader Kevin Spyker discussed Weston A. Price dietary principles.

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ORLEANS COUNTY, NEW YORK

Chapter leader Terry Rogelstad of Mockingbird Bell Farm and Valerie Beam of the Beam Farm promoted healthy food choices at a WAPF booth at the Orleans County 4-H Fair, handing out many WAPF pamphlets. The booth's presence at the fair even made it onto a local news website.



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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.

Local Chapters

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YOUNG WOMEN'S LEADERSHIP SUMMIT, TEXAS

Local chapter leaders Bonnie Kuhlman (left) and Kristen Files (right) hosted a WAPF table at the June leadership summit. Thousands of young women heard about WAPF from speaker Hilda Labrada Gore—Wise Traditions podcast host—and many visited the table to learn more and become members.



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CACHE VALLEY, UTAH

Over fifty adults and children enjoyed a potluck and presentation by Dr. Bryce Fenton, a local dentist who is doing a wonderful job at merging holistic health into his practice. The chapter always encourages attendees to join WAPF and use the resource list.

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Tacoma/Olympia: Rebeka Vairapandi rebeka@vairapandi.com
Tri Cities: Rachel Davis (207) 554-0142, rachelmdavis2018@gmail.com
Walla Walla County: Kali Lambert (801) 600-4241, wallowawallawellness@protonmail.com
Whidbey Island: Sandra Rodman (425) 214-2926 rightbrain2@protonmail.com

WISCONSIN

Ashland/Washburn/Bayfield: Julie Casper (715) 779-3966 westonprice@healthelite.org, chapters.westonaprice.org/ashlandwi/
Chippewa Valley: Rachel Tambornino (715) 379-9448, rtambornino@yahoo.com
Clark & Wood Counties: Elizabeth Schlinsog (715) 389-1013 liz.walkabout@gmail.com
Dane & Sauk Counties: Richard & Vicki Braun (608) 495-6117 richbraun70@gmail.com
Fremont: Ruth E. Sawall (920) 850-7661
Green Bay: Aimee Hamilton (630) 441-2305, draimeehamilton@gmail.com, gbwapf.com
Madison & Surrounding Areas: Saritah chapter@WAPFMADison.org, WAPFMADison.org
Ozaukee/Washington County: Susan Wichman (262) 853-8000 wapfowash@gmail.com & Laurie Meyer, facebook.com/ozwashwapf/
Sheboygan County & South Manitowoc: Emily Matthews (920) 286-0570 realtoremilyrn@gmail.com & Cassie Wild wildc115@gmail.com,
facebook.com/groups/1042122412592106/
Viroqua: Laura Poe Mathes (816) 309-8708, laurapoerd@gmail.com
Waukesha: Jamie Kernen (262) 244-6324, jamie@nourishingwellness4u.com

WYOMING

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Casper: Amanda Willis (770) 630-6446, casperwapf@protonmail.com
Laramie: BJ Edwards (307) 399-4893, BJ@tasteofthewind.com

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Bega Valley: Emily Stokes 0407 192 899 thewordgarden@hotmail.com
Lismore: Deborah Perry doryanthes41@gmail.com, facebook.com/WAPFNorthernrivers/ 0429 781 392
Stuart Town: Hal & Sally Harris 0268 468 261 merrimount@hotmail.com
Sydney: Larissa Wright 043 3457414, arissajwright@gmail.com

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Sunshine Coast & Noosa Region: Jennifer Steinhart (07) 5488 6952, freedomorganics@gmail.com
Tamborine Mountain/Mudgeeraba: Kyle Grimshaw-Jones 0423 647 666 kyle@conscioushealing.com.au

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 464 local chapters:
375 serve the District of Columbia and every state in the U.S.
except West Virginia and 64 serve 24 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.

International Chapters

VIC

Shepparton: Phillip Chua 61 43775 5619, philthenaturopath@gmail.com

WA

Albany: Mike and Barbara Shipley 0414 351 304 shipleysorganics@bigpond.com

Bunbury: Susan Galea (045) 219-1665, dekmatt@outlook.com

Perth (East Metro): Denise Curtis 044 75 66662, deecurtis20@gmail.com

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Vancouver: Sonya McLeod (604) 677-7742 LMhomeopath@gmail.com, facebook.com/westonapricefoundationvancouverbcchapter/, groups.io/g/

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Surrey and Hampshire: Diana Boskma +44 1252 510 935 dboskma@gmail.com, facebook.com/groups/336421596766813/
Sussex: Lyann Kemal (0) 447 310 601143, lyannkemal@gmail.com

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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.

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.

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.

ORGANIC, HEIRLOOM, GRAINS, FLOURS, BAKED GOODS AND MEATS. Small family farm using heirloom varieties and growing methods then processing grains in a traditional manner. We accomplish this by doing everything on our farm in Dwight, Illinois. www.qualityorganic.net (815) 584-1850.

IN

Providence Pastures produces and shares pasture-raised, regenerative, nutrient-dense food through long-term relationships with customers. We raise grass-finished beef, pasture-raised poultry and organic eggs, pasture-raised sheep and Mangalitsa lard pigs, organic maple syrup, produce, wheat and fruit. Sullivan, Indiana (812) 572-4293. pasturesofprovidence.com.

MD

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 **Buckeyestown 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 and Friday 10-6, Saturday 10-4 and by appointment. P. A. Bowen Farmstead, 15701 Doctor Bowen Road, Brandywine, MD. (301) 579-2727, pabowenfarmstead.com.

MI

Grassfed Beef and Lamb, Pastured Pork & Chicken sold from farm or delivered monthly to your home including Grand Rapids, Big Rapids, Muskegon and more. No GMOs and no chemicals. Come visit the farm to see the real deal! provisionfamilyfarms.com provsionfamilyfarms@gmail.com.

Grass fed raw milk for sale through herd share. Jesse and Morla Hochstedler Family 59525 Beaver Lake Road Colon, MI 49040 (269) 432-3169.

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 in central North Carolina offers food as it should be: wholesome, simple, and without all the junk you're trying to avoid. We believe that buying natural food should bring you peace of mind, nourish

your body, and offer long term health for all of nature, including you! Our natural farming practices honor the cycles of nature. We offer local farm-pick up and home delivery in North Carolina as well as shipping to all lower 48 states. Shop 100% grass-fed and grass-finished beef and lamb, and non-GMO, pasture-raised poultry, pork, and eggs. Plus, you'll find raw honey, 100% organic and sprouted flour, rendered lard, and lard dish soap in our online store. We also offer ways to save through our subscribe & save model, or our multi-pack bulk options. Order online at littlewayfarmnc.com.

NY

Dutch Meadows brings you the finest in high-quality grass-fed meats and organic dairy products, raised in harmony with the land. Order online and choose from hundreds of farm products, **WE SHIP**. Convenient pick-up locations in NYC. (717) 442-9208 info@dutchmeadowsfarm.com - DutchMeadowsFarm.com.

Grass fed Farm Fresh food to help you achieve vibrant health by enjoying high quality, nutritious, 100% grass fed raw dairy from sheep and Jersey cows. 100% grass fed/finished beef and lamb, Soy Free pasture raised pork, turkey and chicken, and lots more. Order online and utilize our convenient home delivery or pick up locations. Shop farmmatch.com/pleasantpastures or call (717) 768-3437.

Farm fresh brown eggs. Chickens are free range on organic pasture and are fed non-gmo feed. Verdant Lea Farm, 5320 Pre-emption Road, Dundee, New York 14837 Samuel: (607) 243-5816.

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, paleo. (614) 915-9269, CopiaOhio.com.

Sugar-tree Ridge Grassfed Herdshare/PMA, located 60 miles east of Cincinnati in Highland County. We deliver 100% grassfed A2-A2 milk, pasture raised eggs, and many other products to sixteen delivery sites in Cincinnati. Farm and contact address is: Scott Richardson Family, STRG Herdshare, 6851 Fair Ridge Road, Hillsboro, OH 45133-9548.

OR

Grass-based biodynamic raw milk dairy offering Jersey Hi-creamline milk, cream, golden butter, cottage cheese and aged cheeses. Soy-free veal and pork seasonally. On farm sales and membership club. **Can ship**. Sherry and Walt (541) 267-0699.

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PA

Chilly Creek Farm produces 100% grassfed A2/A2 raw milk products, grassfed beef, veal, lamb, soy-free mangalitzka pork, raw pet food, bone broth, organs, corn- and soy-free eggs. Mon-Sat 9am-3pm. WE SHIP 409 Ants Hill Road, Bloomsburg, PA 17815.

100% grassfed organic A2A2 raw milk and dairy products plus beef, pastured soy-free pork, chicken, turkeys, eggs, beef and chicken stock, fresh and fermented vegetables. Mount Tabor Farm. New Holland, PA (717) 354-3753.

Dutch Meadows brings you the finest in high-quality grass-fed meats and organic dairy products, raised in harmony with the land. Order online and choose from hundreds of farm products, **WE SHIP**. Visit our farm store. 694 Country Lane Paradise, PA. (717) 442-9208 info@dutchmeadowsfarm.com – DutchMeadowsFarm.com.

Enjoy eggs from ducks that are on better pastures. Safe nutrition, direct from the wilds of God's creation. Call or text Cleason Weaver at (717) 706-5961 to order or visit: 501 Shippensburg Rd. Newville, PA 17241.

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.

Hobby Ag LLC: Your Homesteading Neighbor. We offer 100% grass-fed: beef, yogurt, raw milk & cheese; pasture-raised, corn & soy-free chicken & eggs; Alumi-Coops. Located in Lykens, PA. We offer pick up & delivery! Visit hobbyag.com, call (717) 805-9815, or email raymond@hobbyag.com.

Choose from our selection of grassfed beef and lamb and pastured soy-free pork, chicken and eggs. **We ship**. Open Monday through Saturday. Closed on Sunday. Locust Grove Farm, 619 Locust Grove Road, Port Trevorton, PA 17864.

GRASS-FED LAMB FROM PA FARM, half or whole, custom cut to your specs. Reserve with deposit in spring/summer, pick up on farm in fall. www.owensfarm.com, email info@owensfarm.com 570-898-6060. Owens Farm, Sunbury PA. Overnight farmstays also!

Pastured duck and quail eggs free from soy and chemicals at Quackin' Egg Hollow, New Holland, PA. We now offer organic sorghum and millet, sprouted flour and all-purpose flour mixes. **We ship**. Call or text (717) 656-0423. beyondglutenfreemichellesmixins.com.

Raw, unheated HONEY from grass-based PA farm, **free shipping**. Bees not moved

for pollination. Black Locust or Wildflower. 5 lb jug \$51, 10 lbs \$92. Order at www.owensfarm.com, send check, or stop by. Owens Farm, 2611 Mile Post Rd. Sunbury PA 17801 info@owensfarm.com 570-898-6060. Continental US only.

Stone Meadow Farms offers raw milk cheese from our grass-fed dairy. 100% grass-fed beef and pastured pork. Everything is raised outdoors and rotated on pasture with no antibiotics, hormones, GMOs or soy. **We ship cheese**. Woodward, PA (814) 349-5182.

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, nestled in the rolling foothills of the Smokies, offers a wide variety of fresh in-season food. From our pastured meat chickens, grassfed beef, organic, soy-free pork and grassfed lamb, to our several acres of intensively managed, permanent-bed gardens, and our 100% grassfed raw milk, 10-cow Jersey dairy, we find great fulfillment in providing nourishing foods produced in a healthy, diverse, vibrant and flourishing ecosystem. Come see us at: Martin Family Farm, 959 Country Road 423, Athens, TN 37303.

VA

Grass fed Farm Fresh food to help you achieve vibrant health by enjoying high quality, nutritious, 100% grass fed raw dairy from sheep and Jersey cows. 100% grass fed/finished beef and lamb, Soy Free pasture raised pork, turkey and chicken, and lots more. Order online and utilize our convenient home delivery or pick up locations. Shop farmmatch.com/pleasantpastures or call (717) 768-3437.

RUCKER FARM, Flint Hill, Virginia. Multi-generational family farm. Isabelle and Garrett Heydt raise pastured non-GMO chicken, turkey, pork, and grassfed beef. Contact Info@ruckerfarm.com. Visit www.ruckerfarm.com for ordering details for farm pick-up/local drop-sites. Join our newsletter!

Salatin family's Polyface Farm has salad bar beef, pig-aerator pork, pastured chickens, turkeys and eggs, and forage-based rabbits. Near Staunton. **Nationwide delivery available**. Call (540) 885-3590, polyfacefarms.com.

WY

Meadow Maid Foods, 100% grass-fed, grass-finished beef. On pasture year-round

at the family ranch in Goshen County. Production practices detailed on our website. Custom beef, Cheyenne farmers markets and local delivery. (307) 534-2289, meadowmaidfoods.com!!

APPRENTICE/EMPLOYMENT

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.

Temple-Wilton Community Farm in Wilton NH has an opening for an experienced biodynamic vegetable grower who wishes to farm in and for community. Can start 2024 or 2025. Competitive salary, housing, and food from the farm, including vegetables, milk, yogurt, cheese, bread, and meat. Arrangements can be made for your children to attend High Mowing Waldorf School: <https://www.highmowing.org/> Your partner can explore local work options close to the farm. Must have the ability to work and collaborate with our other farmers (dairy and creamery) to cover the needs of the farm and its members and must have long term experience in growing high quality biodynamic vegetables. We work according to the needs of the farm rather than by the clock! Contact Anthony Graham at agraham@tellink.net.

CRAFTS & CLOTHING

Beautiful crafts by local artists. Keep your gift-giving dollars in the USA. Alpaca blankets, socks and yarn; hand painted decorations, paintings by award-winning artist David Zippi; handmade quilts. Exclusive source of Nourishing Traditions posters. Saturday farm tours. Store open Thurs-Sat 10-6 or by appointment. P. A. Bowen Farmstead, 15701 Doctor Bowen Road, Brandywine, MD. (301) 579-2727, pabowenfarmstead.com.

Nest Handmade - Home of the mason jar sized kraut tamper! We are a family of artists making handmade cherry kitchen tools, bentwood boxes and baskets and other all-natural goods for home and body. www.nest-handmade.com.

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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

Free shipping!
View all UK & Irish WAPF conference videos, many European speakers never seen in the USA, in our large and growing video library that will host and fund future events. Subscribe for just £2 a month. (about \$2.50). <https://westonaprice.london>.

FARMING VENTURE/LEASE/SALE

ISO organic/biodynamic/regenerative farm lease. We are a WAPF family of 5 seeking to manage/lease a working organic farm which includes animals. We have extensive experience in both Costa Rica and the Northeastern United States where we have owned large farms. Please contact us at crgreatescape@gmail.com if interested. THANK YOU!

Northern Michigan small grass-fed beef operation for sale; cattle and equipment. Could lease pastures for the rest of this year. Call Bob (231) 649-1122.

SC VEGETABLE FARM EQUIPMENT SELL-OUT. Sold as a package only. IH 531 plow, IH 574 Tractor, only 300 hrs., Pico 10/20 disk cultivator, Lely spreader, 6' scrape blade, 6' lift arm, older Cole planter/cultivator w/ seed plates, 5' Bushog, IH Farmall Super "A" tractor with front cultivator, \$35,900. (864) 292-5001.

For sale: Weston Farm in Glen Arm, Maryland, 73 acres of pasture, forest, fields, gardens, creek and views located in preserved Long Green Valley, MD. Former award winning sheep farm, perfect canvas for a new generation of talent and ambition, endless agriculture potential. Three homes featuring over 10,000 sq ft of living space and over 12 bedrooms total and many out-buildings. Poultry, dairy, sheep, vegetable gardens, food production are all possible. Very rare property in the greenbelt, 3 owners in 120 years. Contact Michael Sutton, Realtor Berkshire Hathaway Homesale Realty Office: 410-583-0400 Cell: 410-258-8664; Licensed in Maryland.

RESEARCH/OUTREACH

Do you have a child with a chronic health or developmental condition? Documenting Hope invites you to join **Healing Together**, a private online community where

parents and caregivers can connect, support one another, find resources, and embark on a healing journey together. <https://healing.documentinghope.com/register/>.

FLUORIDE FREE AMERICA Mission: Enhancing communication between individuals and organizations to exchange information and create strategies to end water fluoridation. facebook.com/waterliberty * [Twitter.com/FluorideFreeAmerica](https://twitter.com/FluorideFreeAmerica) * 70% of Americans are fluoridated. JOIN IN THE EFFORT TO END FLUORIDATION - You have the right to safe drinking water.

SERVICES

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.

TRAVEL/LODGING

Book your stay at Mulberry Lavender Farm and B&B in Tennessee to experience a simpler life and watch heritage animals thrive. Visit the farm store or stay in the Historic Farmhouse or Cottage, with all-organic farm breakfast. Book online at mulberrylavender.com.

SOUTH CAROLINA RENTAL - Waterfront Lake Hartwell with spectacular view. Fully furnished 2 bedrooms, 1 bath, kitchen, great room, screen porch and large patio. Adults only, no pets. Short term 3-6 months. \$1890/month, security deposit. Rural area with raw milk close by, near Anderson, SC. Call (864) 292-5001 Leave Message.

SOUTH CAROLINA RENTAL - N. Myrtle Beach. Saltwater view, channel-front home, 5 minute walk to beautiful beach. Fully furnished 2 bedrooms, 1 bath, kitchen, great room. Adults only, no pets. Short term 3-6 months. Dock, boat ramp. \$1890/month. Security deposit. Call (864) 292-5001 and leave message.

WEST MICHIGAN Couples retreat set on 35 wooded acres. 5 contemporary, luxury suites in a relaxed, romantic setting. All suites have a king size bed, whirlpool tub and glass block enclosed shower. For online videos go to <https://www.pigeoncreekinn.com/> (616) 836-4088.

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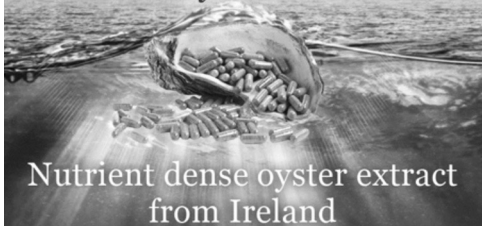
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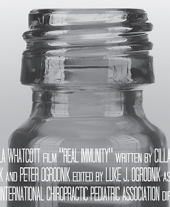
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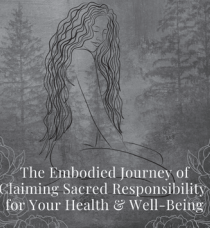
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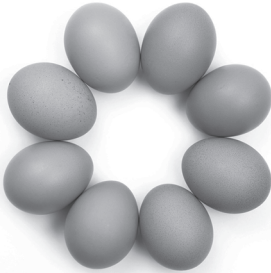
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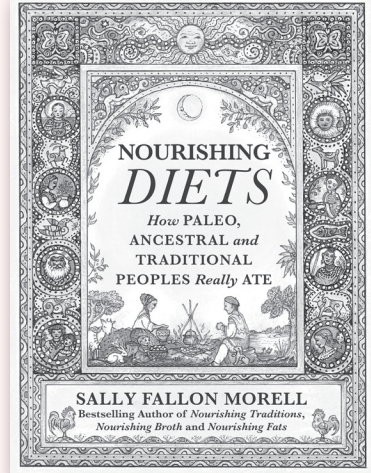
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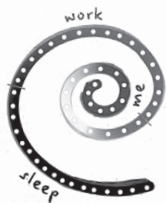


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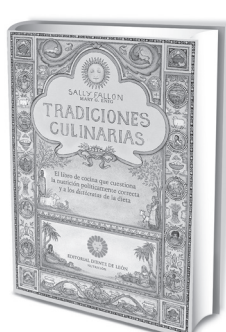
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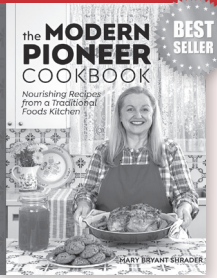
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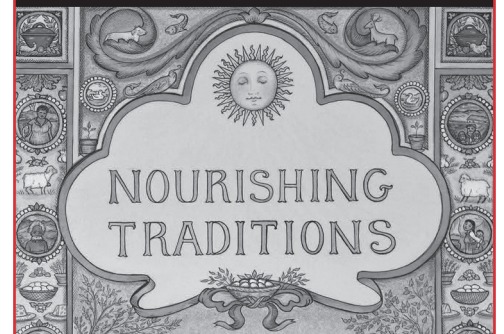


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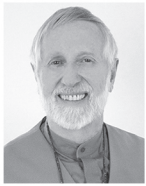


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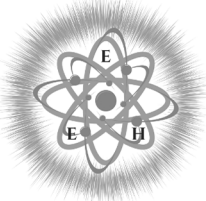
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