

WiseTraditions

in Food, Farming and the Healing Arts
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THE WESTON A. PRICE FOUNDATION®

Education • Research • Activism

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

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

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

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

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

Wise Traditions IN FOOD, FARMING AND THE HEALING ARTS

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President's Message

Dear Members:

With this issue we celebrate twenty years of the Weston A. Price Foundation—the date of our incorporation was September 2, 1999! See pages ten and twenty-five for a walk down memory lane.

In honor of our birthday, WAPF has launched a campaign called the Fifty-Fifty Pledge, a drive asking our members to spend at least 50 percent of their food dollar purchasing raw milk and raw milk products, meat, poultry, eggs, produce and other nutrient-dense foods directly from local farmers and artisans.

In today's world of corporate agriculture and food industry consolidation, the only way that we can save our pasture-based, pesticide-free farms is to make a conscious effort to purchase food directly from conscientious farmers. If you are lucky enough to live near such a farm, just make a habit of visiting the farm every week or two. If you are far from a farm, consider banding together with a few friends to take turns picking up your farm food, or join one of the many food clubs that deliver farm-fresh food to food drops.

Moreover, the highest quality food today is mostly produced on regenerative family farms. For those of you not in the habit of purchasing from a farm, you can start now by giving yourself and your family the gift of improved health by patronizing your local farmer. For sources of local food, contact your WAPF chapter leader or go to websites like realmilk.com and farmmatch.com. The health of present and future generations depends on a prosperous small-farm sector.

Purchasing your food directly from local farmers doesn't mean you have to forego the world's marketplace. With the other 50 percent of your food dollar, you can celebrate how small the world has become, enjoying rice and pineapple, spices and exotic ingredients from remote parts of the globe. Modern technology gives us terrible processed food—which we need to make every effort to avoid—but also allows us to have the best of both worlds, local and international.

We are looking forward to the best of everything—food, speakers, exhibitors, friends, networking—at Wise Traditions 2019, our 20th annual conference! We hope you will join us to celebrate. We have a terrific program planned, with many new speakers as well as perennial favorites. For further information and to register, see pages fourteen to seventeen, or visit wisetraditons.org.

RAW MILK FOR CATS AND HUMANS

As a senior in college, I became seriously ill with chronic pelvic inflammatory disease. After ten months in and out of the hospital, unsuccessfully treating the infection with antibiotics, I turned to herbal remedies. At that time there was a traditional herb shop in town (now illegal). Within one month of following their recommendations to the letter I was well again, with a normal white blood count for the first time in a year. I've since considered food to be medicine.

Over the years I paid little attention to raw milk as it hadn't been readily available. A year ago Jake the cat, who is around seventeen years of age, had to have most of his teeth removed. It was a tremendous shock to his system and for several weeks it seemed he didn't want to keep on living. I looked around the food co-op for nourishment that would help him recover, and was surprised to find raw milk available there. For the next few weeks I kept him on a diet of finely chopped raw wild salmon and

raw milk. It was during this time Jake's attitude and health took a complete turn for the better. Within a few months he looked far healthier, shinier and happier than he had several years before the surgery. Jake now has had a bit of raw milk every day for over a year.

I was so astonished by Jake's transformation that I began using raw milk myself and have been amazed at how much better I feel. I've since found out that in Europe raw milk is widely used and available from vending machines. I've looked in to what pasteurization and homogenization do to milk. The damage they cause makes it very difficult for our bodies to digest milk that's been processed. It seems incongruent that here in the U.S.there's so much regulation of raw milk, when frequently illness and death arise from eating meat readily available in stores.

I have Jake the cat to thank for wising me up about raw milk. I continue to share this insight with others.

Giza Valentine Kelley Rimrock, Arizona

IMMEASURABLE

I am a student of dietetics at Brigham Young University in Provo, Utah. My mother is a member of WAPF and I grew up eating sauerkraut, fermented cod liver oil, raw milk from grass-fed cows and a multiplicity of other healthy foods that she learned about from your Foundation. I wanted to thank you for everything that you have done to help thousands of people, including myself and my family, live healthy, happy lives.

Before my mother found out about WAPF though, she had me fully immunized as a child and I grew up dealing with several health issues, one of which was major depressive disorder. Through healthy living and by incorporating a lot of healthy foods and probiotics into my diet, I have been able to combat the mental illness and am almost entirely healed from it. In many ways, I believe that I have WAPF to thank for that. Thank you for teaching many people, including my mother, how to eat healthy and feed their families right so that they can enjoy higher-quality lives. I believe



NEW! Vaccination Dangers Trifold from WAPF

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- Myths and Truths about Vaccines
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that your influence in this world is immeasurable in all of the good that you have done, and I am truly grateful for it. In fact, I plan to become a registered dietitian, and specifically a GAPS practitioner, so that I can help others to lead happy, healthy lives by changing their diets.

Kayla Cooper Provo, Utah

AGGIE ELAINE CAMPBELL

A couple years ago, when I asked my wonderful housekeeper, Catherine, how her mother was doing she said, "She has slowed down a little, but you kind of expect that at ninety-eight." I saw Catherine this week and asked again about her mother and received this report. Her mother's name is Aggie Elaine Campbell, age one hundred one and three months. Aggie drove her car until nearly age ninety-nine. She still lives in her own home out in the country but no longer walks the twelve miles into town like she often used to do.

Her ninety-eight-year-old sister recently moved in with her and Catherine is not sure who helps whom; they kind of help each other. One of Aggie's other daughters lives next door and now prepares the meals. Aggie has a pair of glasses, Catherine says, but refuses to wear them. All this made me wonder what Aggie ate during her lifetime that contributed to her fine health and longevity. Her daughters have had more health problems than Aggie has.

I asked Catherine to tell me what they ate growing up in South Carolina. "Well, we had milk from our cows, churned our own butter and of course, had buttermilk. We ate a lot of hog meat. Daddy would buy a small pig and raise it, then butcher it and salt the meat in the smoke house. We ate that meat with greens like kale, collards and cabbage, and had lots of tomatoes, okra and green beans. We made souse meat from the head of the pig."

She told me they had dry beans and made molasses from sugar cane. It seems they dug a tunnel and laid the cane in there and cooked it.

They also made chow chow with chopped cabbage, red peppers, vinegar, salt and pickling spices.

"We sometimes got bones with beef on them and had that with rice, but that was a Sunday meal. We also had cow's tongue. Mother would cook it then skin it and slice it. Of course, we had chickens from the yard. We would wring their necks, then clean them and cook them. We used the feathers for pillows."

She told me they grew potatoes and sweet potatoes. They dug a hill and put sand in it somehow to preserve them during winter. They also had corn, canned tomatoes and okra for soup, as well as string beans. They even canned sausage. They grew peaches, and hunted blackberries and picked strawberries.

She reports that her mother seems quite healthy. I asked if she ever takes flu shots. Catherine said, "Oh no, she warned all of us not to take them. Mother said you never know what is in those." Pretty wise woman I would say.

Janice Curtin

Alexandria, Virginia

LIABILITY ISSUE

When I'm speaking with people who are pro-vaccine, I have found it helpful not to focus on the vaccine but the liability issue.

This has also been my tactic when speaking with legislators. I don't discuss the merits of vaccination versus non-vaccination but the need to eliminate the 1986 Vaccine Injury Compensation Fund (VICF) and make vaccine manufacturers responsible for any potential liability. Until that happens there is no need to discuss whether vaccines are beneficial, especially with legislators.

I have found that most who are provaccine are not aware of the 1986 law and resulting compensation fund. Once they understand what has happened there (and subsequent Supreme Court rulings), they begin to have doubts about what they know about vaccines. Then then they become open to going down the vaccine rabbit hole.

Ask them whether they would purchase a car or use a car seat where the manufacturer of the product had no responsibility or liability for any possible defects. Ask them whether they can think of any industry where the manufacturer is not held responsible and liable for any possible problems that come from the use of their product, whether it's a manufacturing defect or a one-off problem with a certain lot. The only one who gets a free ride is the vaccine manufacturer. Any other industry or company can be sued if a person thinks their product resulted in an injury or death. The Supreme Court has ruled that vaccines are inherently

unsafe and maintains that families cannot sue the manufacturer even if the manufacturer was in the position to make a safer alternative. If pro-vaxxers would stop and think about what that means, they would begin to understand that the industry is not held responsible for the safety of their product.

The VAERS (Vaccine Adverse Event Reporting System) is actually maintained by the government; those who are pro-vaccine prefer the government websites. Make sure they understand why the 1986 law came about and what has subsequently happened to the compensation fund.

They need to know that doctors were concerned about malpractice lawsuits resulting from injuries they were seeing from vaccines. As the doctors started backing away from the vaccines, vaccine manufacturers threatened to stop manufacturing all vaccines; so the government stepped in to remove liability from the doctors and manufacturers and set up a compensation fund where anyone who was damaged after a vaccine could file a claim and be compensated. As payouts grew beyond what the government expected, the process to file a claim became onerous with a ridiculous amount of paperwork, red tape and expense for the family filing the claim; yet, in spite of the difficulty to "prove" a claim, the fund has paid out more than four billion dollars.

Because of the 1986 law, individuals cannot sue the manufacturer when injury from a vaccine is suspected, and consumers cannot file class-action lawsuits like they can against other drug manufacturers.

Part of this law created VAERS, system. Although it was set up with the expectation that doctors would report all adverse events, that is not what has happened, especially now where practitioners feel pressure to do the opposite. HHS estimates that less than 1 percent of all injuries are even reported to VAERS.

The VAERS database is searchable and you can pull out information based upon a particular vaccine as well as particular injury, including death. This was helpful when I wrote to my legislator when he spoke about deaths from measles. Using the government websites (CDC and HHS), I was able to show him that the number of deaths attributed to measles vaccines far exceeded deaths from the illness.

Once they are open to researching the vaccine question a bit more, my next question is which illnesses do we vaccinate for (the so-called vaccinepreventable illnesses) that are truly deadly? Ironically, they almost always respond with something that we don't currently vaccinate for, like smallpox. Then it's measles because of all the media hype, to which I ask, when was the last time someone died from measles in the U.S.? The answer is 2015. In fact from 2000-2018 there were eleven deaths from measles in the U.S., while the VAERS database lists almost 2000 deaths from the measles vaccine for the same years. Then remind them that less than 1 percent of injuries and deaths are reported to VAERS. At this point you can also raise the fact that no vaccine is safety-tested against a placebo.

If you can get a seed of doubt planted about what they have been

repeatedly told, and using government websites seems to be the best way to do this since so much of what they are told is backed by the CDC, FDA and HHS, then there is a chance they will look at the issue in more depth. And once they are open to looking at the issue, there is no going back to believing that vaccines are safe and effective.

Some of the best books I have found to address the issue of vaccines from a non-emotional, sticking-to-the-facts point of view include Dr. Cowan's book on vaccines and Forrest Maready's books.

Barbara Geatches Rathdrum, Idaho

INSANE

There is so much in the news right now about the irresponsibility and gross negligence of pharmaceutical companies surrounding the opioid crisis—seventy-six billion pills and over one hundred thousand deaths in a seven-year period. The public is outraged, Congress is outraged. . . and yet this is the same industry that can do no wrong and is being completely vindicated over the "safety" and "effectiveness" of vaccines. It's insane.

Brian Wort Brandywine, Maryland

NO JABS, NO JOB

I would like to share the experience I had regarding my daughter and vaccines.

My daughter lost her summer job because I refused to comply with the vaccine policies here at the school where she was employed. This was the

third year she was hired, except that this year, as they have students coming to them from New York, they adopted a policy based on the draconian NY law just passed.

Our pediatrician keeps pushing Gardasil and other vaccines every time we have a physical. And she wrote on my daughter's vaccine chart that she is not up to date.

I was initially vaccinating my daughter. But I stopped a number of years back when I became familiar with Dr. Andrew Wakefield's story, and as more and more advocates and parents of injured children were sounding the alarms. The ungodly corruption surrounding Big Pharma and many other agendas directed to undermine the health of the public have become quite clear. Children are their biggest and most vulnerable targets.

It is not easy to explain to your own child why someone, like his/her doctor or school, who is supposed to be doing good things for them, is actually advocating something that may harm them. And with all this pressure coming from all directions, it is the parent who has to be on the defensive for advocating the child's wellbeing. It is crazy making! Everything in our culture is being turned on its head.

Anyway, the director of the summer program called me to tell me that if her vaccines are not up to date, she will have to release my daughter from her job. Following the exchange, I did send in a religious exemption similar to the one I provided my daughter's school several years back. I did not file with the pediatrician at the time, but have now. I got a rote response from the school

which left my daughter very upset and embarrassed.

Irina Hizgilov Tenafly, New Jersey

PASTURED POULTRY CHALLENGE

People are becoming aware of the value of soy-free eggs, and that is good—I am a farmer producing soy-free eggs myself-but I find it disturbing to see such a complete lack of emphasis on the "pasture-raised" aspect of egg production. I believe that truly pasture-raised eggs fed soy would be a better choice than soy-free confinement-raised eggs, organic or not. And "organic" status certainly does not guarantee the hens are kept on pasture. In fact, in over ten years' experience farming, the pasture raising of eggs is one of the most complex industries on the farm because of the need for frequent and rapid moves across pasture in all sorts of weather at all sorts of ages of birds, even for a small flock of chickens. For this reason, "pasture-raised" is also a widely abused term, and one must work really hard to find a farm that is dedicated to fulfilling the "pasture-raised" criterion in an authentic way—that is, not sticking the birds in a huge building surrounded by a poultry fence and saying they're "on pasture."

Remember, too, that Dr. Price found that the most nutrient-dense foods come from animals raised on fast-growing grass, not those kept in a permanent lot devoid of vegetation, even if their diet happens to be organic ingredients that exclude soy.

I see first-hand the ridiculous

amount of consumer deception in the marketplace, and I think WAPF supporters are best served to get cozy with a local farmer of integrity who understands the principles that Dr. Price uncovered and adheres to them in his day-to-day efforts to grow real food. It's very unlikely that such products will ever be found in stores, and I know those farmers need all the support they can get. I am one of them, struggling to be heard in a room packed full of green-washed deceivers.

Jerica Cadman Jefferson, Texas

OSTEOPOROSIS IN SCANDINAVIA

In browsing through mercola.com reading Dr. Mercola's different statements, one in particular sticks out as a lie. According to Mercola, "Other research is now showing a connection between high levels of vitamin A and osteoporosis. In fact, many Scandinavian countries that regularly supplement with cod liver oil have rampant osteoporosis even though they are getting adequate amounts of oral vitamin D."

This is not true! I'm a fifty-year-old Swede, and I have worked seven years in Norway. I have never met a single person who supplements with cod liver oil, myself included. The rampant osteoporosis is due to the fact that Scandinavian and Finnish people are the heaviest coffee drinkers in the world. This leads to a poor vitamin C and calcium uptake, among other things. There was a thorough investigation a couple of years ago to clarify why the indigenous people in the north (the Sámi people, formerly called Laplanders) of Sweden

had such bad health. They lived reasonably good lives with few stress factors and they had in comparison with other Swedes a better diet. The only thing that stood out was the fact that they consumed almost a third more coffee then the rest of us. So of course they were depleted of every single nutrient! This is what the researchers concluded.

Chris Linn Gothenburg, Sweden

MUTANT CABBAGES

I eat a lot of vegetables, including about two cabbages per week. From the end of April to the end of May, 95 percent of the fresh organic cabbages bought at the local farmers market near Phoenix, Arizona, have been malformed. I'm not talking about the normal variations that naturally occur in all plants, but what could be

the beginning of major and troublesome mutations. Such malformations are typically caused either by genetic engineering, dangerous electro-smog (especially 5G) or intense amounts of nuclear radiation from reactors. One medical colleague who saw the photos suggested that viruses or toxins in the soil might be the cause. A scientist friend told me that the nodules (see below) were tumor growths. Whatever the cause(s) of the malformed cabbages, however, the normal growth and metabolic signals have been dramatically interfered with.

When I opened the first two cabbages, I thought that their malformations were a fluke and thus did not take photos. After the third cabbage, I knew that there was a serious problem. A picture is worth a thousand words (see below). And now, the obviously mutated cabbages. The first five photos were of two cabbages bought at the beginning of May 2019. In the following photos of all the mutated cabbages, note that the cabbages contain a layer of something dark, which is always toward the edge of the vegetable. The dark stripe will become clearer as we progress.

Today (May 20, 2019), as soon as I held the above cabbage, the energy of it didn't feel right and I muscle tested weak for it. Cutting it open confirmed my suspicions. As stated earlier, over 95 percent of the cabbages I've bought in the past three or four weeks have had a mutation consisting of strange, packed nodules and a dark line toward the edge of the vegetable. I have bought cabbages (and other organic vegetables) from the same honest farmer for the past several years and have never had









MUTANT CABBAGE

CLOCKWISE FROM UP-PER LEFT: Normal organic cabbage, bought from local Sprouts grocery store (farm location unspecified) around May 17, 2019; sort-of-normal local cabbage, bought mid-April 2019 from the same farm, possibly exhibiting the beginning of the nodule mutations; cabbages bought in either late April or early May of 2019, with the knob-like nodules layered throughout the cabbage and faint dark stripe, toward the edge of the cabbage (other cabbages had a darker stripe).

any problems with his cabbage. He willingly exchanged the mutated cabbages for fresh cabbages, but the replacements have had the same problems.

Even if some pesticides or herbicides managed to migrate onto his farm, I am not aware of any chemicals that could create such malformations; even conventionally raised crops do not exhibit such gross changes. Therefore, because these cabbages in question are organic, I can only surmise that either a virus—or more likely, some form of unusual radiation such as a newly installed 5G tower—is responsible. Readers are welcome to write me care of my website.

Nenah Sylver, PhD, author The Rife Handbook of Frequency Therapy and Holistic Health nenahsylver.com

MASS SHOOTINGS

Ever wonder why it's young white males who carry out mass shootings? The answer is found in the field of pharmacogenetics.

A major enzyme (cytochrome P450 "2D6") is missing in 10 percent of white males; it is not missing in African Americans. This enzyme metabolizes Adderall, Risperdal, haldol, psilocybin, cocaine, codeine and similar drugs. Most of these shooters are or have been on psych drugs and street drugs. (And most shooters, if not all, have been fully vaccinated.) As children, they are misdiagnosed as mentally ill instead of polymorphic (missing the enzyme to metabolize the drug). Thus they accumulate the contra-indicated drug given to them by physicians and additionally

accumulate the street drugs.

These prescriptions are handed out by every level of physician from family doctors to pediatricians to psychiatrists, practitioners who have no knowledge of pharmacogenetics or who have not warned physicians about the street drugs that correspond with the missing enzyme.

These drugs cause heinous ideations—not ordinary ideations but ideations that are abject evil. It is not their own ideations. The heinous ideations are different. They are caused by the accumulation of the toxic load of contra-indicated drugs. Additionally, quick withdrawal will also take the person over the edge. Every drug manufacturer already knows this, but not the physicians whose education has been suppressed in med school by pharma interests.

If you actually read the package insert, the manufacturers have to show the metabolic pathway through the Cytochrome P450 super-family of enzymes that their drug must take to be excreted. Some drugs are therefore marked with a black-box warning of suicide. But they don't mention homicide on the label, behavior that is simply outer direction of blame as opposed to self-blame. But that is not mentioned as it would constitute a big red social flag pointing to medication and the inability for individuals to metabolize based on culture and inherited genetics.

This is Pharma's biggest secret. These mass shooters need to be genetically tested (for example, by Genesight, which Medicaid does cover). Unfortunately, some hospitals refuse to do the test (like University of Iowa Medical Hospitals). However, Mayo, Chicago Hospitals and St. Jude are regularly testing children and patients before they prescribe a drug—because they know this that you don't know. But what they don't know is the fact that the vaccine excipients and xenobiotics are the hidden root cause of the early childhood injury that manifests itself in a diagnosis of mental illness. Then, the individual is given additional drugs that are poisonous to them because they do not have the enzyme to metabolize them, especially young white males. Cytochrome P450 "2D6" metabolizes up to 50 percent of today's modern drugs. (Suicides and homicides of normal people gone mad are listed on SSRIStories.net.)

Eileen Dannaman Fairfield, Iowa

ON "FOOD" IN JAMAICA

I got into trouble on an Internet group for some comments I made about Jamaican food. "I've been married to a Jamaican for thirty years and been living with them and blah blah blah and that's not what we eat!!" was what this other "white lady" had to say. When I responded that I was married to a Jamaican, too, and that's what we eat, she replied, "Well, then I'm sorry for you."

I had described a big pot of boiled starchy vegetables: yellow yam, "Irish" (our word for potatoes), cassava and often some other weird roots—I have no idea what they are—also boiled green bananas, boiled green plantains and sometimes a piece of gooey sweet boiled ripe plantain. These starchy

vegetables are referred to in my family as "food" and served with any kind of vegetable cooked in a *whole lot* of coconut oil. We season the veggies and add protein, which is dried salted fish. In fact ackee (a local vegetable) and salt fish is the Jamaican national dish. In the morning you slice up the leftover "food" and fry that in more coconut oil.

My sister once laughed about how horrified she was when a restaurateur in Greece poured a quarter cup of olive oil on her fried eggs thinking he was giving her a nice little gift. We have all been propagandized to think fat is so bad. The lady on the Internet thought I was insulting the food by describing it as "dripping in oil."

No, no dear cranky Internet lady, I just don't want my food dripping in cheap oil. The first thing I attended to in my Jamaican household was to ban all margarine and vegetable oil. There is plenty of coconut oil at the supermarket, albeit, alas, expensive. There are local market people who grate up coconuts and boil them and produce their own. This oil is cheaper than the highest quality extra-virgin variety at the supermarket.

I have been told by locals that cooking with coconut oil was pretty common, presumably before the big food companies started their propaganda and the market got flooded with "vegetable oil," whatever that is. Very poor people didn't bother with oil at all but just grated up a coconut. There is a dark story of fields and fields of coconut palms being killed off by aerial spraying, either by accident or by design. On top of that, a blight has been killing off

the coastal coconut palms for the last few decades. Still, there is plenty of coconut available. I wish the government would subsidize coconut oil but then there's lots of things I wish for.

I wish the chicken didn't get fed "boosters" so they are ready to eat in two weeks. I wish all the soup bases didn't have monosodium glutamate. I wish the salt wasn't supplemented with fluoride. I wish the farmers that trudge up to their fields past my yard every morning in gum boots with their machetes didn't have canisters of weed killer strapped on their backs. I hope it is not in fact true that the largest KFC franchise in the world is in Kingston. I wish for Jamaicans, who are strong and healthy and smart, so far, and clean up gold medals in sports right and left, not to get sucked into the vortex of horrible American food and wind up as sick and depleted as we all are!

Thank goodness for the Rastas! They have it exactly right on a lot of topics. There is a reggae song that goes, "You know they are the healing of the nation..." And I think they are. Some are vegetarians while others eat meat, but the key point is that they want "ital," meaning vital food. I wish we had some nice nature-based religion in my country rather than the current state religion of "science" with its hospitals as big as cathedrals and its doctors hurrying importantly around like holy priests in white coats and stethoscopes and the poor sick people pleased and relieved because they are sanctified by "scientific" rituals.

Rebecca Rust Lee, author *The Mercury Detoxification Manual*

HEALTH IN UKRAINE

I want to commend you for the outstanding job the Foundation is doing and has done for all these years. I read each issue of *Wise Traditions* cover to cover, including the ads!

I did have a particular reaction to Michael Merrill's article on traditional Ukrainian foods (Summer, 2019). I was struck by the contrast with the overall lack of health among its people. Ukrainians are dying at a higher rate than they are being born (State Statistical Service of Ukraine, 2016). The leading causes of death are heart disease (68 percent) and cancer (18 percent) attributed in large part to limited access to quality health care, alcoholism and, never forget, Chernobyl, the radioactive disaster of 1986 with its long-tailed half-life.

We can only imagine how conditions will worsen as western fast foods continue to displace traditional Ukrainian foods.

> Bill Hyde, PhD Happy Farm, LLC Henderson, Colorado

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

THE WESTON A. PRICE FOUNDATION CELEBRATES TWENTY YEARS!

There have been many farms and small businesses that have thrived as a result of the advocacy of WAPF. A lot of things which were unavailable and almost unheard of twenty years ago are now found in just about any good market in the U.S. A lot of that is due to the work and advocacy of WAPF, which has spearheaded a resurrection of the American economy and the way that Americans produce food, get food and consume food. To me, there is very little that is more important than that."

—Tom Cowan, MD, vice president and founding board member.



Chapter Leader Photo 2011

Chapter leaders for all 20 years! Bari Caine, Thomas Earnest, Dina Falconi, Doug Flack, Kim Lockard, Jill Tiebor-Franz and Louise Turner.

first heard Sally Fallon speak in the 1990s. Her information and encouragement changed my life. In 1999 I met a group of like-minded people and we became WAPF's first chapter. We developed the annual Growing Connections Harvest Festival along with other events. We had huge potluck dinners, nationally known speakers, a monthly print newsletter and a detailed paper food list with charts and a map. We still meet monthly, have farm tours, exhibit at local health events and will have our 8th annual potluck in October. I credit the information and activism of the WAPF as being a constant motivating factor in my health journey and sense of community. Thank you!" – Kim Lockard, local chapter leader in Michigan.



Chris Masterjohn, PhD shares his wisdom.



Will Winter and the late Jerry Brunetti at the 2010 conference.



Sally Fallon Morell and Mary Enig, PhD with an early poster.

The WAPF has been a breath of fresh air for two decades. Congratulations to everyone who makes WAPF the leader in the world—probably doing more to connect authentic food to consumers who need it than any other organization in the world. I'm so proud to have been a friend of the organization for these twenty years and to have been there at the beginning in the formative stages. I have enjoyed watching the growth and development as people find answers."

-Joel Salatin, Polyface Farm.



Miss Enthusiasm, Maureen Diaz

MEMBERS SINCE 1999!

Lucille Balukian Lynn Barton Bari Caine Eliot Coleman & Barbara Damrosch Tom Cowan Nancy Currier **Janice Curtin** Walter Felber Doug Flack Jean Giblette & Christopher Reed Richard W. & Leigh Ann Groux **Durrel Handwerger** Frank Melograna Geoffrey Morell Christopher Lyall Morrill Wilmer Newswanger John O'Donnell Kathleen O'Donnell Armand Ravizza Charles Ritch Joseph Tarantolo Stu McCarty and Lynn Thor Rick and Kay Waters

Our membership fee of \$40 has not gone up in 20 years!

Caustic Commentary

Sally Fallon Morell takes on the Diet Dictocrats

FUELING STATION

The Naval Academy has hired nutritionist Scott Maher to help football players maintain weight and "keep healthy" during training. Maher is focusing on a "fueling station" for the mid-practice training break. Will the players get nutrient-dense and easy-to-digest foods to sustain them during vigorous exercise? Will they get paté, bone broth, raw milk, raw cheese, butter, sourdough bread, water kefir and kombucha to nourish their tired bodies? No, the table is set up with "protein bars, bananas, applesauce, fruit cups and other assorted foods so players can get carbohydrates and protein to go along with the obligatory Gatorade or water for hydration. . "It's imperative during practice to have a break period during which we fuel up the players with energy drinks, bars, gels, pickle juice or whatever," says Maher. "We want to get sodium, electrolytes and carbohydrates back into their body so they can finish strong." They'll also get "recovery shakes," Muscle Milk and "all sorts of other goodies" (Capital Gazette, August 6, 2019). The pickle juice, by the way, is not raw, lacto-fermented juice but a canned beverage containing vinegar, salt, dillm oil, potassium, zinc, vitamin C and vitamin E. The Naval Academy is currently building a twenty-million-dollar, twenty-five-thousandsquare-foot "physical mission center," which will include a nutrition center for Maher to dispense his processed food-like substances—but the Navy could nourish its players with the very best of real food for a tiny fraction of that cost. Expect lots of injuries among Naval Academy players this year.

ATTACKING ORGANIC

Writing for *The Wall Street Journal*, vegetarian Bjorn Lomborg, president of the Copenhagen Consensus Center, laments that "switching successfully to vegetarianism [only reduces] individual carbon emissions by the equivalent of 1,190 pounds of carbon dioxide per year. That's only 4.3% of emissions for the average person in a developed country." Rather than having "false hopes about dietary change," we should focus on "improving agricultural practices." The main way he would accomplish this, he asserts, is to get rid of organics! He cites a 2017 paper which concluded that "organic farming takes 70% more land on average to produce the same amount of produce as conventional methods" (August 9, 2019). Not quite. The paper (*Journal of Cleaner Production*

161 (2017) 127-142) concludes that an organic diet requires 40 percent (not 70 percent) more land than a conventional diet, largely because organically produced meat, poultry and dairy take place on open pasture (this is in Germany). The study found that the carbon footprints of both diets were about equal. The authors do not call for ending organic production, noting that some of the land used for organic meat production is "marginal," not suited for crops; and organic agriculture supports more biodiversity, uses no pesticides and supports animal welfare. They also cautioned that the "results should be interpreted with caution since the calculations are based on relatively few studies, hence associated with significant uncertainties." But Lomborg throws caution to the wind in using this 2017 report in his claim that organic agriculture is not good for the planet!

MORE ATTACKS ON MEAT

Bard College professor Gidon Eshel claims that "Replacing meat with plant-based alternatives in American diets would minimize cropland use and reduce greenhouse gas emissions." Eshel and his coauthors used a computer model to "devise hundreds of plant-based diets to replace either beef alone or all three dominant U.S. meat types: beef, poultry and pork." The plant-based diet he recommends for minimizing environmental destruction consists predominantly of—I am not making this up—soy, green pepper, squash, buckwheat and asparagus. Eshel and coauthors claim that the diets they modeled exactly match the protein content of the meat they replace while also satisfying forty-three other nutrient requirements. Eshel lists beta-carotene, soluble fiber, phytosterols and flavonoids as "essential nutrients" that plant-based diets would satisfy, but admits that such diets would lack monounsaturated fatty acids, selenium, zinc and vitamin B12. But no worries: "While these deficiencies are potentially clinically very serious, population data show that mostly or exclusively plant eating populations for the most part avoid such adverse consequences and enjoy extended health- and lifespans." There's also the pesky problem of whether people will actually eat a diet based on soy, green pepper, squash, buckwheat and asparagus. "Notwithstanding our potentially hard-to-overcome culinary partiality toward animal protein, using the above solution diets to replace all

Caustic Commentary

meat or beef alone in the U.S. diet is thus possible through readily available plant combinations that offer diverse and nutritionally sound diets." Eshel reaches his conclusions by squeezing biological systems into complex mathematical equations, based on strange assumptions. This paper could be characterized as science at its worst! (*Scientific Reports* Volume 9, Article Number: 10345 (2019)).

A TAX ON BRAT

In an effort to "improve animal welfare and cut CO₂ emissions," German politicians have proposed raising the value-added tax (VAT) on meat from "a reduced rate of 7%, which it currently enjoys, to the standard state rate of 19%." The hype for making meat more expensive borders on the hysterical. "The latest studies suggest red meat intake should be limited to several grams a day or abolished altogether. . . the consequences of meat consumption could result in millions of deaths and *catastrophic* damage to the planet [emphasis in the original]. . . life-threatening diseases including obesity, diabetes, malnutrition and several types of cancer [are] linked to meat-based diets. Scientists have repeatedly named the meat industry one of the highest emitters of CO₂, which is considered a key driver of climate change" (rt.com, August 7, 2019). Sigh.

DARWIN AWARD

Proctor & Gamble Company has worked with a subsidiary of Google to develop a baby-monitoring system that features an "activity sensor" attached to the front of a Pampers diaper to automatically track a baby's sleep patterns and let parents know, via a monitor in the nursery or on a smartphone app, whether baby's diaper is wet. The high-definition, wide-angle monitor includes night vision and two-way audio, and also tracks temperature and humidity. The app will record "not only sleep but also a baby's feeding, diapering and key milestones so parents can determine patterns and see emerging routines." To accomplish this, baby will have electromagnetic radiation focused on his or her genitals twenty-four-seven (bizjournals.com, July 19, 2019). Might as well track those "emerging routines" in the current generation because it's unlikely these e-hovering parents will have grandchildren. Let's get out the Darwin awards for parents who subject their babies to smart diapers.

IT AIN'T LDL

The premise that LDL-cholesterol accurately predicts future cardiovascular events forms the cornerstone of modern cardiology. High LDL, or even moderately high LDL, calls for the requisite prescription for an LDL-lowering statin drug. The authors of "Development and validation of a ceramide- and phospholipid-based cardiovascular risk estimation score for coronary artery disease patients," published in the European Heart Journal, sought to identify whether LDL-cholesterol or a new class of blood lipids known as ceramide lipids are best in predicting heart attack risk in coronary heart disease patients. The conclusion: "[T]he most critical biomarker in the cardiovascular field, LCL-C, showed a very weak association in predicting outcomes" (18 June 2019). This means that physicians lack any rationale for prescribing statins—which have over three hundred adverse effects, including heart failure.

MORE BAD NEWS ABOUT GLYPHOSATE

New studies indicate that glyphosate, the major ingredient in the herbicide Roundup, is super bad news for the next generation. Noting that glyphosate can act as an endocrine disruptor and that exposure at critical periods of development may program the fetus to induce reproductive damage in adulthood, researchers in Brazil exposed female mice to glyphosate during pregnancy and lactation via their drinking water. Male offspring demonstrated delayed testicular descent, lower sperm production and disruptions in hypothalamus-pituitary-testicular axis regulation (J Dev Orig Health Dis. 2019 Jul 16:1-8). Another study found that exposure to glyphosate during gestation affects maternal behavior, with altered licking behavior toward offspring. The exposure also affected neuroplasticity and gut microbiota in the mother (Journal of Neuroendocrinology, 7 May 2019). Such is the accumulation of evidence that after a review of the literature, the International Federation of Gynecology and Obstetrics has called for a phase-out of glyphosate (GMWatch Daily Digest, July 31, 2019).

DEMISE OF THE PORTER ATHLETES

An alert member has sent us a series of articles from *The Kansas City Star* about the Porter family of gifted athletes, Michael Jr., Jontay and sister Cierra. On October 19, 2017,

Caustic Commentary

the newspaper carried a full-page spread on how the Porter family had hired chiropractor Doug Graham to teach them the value of a raw vegan lifestyle. The Porter family grew up on a farm and "ate steak and eggs" for breakfast but had eaten vegetarian since about 2007. As Michael and Jontay were preparing to play basketball for the University of Missouri, the family transitioned toward a raw vegan diet "in hopes of maximizing physical abilities." Graham introduced them to new dishes such as raw cinnamon buns, vegan pizza, cashew-based cheese sauce and kale chips. The family is fond of fruit smoothies "to increase carb intake without upping fat consumption." According to the article, "Michael Porter Jr,'s fate. . . has been clear for years. Barring injury, he will be a coveted NBA prospect, guaranteed millions. And the most important thing he has discussed spending his money on. . . is a private, vegan chef." But things have not turned out as planned. On November 22, 2017 the Star reported, "The Michael Porter Jr. era might have lasted all of two minutes for Missouri. On Tuesday Mizzou [Missouri] basketball team announced Porter would undergo back surgery that would likely cause him to miss the rest of the season." A second back surgery was announced on July 20, 2018. Just a month earlier Cierra Porter had to medically retire from the women's basketball team due to nagging knee injuries. In October of 2018, Jontay Porter injured his right knee in a basketball scrimmage and was out for the season. Michael did recover from his two back surgeries and was selected number fourteen overall for the NBA draft, to play for the Denver Nuggets. However, he missed the entire regular season due to ligament tears in his right knee. Not exactly the future that the family envisaged for their talented children.

MIRACLE DISEASE FIGHTER?

The soy boys are at it again, after a long silence. The July 29, 2019 issue of *The Examiner* carried an article entitled, "SOYBEANS are a miracle disease fighter! The protein-packed food is great for body and mind." Trotting out the same old tired arguments—"you get all the tissue-building power of protein without the saturated fats and cholesterol"—the article promises that soy fights heart disease, cancer, osteoporosis, Alzheimer's and even baldness! "A molecule in soy called equol neutralizes the hormone DHT, one of the leading culprits of baldness." (In other words,

the estrogen in soy can depress an important male hormone in men!) In addition to this PR puff piece, the University of Toronto has just published a review article which found "a consistent cholesterol-lowering effect for soy protein. . . The study calls into question the U.S. Food and Drug Administration's current proposal to revoke the health claim for soy protein and heart disease." The efforts of the Weston A. Price Foundation to end all health claims for soy must be making the industry nervous.

CDC TO MOTHERS: STOP BREASTFEEDING

Researchers from the CDC's National Centers for Immunization and Respiratory Disease (NCIRD) just released a report stating that the immune-boosting properties of breast milk have a detrimental effect on how well vaccines work. The authors went on to say that it would be better to stop breastfeeding to allow vaccines to do their job rather than stop vaccines while breastfeeding! Researchers introduced the theory that breastfeeding was counterproductive to vaccine efficacy when they investigated why children in underdeveloped countries weren't responding to live virus vaccines. They came to the conclusion that breast milk, which is packed with immune-building immunoglobulin, lysozyme and other important immune factors, inhibits the vaccines from working. According to a blogger at healthywildandfree.com (March 30, 2017), the CDC "would like to see impoverished areas delay something natural and free of charge that will absolutely benefit their child and replace it with something that is lining big pharma's pockets." And since raw animal milk contains all the immune factors that breast milk does, why not just nourish your children with raw milk rather than vaccinate?

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.



WiseTraditions 2019

TWENTIETH ANNUAL INTERNATIONAL CONFERENCE OF THE

Weston A. Price Foundation

ANCESTRAL WISDOM MEETS MODERN SCIENCE



Friday, November 15 – Sunday, November 17 Fundraiser Reception on Nov. 14 & Farm Visit Nov. 18 North of Dallas, Texas

AMERICA'S PREMIER NUTRITION CONFERENCE

Life-Changing Lectures • Cooking Classes

Cutting-Edge Nutrition • Traditional Nutrient-Dense Meals Wise Kids Program • WAPF-Friendly Vendors • Networking

For those interested in improving their health through food, farming & the healing arts.

CONFERENCE SPEAKERS

Sandeep Agarwal, expert on ghee & Indian cuisine
Peter Ballerstedt, PhD, expert on ruminant agriculture
Leslie Bobb, MPH, CIHC, fermentation expert
Mandy Blume, author of Real Food Recovery
Natalie Campbell, MS, vaccine researcher
Griffin Cole, DDS, biological dentistry
Monica Corrado, MA, CNC, traditional food chef
Tom Cowan, MD, author of Human Heart, Cosmic Heart
David Diamond, PhD, expert on cardiovascular disease
Ben Edwards, PhD, integrative-functional medicine
Sally Fallon Morell, MA, author of Nourishing Traditions
Janine Farzin, of offallygoodcooking.com
Andrew Gardner, expert on animal fat skin care
Esther Gokhale, author of 8 Steps to a Pain-Free Back
Lyndsay Gutierrez, MIH, CICH, fermentation expert

Anthony Jay, PhD, author of Estrogeneration Kiran Krishnan, expert on intestinal flora Kelly Moeggenborg, of kellythekitchenkop.com Becky Plotner, ND, expert on GAPS Robert Quinn, founder of Kamut International Karen Randall, DO, emergency medicine physician Pam Schoenfeld, RD, co-director Healthy Nation Coalition Stephanie Seneff, PhD, expert on glyphosate Joseph Tarantolo, MD, an existential psychiatrist Jerry Tennant, MD, author of Healing is Voltage Carrie Vitt, of DeliciouslyOrganic.net Timothy Weeks, DC, author of Whole Body Health Louisa Williams, MS, DC, ND, author of Radical Medicine Lindsea Willon, MS, NTP, expert on insulin resistance Will Winter, DVM, expert on pastured livestock Nasha Winters, ND, LAc, co-author The Metabolic Approach to Cancer

LOCATION AND ACCOMMODATION

The conference hotel is the Delta Hotel by Marriott, 777 Watters Creek Blvd, Allen, Texas 75013. A special conference room rate of \$135 per night (plus taxes and fees) has been negotiated for our attendees. This rate is for single and double occupancy and is available only until October 24 or until all rooms are reserved. You may book online (see details at wisetraditions.org) or call (469) 675-0800 and mention Wise Traditions.

One-day, weekend, no-meal options. Free exhibit hall and film.

Children's Program • Monday Guided Farm Visit • Continuing Education Units • Early Bird Discount • Scholarships For more information, call (540) 722-7104 or visit wisetraditions.org

PRE-CONFERENCE AND POST-CONFERENCE ACTIVITIES

THURSDAY, NOVEMBER 14 6:00 – 9:00 pm

RAW MILK CAMPAIGN FUNDRAISER RECEPTION

MONDAY, NOVEMBER 18
Will Winter, DVM
Professionally Guided Farm Visit

WISE TRADITIONS 2019 REGISTRATION FORM

First Name L	Last Name		Name for Badge			
Organization/Affiliation						
Address						
City	State	Zip Code	e	Country		
Phone	Fax	Fax		if you are interested in donating food.		
E-mail	Website		☐ Thi	s is my first Wise Traditions	conference.	
☐ Check here to reserve gluten- & casein-free conferen	ce meals. OR 🗖 Glu	ten-free only. OR 🗖 C	asein-free only. R	egister for GF and/or CF chi	ldren's meals below.	
DISCOUNTED MEMBERSHIP: become a member of t □ \$30 U.S. Annual Membership (regularly \$40) □ \$40 FULL REGISTRATION* includes conference materials, unch and Awards Banquet, Sunday sessions and brunc	Canadian/Internation	onal (regularly \$50) ch and dinner, Saturda	y sessions,	CHAPTER I I am a chapter leader. I plan to attend the Cl Friday, Nov 15, 9 AM-1:3	napter Leader Meeti	
☐ Full Registration ☐ Full Registration No-Meal Option (meals not include WEEKEND REGISTRATION includes sessions with lunc ☐ Weekend Registration	By Sept 20 \$425 d) \$350	After Sept \$450 \$400	20	How did you hear about WAPF journal Friend/colleague Blog Web advertisement	the conference? WAPF email WAPF postcarc Twitter or FB WAPF website	
DAILY REGISTRATION includes conference materials, ☐ Daily Registration ☐ Friday* ☐ Saturday ☐ Sunday	sessions and lunch (\$135	no dinner). \$160		☐ Print advertisement☐ Another conference☐ Other, please specify_	☐ Radio ☐ Chapter	
☐ Saturday Traditional Diets Seminar, Sally Fallon More ☐ Monday Guided Farm Visit 7 AM-6 PM (includes lure		\$75 \$110		What is your current occ	☐ Farmer	
☐ Thursday Fundraiser Reception ☐ Friday Dinner and Events ☐ Saturday Evening Awards Banquet		\$50 \$60 \$75		☐ Nutritionist ☐ Massage therapist ☐ Chiropractor ☐ Nurse	☐ Homemaker ☐ Student ☐ Retired ☐ Teacher	
FTCLDF BREAKFAST One breakfast (donation) Breakfast for Friday, Saturday, Sunday		\$17 \$45		☐ Agriculture professiona☐ Artisan worker☐ Other, please specify_	al 🗖 Journalist 🗖 Chef	
CHAPTER LEADER MEETING \$20 discount for chapter leaders attending Friday's r	meeting\$20			THREE WAYS TO REGIS 1. PHONE (540) 722-710		
Please select the sessions you plan to attend. This he Friday Seminar Choice – AM: ☐ GAPS ☐ Estrogen PM: Friday Evening Choice – ☐ Sustainability Requires Rumina Saturday Choice – ☐ Seneff/Cowan ☐ Nourishing Trad Sunday Seminar Choice – ☐ Practical ☐ Tennant ☐ Iron/	□ Cooking □ Hollants □ Practitioners Partitional Diets □ Pract	und/Quinn ☐ Campbe nel ☐ Practical Panel ☐ F ical ☐ Estrogen/Vitami	ll/Weeks ilm in A/etc.	2. FAX (540) 301-3536 3. MAIL WAPF Wise Traditions 1900 Jones Road Winchester, VA 22602		
CHILDREN'S PROGRAM (Child must be age 3-12 and potty trained.) Child's Name(s) @ \$250 per child for Friday - Sunday includes Friday lunch & dinner, Saturday lunch, Sunday brunch GF/CF meals OR GF only OR CF only for children OR@ \$150 per child, includes no meals.				PLEASE NOTE: One adult registration per form, please. Forms submitted without payment will not be processed.		
CEUs FOR RNs & LACs. A \$5 certificate of attendance RN				FOR FURTHER INFORM wisetraditions.org registrar@ptfassociates.co		
PAYMENT PROCESSING Total Due: □MasterCard □Visa □Chee Full Name Card Number	ck Payment/Money	Order (make payable 1	to WAPF)	NO REFUNDS will be iss December 31, 2019.	sued after	
	ecurity Code (3 digi	ts on back of card)				

By submitting this form, I authorize Wise Traditions to charge the applicable registration fees. I understand that all cancellations must be submitted in writing and must be received by October 23, 2019 to be eligible for a refund, less a \$25.00 administrative fee. All refunds will be issued following the conference. Substitutions will be permitted at any time. Registration packets will not be mailed and must be picked up on-site at the conference registration desk when you arrive at the conference.

Wise Traditions 2019 Texas Schedule

THURSDAY, NOVEMBER 14

6:00-9:00 PM Raw Milk Fundraiser Dinner (not included with conference registration)

FRIDAY, NOVEMBER 15

9:00 – 1:30 Chapter Leader Meeting (chapter leaders who attend get a \$20 discount on registration)

9:00-12:15

Seminar Anthony Jay, PhD: Artificial [Estrogen] Intelligence

Seminar Becky Plotner: GAPS, Stage by Stage

9:00-10:15

Focused Natalie Campbell: The Vaccinated Versus Unvaccinated Children and the Risk of Chronic Diseases

11:00-12:15

Basic Sandeep Agarwal: DIY Curry Sauces, Spice Blends and Toothpowder

12:15-1:45 Lunch

1:45-3:00

Basic Monica Corrado: Broth and Stocks: Timeless Remedies for Vibrant Health

Seminar Neil Z. Miller: Vaccine Studies Part 1

General Elizabeth Plourde: Surviving the 5G Never Encountered by Our Ancestors

Focused Griffin Cole: On Holistic Dentistry

3:45-5:00

Basic Monica Corrado: Culturing Dairy for Everyone (Even the Lactose-Intolerant)

Speaker Neil Z. Miller: Vaccine Studies Part 2 General Robert Quinn: Studies on Kamut

Focus Timothy Weeks, DC: Whole Body Health Tests: Simple Tests to Determine Your Current Level

of Health and Strategies for Resetting It

6:00-7:30 Dinner

7:30-9:30

Bloggers Panel Making Wise Traditions Work for Your Family with Kelly Moeggenborg, Carrie Vitt & Mandy Blume

Ask The Practitioner Panel with Tom Cowan, Nasha Winters, Anthony Jay, Pam Schoenfeld,

Becky Plotner, Ben Edwards and moderator Sally Fallon Morell

General Talk Peter Ballerstedt: Humanity & Ruminants: Past, Present and Future

Film with Q&A TBD

SATURDAY, NOVEMBER 16

6:45-7:45 Movement - Esther Gokhale

7:30-8:15 Sponsor Presentation

9:00-10:15

Basic Sally Fallon Morell, Nourishing Diets, Part 1

Seminar Stephanie Seneff: Glyphosate: The Rattlesnake in the Corn Fields, Part 1

General Peter Ballerstedt: Forage Agriculture IS Sustainable Agriculture

Focus Anthony Jay: Straight Shooting Stem Cells

11:00-12:15

Wise Traditions 2019 Texas Schedule

SATURDAY, NOVEMBER 16 (continued)

Basic Sally Fallon Morell: Nourishing Diets, Part 2

Seminar Stephanie Seneff: Glyphosate: The Rattlesnake in the Corn Fields, Part 2

General Esther Gokhale: Primal Movement Focus Karen Randall, DO: Cannabis Medicine

12:15-1:45 Lunch

1:45-3:00

Basic Sally Fallon Morell, Nourishing Diets, Part 3

Seminar Tom Cowan, Cancer and the New Biology of Water, Part 1

General Andrew Gardner: What's Wrong with Modern Skin Care, How Our Ancestors Cared for Their

Skin and How You Can Do the Same (Including the Best Way to Render Animal Fats)

Focus Pam Schoenfeld: Vitamin A-mazing!

4:00-5:15

Basic Sally Fallon Morell, Nourishing Diets, Part 4

Seminar Tom Cowan, Cancer and the New Biology of Water, Part 2

General Janine Farzin: Making Offal Taste Good

Focus Joseph Tarantolo: Not by Bread Alone Doth Man Live, Even if It's Sourdough: A Critique of

Antidepressants and the Medical Model in Psychiatry

6:30-9:30 Awards Banquet Keynote: David Diamond: Dietary Sense and Nonsense in the War

on Saturated Fats and Cholesterol

SUNDAY, NOVEMBER 17

6:45-7:45 Movement - Esther Gokhale

7:30-8:15 Sponsor Presentation

9:00-10:15

Basic Sally Fallon Morell: Reading Labels

General Louisa Williams: The New Homeopathic Sensation Method

Seminar Jerry Tennant: Thealing is Voltage, Part 1

Focus Ben Edwards: Toxic Iron and the Master Antioxidant

11:00 - 12:15

Basic Leslie Bobb & Lyndsay Gutierrez: The Art, Science and Story of Fermentation
General Nasha Winters: Healing with Hunger: Practical Applications of Intermittent Fasting

Seminar Jerry Tennant: Healing is Voltage, Part 2 Focus Kiran Krishner: Healing Leaky Gut

12:15-1:30 Lunch

1:30-2:45

Basic Lindsea Willon: Sports Nutrition: How to Optimize Performance at Any Level

General Jerry Tennant: Healing is Voltage, Part 3

Focus David Diamond: Demonization and Deception in Targeting Cholesterol as a Cause

of Cardiovascular Disease

2:55-3:45 Closing Ceremony with Sally Fallon Morell and Mandy Blume:

The Powerful Simplicity of Recovering with Real Food

MONDAY, NOVEMBER 19

Will Winter, DVM: Professionally Guided Farm Visit

Why We Cook. . . and Chop, Ferment, Salt and Dry

By Sally Fallon Morell

Il human cultures cook. In his 1960s book, *The Raw and the Cooked*, Claude Lévi-Strauss, often called the father of modern anthropology, noted: "Not only does cooking mark the transition from nature to culture, but through it and by means of it, the human state can be defined with all its attributes." The point of view articulated by Lévi-Strauss implies that humans cook their food for cultural and psychological reasons, and not because of any biological or physiological imperative. Fellow anthropologist Edmund Leach held the same view. "[People] do not have to cook their food, they do so for symbolic reasons to show that they are men and not beasts." Others proposed that cooking was simply an offshoot of using fire for warmth.

However, a newer school of thought references scientific experiments showing that cooking makes our food easier to digest. These findings lead to the conclusion that the practice of cooking allows humans more time for cultural activities and more energy to power a bigger brain.

A HOLE IN THE STOMACH

Basic knowledge about the digestion of raw and cooked food comes to us as the result of an unfortunate accident, in which a Canadian named Alexis St. Martin received a gunshot wound to the stomach. The wound did not fully heal, leaving an opening that allowed the curious to view the workings of his stomach. Fortunately, the doctor who treated him, a U.S. Army surgeon named William Beaumont, was not only curious, but meticulous and thorough. He performed many experiments by dangling food on a string into St. Martin's stomach, then pulling it out to observe the extent of digestion; he also recorded how quickly various foods eaten by St. Martin left the stomach. For the next ten years, he performed an estimated two hundred studies on his hapless subject, all published in his book *Experiments and Observations on the Gastric Juice, and the Physiology of Digestion* (1838).¹

In his first study, Beaumont introduced "articles of diet, suspended by a silk string, and fastened at proper distances, so as to pass in without pain—viz.:—a piece of highly seasoned a la mode beef; a piece of raw, salted, fat pork; a piece of raw, salted lean beef; a piece of boiled, salted beef; a piece of stale bread; and a bunch of raw, sliced cabbage; each piece

weighing about two drachms [drams]." On the introduction of food, he noted that the stomach (which is a muscle) would begin to churn and its color would brighten (due to increased blood flow to the stomach), followed by a "gradual appearance of innumerable, very fine, lucid specks, rising through the transparent mucous coat, and seeming to burst, and discharge themselves upon the very points of the papillae, diffusing a limpid, thin fluid over the whole interior gastric surface." He discovered that the stomach lining excreted this gastric juice, and he confirmed an earlier theory that these juices contained hydrochloric acid.

Beaumont noted that St. Martin's stomach digested tender foods as well as foods "finely divided" (by cutting or chopping) more rapidly and completely than foods in large pieces. Potatoes boiled and reduced to a fine powder

THE OBSERVATIONS OF WILLIAM BEAUMONT

In his book *Experiments and Observations on the Gastric Juice, and the Physiology of Digestion*, which describes the experiments performed on Alexis St. Martin, Dr. William Beaumont made the following observations:

- The inner coating of the stomach is pale pink when food is absent. The color becomes redder (due to the infusion of blood) during digestion. In health, a mucous coat lines the stomach.
- The normal temperature of the stomach is 100 degrees Fahrenheit. When the temperature of the stomach becomes too low, as with the introduction of cold food or cold fluids, digestion almost ceases.
- Gastric juice is clear, transparent, without odor, slightly salty and acid. Since Beaumont's time, we have learned that gastric juice contains a combination of hydrochloric acid (HCl), potassium chloride (KCl) and sodium chloride (NaCl). An empty stomach never contains gastric juice, which only appears when food enters the stomach.
- Gastric juice acts as a solvent of food, becoming intimately mixed and blended by the churning motion of the stomach.
- The stomach is capable of producing only a fixed quantity of gastric juice. If too much food enters the stomach, there will not be enough gastric juice to digest it all. Taking in too much food "if persevered in, generally produces, not only functional aberration, but disease of the coats of the stomach."
- Bile (for digesting fats) does not occur in the stomach, but in the small intestine.
- Food is readily digested when it enters the stomach in a "finely divided" state, because this allows the gastric juice to act on a large surface area.
- Raw foods, such as raw beef and raw potato, leave the stomach largely undigested.
- Most food leaves the stomach after about three or three and one-half hours. Milk, both boiled and raw, leaves
 the stomach in about two hours. Tough cuts of meat—such as heart, tendon and salt pork—take around four
 hours for full digestion.
- Surprisingly, soup also takes about four hours for full digestion. In fact, Beaumont observed that "solid food, of
 a certain texture, is easier of digestion than fluid." However, soup taken with bread leaves the stomach after
 the normal time of three to three and one-half hours.
- Beaumont observed that animal foods and "farinaceous aliments" (such as bread and porridge) are easier to digest than vegetables. Fats and oils leave the stomach unchanged.
- Excesses in eating or drinking, fatigue, anger or excitement, illness and damp weather impair the quantity and quality of gastric juices. When St. Martin had a fever, the stomach appeared dry and inflamed, and the secretion of gastric juice was minimal. When he was angry, the stomach remained contracted, greatly hampering digestion.

The researchers warned: "Since many raw food dieters exhibited underweight and amenorrhea, a very strict raw food diet cannot be recommended on a long-term basis." underwent complete digestion while cooked potatoes in pieces resisted complete digestion. Pieces of raw potato left the stomach largely undigested. "Pieces of raw potato, when submitted to the operation of this fluid, in the same manner, almost entirely resist its action. Many hours elapse before the slightest appearance of digestion is observable, and this only upon the surface."

St. Martin's stomach easily digested boiled beef—a morsel introduced at noon was gone by two in the afternoon—but a piece of raw, salted, lean beef left the stomach largely intact. Beaumont's experiments also determined that vegetables digested more slowly than meat and that milk coagulated (separated into curds and whey) early in the digestive process.

WHAT HAPPENS IN THE SMALL INTESTINE?

After food leaves the stomach, it enters the small intestine, where the environment is mildly alkaline rather than highly acidic. There, a host of digestive enzymes take over the task of breaking food down into basic components, which can then be absorbed across the gut wall. Bile released into the small intestine from the gallbladder breaks down fats (in the form of triglycerides) into individual fatty acids.

Patients who have undergone surgery to remove the colon have a bag where the small intestine ends (the final segment of the small intestine is called the ileum). Experiments with these ileostomy patients have allowed scientists to examine the contents of the small intestine at the end of its digestive activities.

These studies show that humans digest cooked starch very efficiently. The percentage of cooked starch digested by the time it reaches the ileum is at least 95 percent for oats, wheat, potatoes, plantains, bananas, cornflakes and white bread. Home-cooked kidney beans and flaked barley have an ileal digestibility of around 84 percent. For raw starch, analyses show 71 percent digestion for wheat starch, 51 percent for potatoes and 48 percent for plantains.³ In general, we digest raw starch only half as well as cooked starch. Some starch granules eaten raw—called "resistant starch"—pass through the ileum and enter the colon unchanged.

RAW FOOD DIET STUDIES

Studies on raw food diets have shed more light on why human beings cook their food. In a 1999 report published in the Annals of Nutrition and Metabolism, 4 researchers looked at the results of the Giessen Raw Food Study conducted in Germany in the 1990s. The subjects consisted of a group of about five hundred men and women consuming raw food diets long term (on average, almost four years). The diet largely consisted of fruits and vegetables, but also raw honey and cold-pressed oils, dried fruit, dried or smoked meat and fish, fermented vegetables and certain types of nuts. Even though they included high-caloric foods like honey and oils in the diet, the subjects lost weight and ended up with a body mass index (BMI) below the normal weight range. Women lost an average of 26.5 pounds and men lost 21.8—something an overweight person might welcome, but not a good idea if you are a hunter-gatherer relying on a robust physique for hunting and gathering activities. In fact, the volunteers reported always feeling hungry.

About 30 percent of the women under 45 years of age had partial to complete amenorrhea; subjects eating high amounts of raw food (more than 90 percent of the diet) were affected more frequently than moderate raw food dieters. Men reported decreased interest in sex.

The researchers noted that "a strict raw food diet cannot guarantee an adequate energy supply" and concluded that the consumption of a raw food diet is associated with a high loss of body weight. They warned: "Since many raw food dieters exhibited underweight and amenorrhea, a very strict raw food diet cannot be recommended on a long-term basis."

Other risks of an all-raw diet include low bone mass, low B₁₂, low HDL-cholesterol (the so-called "good" cholesterol) and elevated homocysteine.⁵

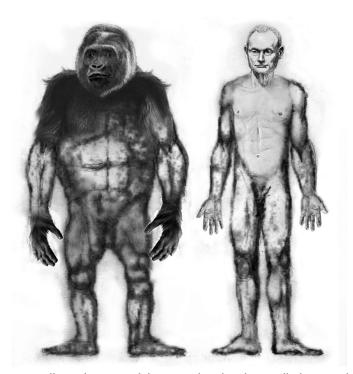
THE COOKING THEORY

These and other observations led to the formulation of the cooking hypothesis, first published in a 1999 article entitled, "The raw and the stolen: cooking and the ecology of human origins." Lead author Richard Wrangham, a primatologist, noted that cooking is a univer-

sal human activity and suggested that the practice of using fire to cook our food led to other behaviors considered uniquely human, including greater cooperation and sociability (needed to keep fires going), division of labor between males (who did the hunting) and females (who did the cooking) and the tendency to form male-female bonds "embedded within multifemale, multimale communities." More to the point, cooked food provides humans with more energy than enjoyed by other species, allowing selection for a smaller digestive tract, smaller mouth and teeth and a larger brain.

In 2009, Wrangham published the book *Catching Fire: How Cooking Made Us Human*, which expanded on his original thesis. Wrangham notes that digestion is a costly process, requiring between 15 to 30 percent of our calories, so anything that makes digestion easier provides human beings with greater energy and allows them more time for other activities—from weapon production to ritual.

Human mouths, lips, teeth and jaws are smaller than those of apes and chimpanzees. The human stomach, small intestine and colon are smaller than those of a primate of the same height. Wrangham notes that the "volume of the whole gut is about 60 percent of what is expected for a primate of our size." The more gut tissue in the body, the more energy must be spent on its metabolism. Thus, the reduced size of the human gut "increases efficiency and saves us from wasting unnecessary metabolic costs on features whose only purpose would be to allow us to digest large amounts of high-fiber food." According to physical anthropologists Leslie Aiello and Peter Wheeler, compared to great apes, the reduction in hu-



A gorilla and a man of the same height; the gorilla has much greater digestive capacity while man has a larger brain.

man gut size saves humans at least 10 percent of daily energy expenditure.8

Another difficulty with raw food is that it takes a long time to chew. Wrangham notes that chimpanzees spend more than six hours per day chewing; he estimates that humans living on a raw primate diet would need just over five hours per day for chewing.

As Wrangham puts it, "The unnaturally, atypically soft foods that compose the human diet have given our species an energetic edge, sparing us much of the hard work of digestion. Fire does a job our bodies would otherwise have to do. . . . Cooking gives calories."9

WHY COOK?

These studies of digestion in the stomach and small intestine indicate that for humans, starchy food, fibrous food and most meats require cooking.

Starch inside plant cells occurs as granules—dense packages of stored glucose so small that they may remain even after milling. These starch granules are very stable and can persist in a dry environment for thousands of years. But with warmth and water, they start to swell at around 136 degrees F. In the presence of a liquid at 194 degrees F, the granules break into fragments and lose their structure. The starch "gelatinizes," meaning that it dissolves in water. The more starch gelatinizes, the more easily enzymes can reach it and the more completely it is digested. This is why cooked starch yields more energy than raw.

Beaumont's experiments indicate that vegetables take longer to leave the stomach than starchy food or meat. In addition to starch, plant foods contain dietary fiber or roughage—nonstarch polysaccharides (glucose or fructose chains) such as cellulose, inulin, lignins, chitins, pectins, beta-glucans and oligosaccharides. Levels will be especially high in certain rough vegetables like cabbage, kale and collard greens. These components are especially resistant to digestive enzymes, and cellulose is indigestible for humans. But cooking—as well as chopping—help break down dietary fiber into more digestible elements.

Fiber that resists digestion in the small intestine becomes food for bacteria in the colon.

Cooking, especially long, slow cooking in liquid, turns the tough collagen into soft gelatin.

These beneficial flora break the fiber molecules into short-chain fatty acids, which can provide health benefits. On the other hand, some fiberrich foods, such as beans and other legumes, can lead to flatulence and gas as the digestive apparatus tries to break down the tough molecules by fermentation.

COOKED MEAT

Cooked meat is easier to digest than raw for two reasons. First, cooking melts away the connective tissue that wraps around muscle fibers.

Meat contains several kinds of connective tissue, including tendons (which connect muscles to bones), ligaments (which connect bones to each other) and sheets of white fibrous tissue called silverskin (which surround whole muscles). These are obviously tough and hard to digest when raw, and ligaments and silverskin remain as tough gristle even when cooked; however, the collagen in tendons melts into a broth when cooked in a liquid.

Connective tissue in the form of collagen also encases individual muscle fibers, and a collagen sheath encases individual fibers grouped into bundles—we see these bundles as the "grain" of the meat. It's these collagen wrappings that make raw meat chewy and tough. Cooking, especially long, slow cooking in liquid, turns the tough collagen into soft gelatin.

Steaks and filets contain relatively little collagen and are most tender when cooked quickly to about 140 degrees F—if cooked longer or at too high a temperature, the muscle fibers themselves become tough. Meat that we eat raw is either sliced very thinly across the grain (carpaccio), ground up (steak tartare) or

pounded. All of these techniques make these dishes easier to chew and digest.

Secondly, as the collagen webbing in meat melts away during cooking, the tightly wound muscle fibers begin to relax, providing more surface area for gastric juices in the stomach and digestive enzymes in the small intestine to do their work. For example, digestion of cooked beef by the enzyme trypsin increases four times compared to that for uncooked beef.¹⁰

Thus, cooking partially denatures meat proteins, and this denaturation process continues in the digestive tract.

ENHANCING THE BENEFITS OF COOKING

In addition to cooking, anything that reduces particle size—such as chopping, crushing and grinding—makes our food easier to digest.¹¹ Acidity, salt and drying also promote protein denaturation—think marinated, salted or dried meat.¹² Animals contain glycogen in their muscles, and during the process of aging meat, the glycogen is converted to lactic acid, which promotes denaturation. Hanging makes meat more tender because proteins are partly broken down by lactic acid and enzymes. Kalahari San hunter-gatherers cook their meat until it is so tender that the sinews fall apart and ensure complete digestibility by then crushing it in a mortar.¹³

Of course, raw foodists can point to many examples of raw food consumption—and in particular, raw meat consumption—among human beings; nevertheless, all human societies cook some or even most of their food, including some or even most of their meat. According to Marco

THE EXPENSIVE TISSUE HYPOTHESIS

The relative size of the human brain compared to body size is higher than for other mammals. Compared to the chimpanzee brain, the human brain is about three times as large, and the human digestive tract is smaller than would be expected for a primate of our body size. In 1995, scientists Leslie Aiello and Peter Wheeler formulated the Expensive-Tissue Hypothesis (ETH), noting that when the brain is large, the organism must use less energy on other expensive tissues, such as the digestive tract. The ETH proposes that humans can get by with a smaller gut by eating an easy-to-digest diet.⁸ The primary way to make our diet easy to digest is to cook our food.

The original paper introducing the ETH sought to explain how humans manage to have energy for their large and metabolically expensive brains while still maintaining a basal metabolic rate comparable to other primates with smaller brains. The hypothesis holds that the higher energy expenditure of vertebrates with larger brains has to balance out with a decrease in the size of other energy-consuming organs, particularly the gut.

OPTIMIZING DIGESTION

MILK PRODUCTS: Milk provides exquisite nourishment as a raw food, straight from the breast or the udder. The myriad proteins in milk are fragile three-dimensional objects, not tightly coiled and bound as are meat proteins. They do not require heat to render them digestible. In fact, heat causes milk proteins to lose function rapidly—whether to provide nourishment as proteins, enhance immune function, eliminate pathogens or act as carrier proteins for the vitamins and minerals in milk. Fermentation further increases the nutritional value of raw milk. Raw cheese, yogurt and kefir are super-nourishing, super-raw foods.

EGGS: Studies with ileostomy patients show that cooking increases the protein value of egg whites by around 40 percent. Heat denatures proteins and renders them more digestible, a finding reflected in the habits of traditional peoples. The Aborigines of Australia threw emu eggs into the air to scramble them, then put them in hot sand or ashes and turned them regularly to cook them evenly, taking about twenty minutes. Yaghan hunter-gatherers of Tierra del Fuego "would never eat half-cooked much less raw eggs." They bored holes in egg shells to prevent bursting and buried them on the edge of a fire, until quite hard inside. ¹⁵ But we also have traditions of consuming the yolks raw—such as raw egg yolk mixed with rice in Iran.

MEAT: Meat requires gentle cooking to melt the collagen it contains and to gently relax tightly bound muscle fibers. Overcooking makes meat tough and harder to digest. Very rapid heating, as in microwaving (see page 46), renders the proteins in meat toxic. However, most cultures also consume raw meat, which provides vitamins B_6 and B_{12} in undenatured form. Grinding, pounding and thinly slicing make raw meat more digestible.

SEAFOOD: Traditional cultures consume fish and shellfish both raw and cooked. Marinating raw fish in an acid medium, as in *ceviche*, makes the muscle proteins easier to digest.

GRAINS: Grains require cooking in a liquid to soften them and gelatinize the starch, but cooking alone will not neutralize the many antinutrients in grains, particularly whole grains; these anti-nutrients include phytates, lectins and enzyme inhibitors. All grain-consuming populations throughout the world subject whole grains to soaking, sour leavening and other fermentation processes before cooking, and sometimes even after cooking. Eating raw muesli (soaked but not cooked) and granola (not soaked and not cooked in water, only baked) is a recipe for digestive problems. A diet of grains that have been rapidly heated or subjected to pressure, such as breakfast cereals and rice cakes, causes rapid death in test animals.¹⁶

BEANS: Beans are indigestible unless soaked and then cooked a long time. Some cultures then ferment cooked legumes to make a sour porridge.

VEGETABLES: Beaumont's experiments revealed that vegetables are harder to digest than meat or starches. Most vegetables should be cooked until tender; those with good digestion can eat salads of tender vegetables cut small, or raw fermented vegetables. The common practice of consuming raw rough vegetables as juices, in salads or as chips poses a real challenge to our digestive apparatus.

FRUIT: When St. Martin consumed nine ounces of raw, ripe sour apples, the contents of the stomach became "sharp and acrid," irritating the aperture; the "morbid appearance of the gastric surface considerably increased." Apples are high in pectin, and studies with rats indicate that compared to other types of dietary fiber, pectin produces lesions in the stomach and pathological structural changes of the villi in the small intestine. High-pectin fruits such as apples, pears, apricots, cherries, peaches and plums are best cooked; Asian cultures always cook these fruits. If you plan to eat these foods raw, at least remove the skin and make sure the fruit is very ripe and sweet. Citrus fruits also contain pectin, especially in the membranes—so best to section citrus fruit and remove the membranes. Interestingly, in non-obese diabetic mice, eating pectin increases the incidence of diabetes.

SOUPS: Beaumont's surprising finding—that soup takes longer to leave the stomach than meat or starches, unless eaten with bread—indicates that bread or croutons are a natural with soup!

SALT: The digestive juices—hydrochloric acid (HCl) and potassium chloride (KCl)—require chloride, which we get from salt (NaCl). Sodium in salt activates enzymes that help break down starches. Salt is essential for digestion!

BROTH: The work of Francis Pottenger, MD indicates that broth taken with meals (in soups, sauces, gravies and stews) acts as an aid to digestion of other foods, especially if these foods are processed to reduce particle size.

Polo, Mongol warriors could ride for days without lighting a fire. They ate the raw blood of their horses or put slabs of raw meat under their saddles to consume at the end of their ride, but they looked forward to cooked food at the end of a campaign. Maasai warriors relished fermented raw milk and blood but still cooked their meat. The Inuit consumed raw meat on a hunt, or raw fish (frozen or fermented) as a snack, but expected a cooked meal waiting for them when they returned in the evening. South Sea Islanders do not need to light fires for warmth but nevertheless cook most of their food, most often in underground pits. They even light small fires in their canoes to steam fish wrapped in leaves.

Typically, hunter-gatherers consume the soft parts of the animal raw immediately after the kill—brain, marrow, tongue and liver—and then subject the muscle meats to cooking, drying or pounding. According to Dr. Price, African hunters ate liver both raw and cooked.¹⁴

One argument against cooking concerns the loss of vitamins and enzymes. Vitamin C disappears with cooking, while thiamine (B_1) , pantothenic acid (B_5) and vitamin B_6 decline. We need raw foods to obtain these nutrients—occasional raw meat or raw organ meat (especially for B_6), raw dairy products and carefully chosen raw fruits and vegetables for vitamin

C and B vitamins. Even better are super-raw foods—lacto-fermented foods in which these vitamins increase many-fold. Vitamin C levels in cabbage can increase up to tenfold when we use lacto-fermentation to transform raw cabbage into raw sauerkraut; B vitamins also increase. Enzyme-rich lacto-fermented foods provide generous compensation for whatever enzymes are lost during cooking. The practice of consuming small amounts of super-raw lacto-fermented food with cooked food finds confirmation in both tradition and science.

Sally Fallon Morell is the author of the cookbook Nourishing Traditions (1996) and many other titles, including her latest book Nourishing Diets (2017). She is the founding president of the Weston A. Price Foundation.

OBSERVATIONS OF NUTRITIONIST CHRIS SANDEL

In a recent survey, I found that two issues many people seem to be suffering from are low energy and poor digestion. Here are some tips for how to improve both these areas through diet and lifestyle changes.

The first suggestion is to focus on easy-to-digest food. I see countless clients who suffer with IBS and digestive issues, and when I go through their food diary, I am hardly surprised. Their diet consists of lots of salad, spinach, kale, sweet corn, beans, lentils, quinoa, bread, pasta, oat cakes, rice cakes, protein bars, popcorn and so on. All these foods are really difficult to digest, and yet they are the cornerstones of their diet. If you are unable to digest the food you are eating, this will not only cause digestive issues, it will also mean you get a lot less nutrients and therefore less energy.

On top of being difficult to digest, a lot of these foods are very low in calories. I know "calories" is a dirty word in the mind of the general public, but it is a measure of the energy available to power your body. We use anywhere between 15 to 30 percent of our calories just to run our digestive system. If people are eating foods that are difficult to digest and give little in return, then it is no wonder they have low energy. With less energy, the body has fewer resources, and so digestion is turned down further, which then makes the situation worse. It's a vicious cycle resulting in more digestive upset and less energy.

So instead of low-calorie, hard-to-digest foods, I want people to eat things that are going to give them the biggest bang for their buck. I mean foods that are high in calories, high in macronutrients (carbohydrates, protein and fat), high in vitamins, minerals, enzymes, etc. and are easy to digest so you can get access to all these nutrients. The foods that generally fall into this category are: carbohydrates, including root vegetables (must be well cooked) and fruit (particularly tropical fruit); protein, including white fish, shellfish, broth, meat (how much and which cuts depends on the person), eggs and dairy (if you can digest it); fat, mainly saturated fat such as butter and coconut oil (but also lard, tallow, suet, ghee and bone marrow). Olive oil is fine as long as it is not heated above 180 degrees C.

The final piece of advice to help with energy and digestion is to eat in a relaxed environment. I know it sounds simple and most people know it in a theoretical sense, but no one is doing it. People eat meals while rushing around or eat their lunch while sitting in front of their computer working. Every meal doesn't have to be a long drawn-out affair but giving yourself time to eat where your only focus is the food in front of you makes a huge difference. Even if it is just five to ten minutes, it helps. We have two sides of the autonomic nervous system, sympathetic (fight or flight) and parasympathetic (rest and digest). You need to be in a relaxed state to digest your food properly, and if you are rushing around and not giving your body a chance to slow down, your ability to digest your food is minimized.

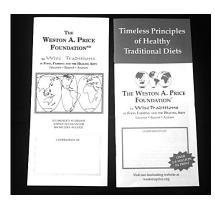
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TWENTY YEARS OF EDUCATION AT THE WESTON A. PRICE FOUNDATION



MAIN BROCHURE

The 2000 brochure (left) and the updated current brochure (right). In twenty years, WAPF has printed 925,000 of these educational documents. We encourage members to read the brochure once a year as a refresher course on the principles of healthy traditional diets and share it with others.

SHOPPING GUIDE

The 2001 Shopping Guide (far right) had twenty pages listing healthy food products. The current Shopping Guide (left) has expanded to ninety-nine pages. The Shopping Guide is now available as an App at realfoodmobileapp.com/.



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WISE TRADITIONS JOURNAL

The original Spring, 2000 journal (above, right) contained fifty-six pages, including two pages of ads and a list of eleven local chapters. The latest *Wise Traditions* journal (right) for Summer, 2019 is one hundred twenty-eight pages long, includes eighteen pages of ads and lists over four hundred local chapters.

CONFERENCE PROGRAM

The 2018 Wise Traditions program (above, left) for the four-day conference featured over forty speakers. The Wise Traditions 2001 program (center) featured speakers Julia Ross, Tom Cowan, MD, Krispin Sullivan, CN, Mary G. Enig, PhD and Sally Fallon. The Wise Traditions 2002 program (right) for a two-day conference with the theme "All About Beef" included speakers Joel Salatin, Mark Purdy and Mike Callicrate.



The Mitochondria: Key to Health and Longevity

By Wayne A. Feister, DO

family physician, I've understood that the frontier in medicine and health is a place where diseases without cures remain unsolved mysteries—awaiting the breakthroughs of discovery, connection, coincidence and evidence that will unravel and explain them. It is impossible to overstate the importance of unraveling these mysteries. Unfortunately, most family doctors and internists are unlikely to recognize or have prior knowledge about these troubling conditions and thus cannot guide their patients to proper medical treatment.

Sir Arthur Conan Doyle's creation of one of the best-known fictional detectives, the iconic Sherlock Holmes, introduced a logical method for solving mysteries: "Once you eliminate the impossible, whatever remains, however improbable, must be the truth." Ten years ago, I heard about a strange health condition—mitochondrial dysfunction—with documented links to other conditions such as autism and attention-deficit/hyperactivity disorder (ADHD), which may result from severe and damaging changes within the cells. Inspired by Doyle to retain my suspicions, my story begins with whatever remains, however improbable. Applying an understanding of mitochondria, I suspected the origins of and pursued the missing but probable explanation for this widespread health and medical problem.

WHAT ARE MITOCHONDRIA?

A brief course in cell biology is crucial to understanding the breakdown that leads to illness. Just as the body has vital organs—such as the heart, stomach and liver—the cell has

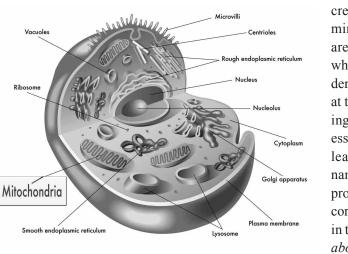
similar critically functioning components. In the cell, these parts are called "organelles" and include the nucleus, Golgi complex, centrioles and mitochondria. Not confined to humans, mitochondria exist in all forms of life. Having unique DNA similar to the DNA of bacteria, mitochondria are actually a kind of parasite that lives in all organisms. By scientific estimate, eight to two thousand mitochondrial hitchhikers

live in every cell of the human body.

The essential role of the mitochondria is to produce energy. Mitochondria generate 90 percent of the body's energy and power the cells to perform vital functions that include breathing, thinking, talking and walking. How does this work? Inside the mitochondria, carbohydrates, fats and proteins are metabolized by utilizing oxygen to produce energy, which converts ADP (adenosine diphosphate) to the energy-packed ATP (adenosine triphosphate). Called

the Krebs's cycle, this process is a marvel of cellular biology, producing thirty-eight ATPs per molecule of glucose burned.

When the mitochondria are healthy, a person is generally fit and healthy. Moreover, under the influence of a positive cascade of effects, the more mitochondria that individuals have, the healthier they are,



which increases their ability to create energy. Children brimming with energy, for instance, are loaded with mitochondria, whereas the less energetic elderly have fewer mitochondria at the cellular level.1 Recognizing that the mitochondria are essential to human health also leads to another conclusion. namely that health and disease processes are interrelated. According to a researcher writing in the Journal of Inherited Metabolic Disease, mitochondrial deficiency "can theoretically

give rise to any symptom, in any organ or tissue, at any age, and with any mode of inheritance."²

MITOCHONDRIA IN THE NEWS

Since the discovery of genes in 1954, a "gene theory" has become the most likely explanation for cancer, with researchers positing that humans develop cancer as a result of genetic changes in the cell. According to this theory, when the immune system does not identify or destroy a deformed cell, the altered cell continues to multiply, becoming a tumor, and the person eventually is diagnosed with cancer.

In 2003, the Human Genome Project completed its mapping of the

ARTICLE SUMMARY

- Mitochondria generate 90 percent of the body's energy, powering the cells to perform vital functions.
- Mitochondria burn two main fuels: glucose and ketones. Because the standard American diet has given rise to a widespread sugar addiction, most people tend to burn glucose.
- When the mitochondria are healthy, a person is generally healthy.
- Mitochondrial deficiency can give rise to symptoms in virtually any organ or tissue.
- Many factors—chemicals, foods, modern lifestyle habits and electromagnetic fields—have been implicated as causes of mitochondrial dysfunction.
- In cancer, the mitochondria change first—before any gene coding changes—which undermines the "gene theory" premise of conventional cancer explanations.
- Dysfunctional mitochondria can trigger a series of cellular processes that result in insulin resistance (diabetes).
- Feeding and nourishing mitochondria with wholesome ketones—which do not require insulin—can help restore mitochondrial health and relieve brain starvation in individuals with cognitive impairment.
- AMPK is an enzyme responsible for multiple metabolic functions. AMPK and mitochondrial imbalances can initiate a cascade of inflammatory changes related to disorders such as obesity and diabetes.
- As key elements for cellular energy production, AMPK and mitochondria require nutrient and lifestyle changes when imbalanced.
- Supporting mitochondrial health can help control the aging process as well improve overall health.

Mitochondrial
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entire human gene sequence, a thirteen-year undertaking that required the collaboration of twenty universities in seven countries. Scientists are now working on a new project—mapping the cancer genome to discover treatments—a task one thousand times greater than the original mapping of the human genome.

These dedicated cancer researchers have produced two remarkable discoveries. First, the genetic pattern of cancer is verifiably random. Second, the genetic changes often occur *after* the onset of cancer, indicating that some cellular changes are occurring well before genes are ever affected. As scientists were investigating both plausible and "improbable" explanations, I asked myself: what is changing that disables the

body's immune system? After critical inquiry and researching scientific sources, I reached the conclusion that the most likely, science-based explanation is that *the mitochondria are changing and become impaired*.

MITOCHONDRIAL DYSFUNCTION AND CANCER

Scientists point to mitochondrial dysfunction as the genesis of a number of diseases, including cancer. Mitochondrial changes and their relationship to cancer have been proven in a simple experiment. When scientists transfer the nucleus of a cell with cancer genes into a normal cell, the genes revert to normal genes—the cell does not become cancerous. However,

LIKELY CONTRIBUTORS OF MITOCHONDRIAL DYSFUNCTION

Many factors—chemicals, foods, modern lifestyle habits and electromagnetic fields—have been implicated as causes of mitochondrial dysfunction. Included in this list are antibiotics, fructose, glyphosate, cell phones and statin drugs, as well as other drugs, chemicals, foods and additives.

ANTIBIOTICS: Many types of radicals are formed in biological systems, but the most worrisome, derived from oxygen, are referred to as reactive oxygen species (ROS) or oxygen free radicals. Dousing mitochondria with antibiotics causes the formation of ROS—a relationship confirmed by scientists writing in 2013 in *Science Translational Medicine*, who observed that "clinically relevant doses of bactericidal antibiotics. . . cause mitochondrial dysfunction and ROS overproduction in mammalian cells." This is because mitochondrial DNA is similar to the DNA of bacteria, so antibiotics that kill bacteria also harm mitochondria.

FRUCTOSE: An abundance of fructose in the diet, and especially high-fructose corn syrup, overloads mitochondria and halts metabolism. Fructose is then changed to triglycerides, which are the precursor to body fat and eventual obesity. A paper in the *Journal of Nutrition and Metabolism* explains that uric acid, a "byproduct of uncontrolled fructose metabolism," increases rapidly following fructose ingestion. In turn, "[u]ncontrolled fructose metabolism leads to postprandial [after eating] hypertriglyceridemia [increased fats in blood], which increases visceral adipose deposition [obesity]." In addition, UCLA researchers have described how pancreatic cancer cells readily use fructose to divide and multiply.⁵

GLYPHOSATE: In 2015, the World Health Organization (WHO) ranked glyphosate as a Class 2A probable carcinogen. Glyphosate originally was patented as an antibiotic and is known to eradicate beneficial, probiotic gut bacteria. Again, because the DNA of mitochondria and bacteria are similar, substances like glyphosate that eliminate bacteria may also harm mitochondria.

CELL PHONES: In 2011, the WHO ranked cell phones as a Class 2B possible carcinogen. Studies confirm that changes occur in mitochondrial DNA with exposure to electromagnetic energy transmitted by cell phones. Because Wi-Fi uses the same digital, pulsed signals, it is also implicated in mitochondrial damage. According to researchers at the Centre of Excellence in Biotechnology and Development in New South Wales, Australia, radiofrequency electromagnetic radiation (RF-EMR) "in both the power density and frequency range of mobile phones enhances mitochondrial reactive oxygen species generation."⁷

STATIN DRUGS: Duane Graveline, MD, is a retired family physician and former U.S. Air Force flight surgeon. Graveline discusses the effects of cholesterol-lowering statin medications on mitochondria on a webpage titled "PQQ and statin damage." He says, "Those. . . following my research over the years will know that I consider mitochondrial DNA damage as the ultimate result for many people. . . taking statins."

when scientists do the reverse, transferring the nucleus of a normal cell to a cancer cell, the cell remains cancerous, suggesting that genes are not driving the cancer. Those engaged in this work have concluded that the driver of cancer is not genetic but dysfunctional mitochondria in cells.

Since food is consumed by mitochondria in the metabolic process, diet is an additional factor involved in mitochondrial dysfunction. Researchers have rediscovered the 1923 conclusions of scientist-physician Otto Warburg, who observed that cancer was caused by a metabolic change—a discovery for which he received a Nobel Prize in 1931. Warburg described how cancer cells stop using oxygen to make energy and shift to non-oxygenated, inefficient metabolism that uses fermentation to produce energy.

Fermentation metabolism causes mitochondria to produce only two ATPs per glucose molecule metabolized, while also forming acidic byproducts. The cell nucleus then changes the gene code to support this impaired metabolism. The fact that the mitochondria change first—before any gene coding changes—undermines the "gene theory" premise of conventional cancer explanations. Most doctors are unaware that the build-up of lactic acid is a *result* of the cancer, not the originating cause, and so they try to de-acidify the cancer patient's body by recommending that patients eat an alkaline diet.

MITOCHONDRIAL DYSFUNCTION, DIABETES AND OBESITY

Overconsumption of fructose, the sweetest of the sugars principally found in fruits, is a commonly known cause of diabetes. Whereas table sugar (sucrose) is half glucose and half fructose, high-fructose corn syrup is commonly formulated as 42 percent glucose and 58 percent fructose. Because fructose is a unique sugar metabolized only by the mitochondria in the liver, the culprit that causes diabetes is uric acid, which (as already discussed) is a metabolite of fructose. Though uric acid is a strong antioxidant outside the cell, inside the cell it has the opposite action, producing ROS. In the presence of uric acid, the mitochondria, which should be making the energy-packed

ATP, instead produce the energy-depleted ADP.

Once dysfunctional mitochondria stop metabolizing food—and especially thermal-producing fats—the fats accumulate inside the cell and its membrane. The result is twofold: tissues become fat (i.e., fatty liver disease) and fat-laden cell membranes lose permeability, preventing water-soluble sugar from entering the cell. Insulin, which ordinarily allows sugar to enter cells, fails because the accumulated fat prevents sugar's passage. This condition is called insulin resistance or diabetes. Simultaneously, the liver (fatty liver disease) and body (obesity) begin to store fat. Establishing the etiology of these conditions, a seminal 2013 article in Diabetes stated, "An elevated serum uric acid is. . . one of the best independent predictors of diabetes and commonly precedes the development of both insulin resistance and diabetes. An elevated uric acid also independently predicts the development of fatty liver, obesity, [and] hypertension." Other researchers have noted that "[f]ewer and smallersized mitochondria are found in skeletal muscle of insulin-resistant, obese, or T2DM [type 2 diabetes mellitus] subjects."¹⁰

People who remain thin while eating vast quantities of food often baffle observers. "How can they eat all that food and be so skinny?" A common explanation for what appears to be inexplicable is "high metabolism." However, scientific understanding of the importance of healthy mitochondria offers a more plausible explanation: overweight people who eat one meal a day but continue to gain weight likely have fewer healthy mitochondria, following injury of the mitochondria by some combination of the factors described earlier. People who remain thin even though they eat a lot likely have high amounts of healthy mitochondria.

MITOCHONDRIAL DYSFUNCTION AND NEUROLOGICAL DISORDERS

Alzheimer's disease, branded as type 3 diabetes (insulin resistance) by many medical experts, is a condition whereby the "diabetic brain" cannot use sugar and therefore is starved. Magnetic resonance imaging (MRI) of Alzheimer's patients displays brain shrinkage, an indicator of starvation. Increasingly it has become apparent that feeding and nourishing mitochondria with wholesome ketones—which do not require insulin—can help restore mitochondrial health and relieve brain starvation. Substantiating the potential for some level of recovery, patients with mild cognitive impairment who were fed ketones in the form of medium-chain triglycerides (MCTs)—such as those present in coconut oil—have experienced improvement in brain symptoms.¹¹

Overuse and misuse of antibiotics in childhood also damages mitochondria, which can arrest children's physical and mental development. Antibiotics are a likely contributor to the neurodevelopmental disorders such as autism and ADHD that are plaguing today's children.¹²

FEEDING THE MITOCHONDRIA

For mitochondrial and overall health, individuals must select and eat the highest-quality foods possible—allowing food to be the "medicine" it was meant to be—instead of consuming a diet of denatured processed

BENEFICIAL FOODS AND SUPPLEMENTS

It is life-enhancing to choose foods and supplements wisely—the more natural the nutrients, the more that the mitochondria respond in beneficial ways. Although mitochondrial supplements are still "a work in progress," they represent a growth market for "customers looking for an energy boost and an anti-aging solution." The list below summarizes foods and supplements beneficial to mitochondrial health.

HEALTHY FATS: Replacing the lowfat/vegetable oil directive that has held sway for forty years, scientific studies as well as current nutritional understanding confirm the dietary wisdom that the healthiest fats are butter; saturated animal fats (such as lard, tallow, chicken schmaltz and duck fat); tropical oils (such as coconut, palm kernel and palm oils); and tree nut fats (such as macadamia). These healthy fats are the foremost recommendation for dietary sources of ketones. Dr. Thomas Seyfried, Yale University and Boston College researcher, argues in *Cancer as a Metabolic Disease: On the Origin, Management, and Prevention of Cancer* in favor of treating cancer nutritionally with saturated fats because they convert to ketones more readily than polyunsaturated oils.¹⁹

MCT OIL: "With a couple of exceptions," state researchers in the *Annals of the New York Academy of Sciences*, "there is normally no opportunity to consume medium-chain fatty acids from the diet." Coconut oil and palm kernel oil are the two exceptions. Coconut oil contains C6, C8, C10 and C12 triglycerides. Medium-chain triglyceride (MCT) oil is made from coconut oil but contains only the C8 and C10 triglycerides, which are directly converted in the liver to ketones. For those who do not like the taste or smell of coconut oil, MCT oil has virtually no taste or smell.

PQQ: PQQ (pyrroloquinoline quinone) is the only supplement that increases the number of mitochondria and improves mitochondrial function. It is found naturally in egg yolks (from free-range chickens), vegetables like parsley and celery, and fruits like kiwi and papaya. Integrative physician Isaac Eliaz explains that PQQ is similar to CoQ_{10} and "is another nutrient that can increase mitochondrial ATP production, while also increasing the number of mitochondria."

CO-ENZYME Q_{10} : CoQ_{10} , also known as ubiquinone, is involved in energy production and is abundant in organs like the heart that require high amounts of energy. In fact, CoQ_{10} is a chemical supplement necessary for mitochondrial survival. With advancing age, when bodily production of CoQ_{10} declines, an exogenous or dietary supply is required. Organ meats are packed with CoQ_{10} , but most people don't eat them; as a result, supplementation must provide this valuable nutrient. In *The Dark Side of Statins*, Dr. Duane Graveline cautions: "Few seniors have the CoQ_{10} adequacy of their youth. Supplementation is not only important for this group, but critical for most." Others also attest to CoQ_{10} 's importance: "Even as the range of benefits expands beyond mitochondria, CoQ_{10} remains at the top of mitochondria nutrients."

COLOSTRUM: Colostrum—the first milk mothers produce—is not only safe for all babies but is essential for newborns to ingest immediately. Although raw milk is considered nature's perfect food, colostrum is fifteen times more potent in health-giving properties. Colostrum contains fats, vitamins, minerals, proteins, polypeptides (antibodies), growth factors and antioxidants. In the definitive work on the use of mammalian colostrum, *Peptide Immunotherapy: Colostrum, a Physician's Reference Guide*, Dr. Andrew Keech provides biochemical evidence for colostrum as a source of antioxidants. Dr. Keech states, "One such antioxidant, glutathione, has been described as the ultimate antioxidant. It is well-documented that glutathione and its precursors are present in colostrum in relatively high levels." High glutathione levels correlate with long life. In the *Journal of Alzheimer's Disease*, researchers contend that colostrum "decelerates the aging process" through "improvement in senescence-associated mitochondrial dysfunction and a decrease in ROS generation." ²³

KOMBUCHA: Kombucha is a tart, bubbly drink from the Ural Mountains of Russia. Kombucha is a refreshing source of a potent, detoxifying substance called glucuronic acid. A proven cancer preventive, glucuronic acid works in the liver to convert toxins into harmless forms that the liver can then excrete. A 2011 study published in *Pathophysiology* found that kombucha tea "modulate[d] the oxidative stress induced apoptosis [i.e., natural programmed cell death] in...hepatocytes probably due to its antioxidant activity and functioning via mitochondria dependent pathways and could be beneficial against liver diseases, where oxidative stress is known to play a crucial role."²⁴

MAGNESIUM: One of the major mineral deficits of the American diet is magnesium, which functions as a cofactor to vitamin B₆, both of which are necessary for the metabolism of proteins. To be biologically active, ATP "must be bound to a magnesium ion," and "[w]hat is called ATP is often actually Mg-ATP [magnesium-ATP]."²⁵

foods and synthetic vitamins, which insufficiently supports health. The best dietary choices are organic, non-GMO, pasture-raised, grass-fed, traditional foods that are not overprepared, packaged, processed or preserved with additives, colors or chemicals that degrade overall food quality.

Unfortunately, health-conscious individuals often virtuously cite the "grocery list" of high-quality foods that they buy without realizing that they may be failing to prepare these foods properly. Most modern people lack their ancestors' traditional knowledge and dietary literacy about health-promoting methods of food preparation.

The best place to start and continue on a path to high-quality, properly prepared food is by following the research and accumulated wisdom of the dentist Weston A. Price, a former director of the American Dental Association's Research Institute. On his scientific travels worldwide, Dr. Price studied the diets of traditional people on five continents. He then assembled the accumulated wisdom of humanity on traditional diets in his seminal treatise, *Nutrition and Physical Degeneration*, which represents essential reading for anyone concerned with food and health. The Weston

A. Price Foundation is a leading advocate for the return to nutrient-dense diets and covers Dr. Price's findings in its materials and on its website. *Nourishing Traditions* by Sally Fallon Morell provides comprehensive instruction on proper food preparation techniques.

Mitochondria burn two main fuels: glucose (sugar) and ketones (a normal, carbon-based metabolic product). Because the standard American diet (SAD) supplied by modern food producers has given rise to a widespread sugar addiction, most people tend to burn glucose. Glucose can be considered a "dirty fuel" because its metabolism produces ROS. It is also highly addictive; its removal from the diet can lead to common withdrawal symptoms such as headaches, nausea, malaise and lightheaded-

SELENIUM: Selenium is a nonmetal mineral, which when combined with a protein has antioxidant properties that protect the mitochondrial membrane. Selenium is found in Brazil nuts, fish, red meat, chicken, egg whites and milk. Dietary selenium is required to form biologically active selenoproteins, which are enzymes that function as antioxidants.²⁶ In *The Dark Side of Statins*, Dr. Graveline confirms that "well over 30 selenoprotein enzymes have been discovered for the element selenium, expressing an unusually wide range of physiological applications with multisystem involvement. These enzymes are highly beneficial in preventing mitochondrial damage, premature aging, and many chronic diseases—similar to the antioxidant role of CoQ1O."¹⁵ However, according to the National Institutes of Health Office of Dietary Supplements website, very high doses of selenium can be toxic.

B VITAMINS: The B vitamins are spark plugs for metabolism—especially B_{12} , B_6 , thiamin (B_1), riboflavin (B_2) and niacin (B_3). In symbiotic support, B_{12} is largely responsible for proper formation of every cell in the body, and B_6 is necessary for the complete digestion of all proteins. When B_2 and B_3 are utilized in the body, they convert to FADH₂ and NADH, key molecular elements of the ATP-producing Krebs cycle.

D-RIBOSE: D-ribose, which occurs widely in nature, is essential to make the energy-carrying ATP molecule and plays a role in energy recovery and fatigue prevention. D-ribose "comprises the backbone of RNA, the basis of genetic transcription and, through the removal of one hydroxyl group, becomes DNA. Because of this, D-ribose is a promising element of any attempt to repair DNA damage. Additionally, once phosphorylated, ribose can become a subunit of ATP."²⁷

L-CARNITINE: Found in animal tissue, L-carnitine acts as a carrier, moving fatty acids to the mitochondria. L-carnitine "is our only carrier for fat metabolism and without L-carnitine, all energy potentially derived from fat would be lost."²⁸

COD LIVER OIL: By providing omega-3 fatty acids, cod liver oil enhances the mitochondrial membrane, which allows the release of ROS, thereby reducing their danger. Research in *The Journal of Physiology* shows how "the current data strongly emphasize a role of omega-3 in reorganizing the composition of mitochondrial membranes." However, the Weston A. Price Foundation points out that while cod liver oil provides vitamins A, D, and omega-3 fatty acids, it's important to balance these with omega-6 arachidonic acid from animal fats.

ALPHA-LIPOIC ACID: Alpha-lipoic acid (ALA) is present in meat as well as vegetables and fruits in smaller quantities. ALA provides mitochondrial antioxidant effects and delays body aging. In an article in *Metabolism*, researchers affirm the disease-preventive qualities of lipoic acid, which "possesses antioxidative and antidiabetic properties."³⁰

ness. After becoming more informed about diet and nutrition, replacing a sugar-based diet with a diet based on healthy fats is, therefore, essential. Ketones—made from fat—are the preferred mitochondrial fuel because they are clean-burning, healthy and produce less ROS.

THE ROLE OF AMPK

AMPK (adenosine monophosphate-activated protein kinase) is an enzyme responsible for multiple metabolic functions. High levels of AMPK are found in the liver and brain as well as skeletal muscle. In a complex process, AMPK helps control metabolism by detecting and comparing the quantities of both ADP and ATP. If it senses that low-energy ADP is more abundant than high-energy ATP, AMPK becomes activated. Once activated, AMPK performs a variety of essential metabolic functions:

- It increases the levels of energy-charged ATP
- Changes fat metabolism by lowering triglycerides and raising HDL cholesterol levels, which decreases hard-to-lose visceral fat
- Decreases chronic inflammation
- Initiates autophagy (the purging of cellular trash) and mitophagy (the removal of dysfunctional mitochondria), both of which clean up cellular debris to increase lifespan
- Maintains cellular polarity needed to confirm tissue identity
- Promotes the formation of new mitochondria (mitochondrial biogenesis).

AMPK is not available in foods nor as a supplement but is activated by several herbal plants, some nutrients, lifestyle influences and some prescription medications. Researchers at Spain's University of Seville also have described how excessive quantities of food can deactivate AMPK and increase oxidative stress, exposing mitochondria to DNA damage.¹³ These imbalances in AMPK and mitochondrial function can initiate a cascade of inflammatory changes related to metabolic disorders such as obesity and diabetes that are at pandemic levels. As key elements for cellular energy production, AMPK and mitochondria require nutrient and lifestyle changes when imbalanced to activate AMPK as well as treat and remedy metabolic disorders.¹³

One researcher summarizes how AMPK's activation of mitochondrial function helps offset diseases and improves overall health as follows:

Indeed, current evidence indicates that AMPK activators may reduce risk for atherosclerosis, heart attack, and stroke; help to prevent ventricular hypertrophy and manage congestive failure; ameliorate metabolic syndrome; reduce risk for type 2 diabetes and aid glycemic control in diabetics; reduce risk for weight gain; decrease risk for a number of common cancers while improving prognosis in cancer therapy; decrease risk for dementia and possibly other neurodegenerative disorders; help to preserve the proper structure of bone and cartilage; and possibly aid in the prevention and control of autoimmunity.¹⁴

FURTHER MITOCHONDRIAL CARE

The proper feeding of mitochondria is the most important change to facilitate better health. Lifestyle changes such as intermittent fasting and exercise are also fundamental to wellness. Fasting, or more appropriately, intermittent fasting—a salutary habit of eating only during a six- to ten-hour period each day—increases and resets the mitochondria, changing them from sugar consumers to ketone consumers. During a fast, the body metabolizes body fat until food is available. Some fat is converted to ketones, a preferred fuel, thereby boosting and activating the mitochondria for fat digestion.

Exercise is the second mitochondrial builder. Because exercise requires energy, the mitochondria multiply to supply the extra energy. One researcher explains, "Endurance exercise training increases mitochondria size, number, and oxidative activity." Exercise can explain weight loss through this ability to increase the number of healthy mitochondria. Additional healthy mitochondria not only increase metabolism but also burn more fuel.

HEALTHY AGING

Current scientific research verifies the premise that both declining numbers and dysfunction of mitochondria translate into aging. As a physician-researcher, Dr. Graveline confirms with evidence and personal experience in *The Dark Side of Statins* that a debilitating aging process results from mitochondrial damage: "The mitochondrial theory of aging proposes that aging, and the development of age-related degenerative diseases, are primarily the result of accumulated oxidative damage to mitochondrial membranes and DNA, over time." ¹⁵

Thus supporting mitochondrial health can help control the aging process as well as improve overall health. Summarizing the current scientific and medical research, which individuals must consider as fundamental health care knowledge, researchers at the National Institutes of Health have acknowledged that "mitochondria appear to play a central role in regulating cellular life span." Stated another way, cellular longevity enhances human longevity.

Understanding how mitochondrial health

relates to overall health equips people to make choices that support wellness, help control body weight and manage the effects of aging—major aspects of happiness and a long life. From these observations about the mitochondria, one can also derive a general principle of cancer prevention: if something is known to cause cancer, it also damages mitochondria, and measures that prevent cancer will likely protect, heal and multiply the number of mitochondria. This knowledge puts the keys to health in each individual's hands.

Dr. Wayne Feister has had a 33-year general practice as an osteopathic physician in Rawson, Ohio, and specializes in musculoskeletal pathology. He received his degree in osteopathic medicine from Ohio University College, completed his internship at Osteopathic Hospital in Michigan and is certified in prolotherapy and sclerotherapy. He is vice president of both the American Osteopathic Association of Prolotherapy Regenerative Medicine and the Ohio Academy of Osteopathy, served as past chair of the Osteopathic Principles/Practices Committee (Centers for Osteopathic Research/Education) and is also a member of the International College of Integrative Medicine. He enjoys sharing his knowledge and experience with future medical professionals through positions at the Ohio University Heritage College of Osteopathic Medicine and Bowling Green State University Department of Public and Allied Health. He has collaborated on numerous published journal articles to increase public awareness of osteopathic medicine and prolotherapy. Dr. Feister also uses vitamin and mineral nutrition to remedy disease, as well as encouraging a traditional diet. A committed WAPF member, he has helped establish eight chapters and is a regular speaker at chapter meetings. A veritable country doctor, he and his wife follow a traditional diet, raise chickens and dairy cows and grow produce on their Ohio family farm. Dr. Feister acknowledges Carole Elchert's editing assistance for this article.

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Prenatal Ultrasound: Not So Sound After All

By the Children's Health Defense Team

Prenatal ultrasound is taken for granted as a component of modern maternity care, to such an extent that most obstetrician-gynecologists find it impossible to practice their profession without it. American women now routinely undergo four to five ultrasounds per pregnancy. Despite the absence of demonstrated benefits, there is also a trend toward "new applications of ultrasound. . .at earlier stages in pregnancy," including Doppler fetal heart rate monitoring, which magnifies the unborn baby's radiation exposure manyfold.⁴

A Scottish physician developed the first 2D ultrasound machine in the late 1950s. Intended for prenatal scanning as well as gynecological tumor diagnosis, the machine drew on the doctor's prior experience with military radar technology. Now, the latest growth sector in ultrasound technology is 3D imaging (which shows the baby's face) or 4D ultrasound that creates a "live video effect, like a movie"—luring parents into stockpiling "keepsake" footage of their baby's *in utero* facial expressions.⁵

While the U.S. Food and Drug Administration (FDA) tells prospective parents that ultrasound exams provide "a valuable opportunity to view and hear the heartbeat of the fetus, bond with the unborn baby, and capture images to share with family and friends"6—and the Centers for Disease Control and Prevention (CDC) denies any association between ultrasound and adverse maternal, fetal or neonatal outcomes⁷ not everyone shares the agencies' complacency. In fact, two recent books make the opposite case. One author—backed up by over fifteen hundred scientific citations—argues that prenatal ultrasound is so harmful to children that it "should be banned from obstetrics immediately."8 The other contends that the "subtle and not-so-subtle" biological effects of ultrasound "have set the human species on a tragic path" from which it may take generations to recover.9

KNOWN BUT HIDDEN RISKS

Few prospective parents realize that ultrasound technology is not just sound waves but is based on non-ionizing radiation.¹⁰ Other examples of manmade non-ionizing radiation include cell phones, cell towers, cordless phones and Wi-Fi. Although ionizing radiation (think X-rays) has the reputation of being more powerful, non-ionizing radiation is quite capable of producing biological effects¹¹—including altering and damaging cells.¹² In the mid-1980s, a best-selling doctor compared ultrasound to other "unproven" technologies "being sold to the public as being 'perfectly safe'" and scolded the medical profession for failing to take the "necessary steps to protect people against a malignant technology."13 Around the same time, the World Health Organization declared (in vain) that concerns about ultrasound's clinical efficacy and safety "do not allow a recommendation for routine screening."14

According to the author of one of the recent ultrasound critiques,⁸ the technology causes farreaching damage. Describing a series of studies published in the late 1970s¹⁵ and early 1980s,¹⁶ the author notes that "a single exposure to ultrasound produced cellular and DNA damage similar to 250 chest x rays"—and "[d]amage was permanent and heritable for ten generations

and beyond." Forms of damage included "DNA shearing, single and double strand breaks, chromosome rearrangements and DNA uncoiling, deformities and mutations in offspring, as well as the complete deactivation of genetic material within sonicated cells."

The second recent book summarizes fifty studies of prenatal ultrasound in China, describing "alteration and injuries in the organs, tissues [and] cellular ultrastructures" and "damage to the cytokine signalling in molecules, red blood cells, neurons and mitochondria."13 The author notes that the physics of ultrasound are "dramatic"; for example, industry uses ultrasound "to disintegrate and blend materials, and to weld steel."9 Airing the concept of "toxic synergy," the book also suggests that "ultrasound is an effective synergist. . . theoretically capable of initiating fetal vulnerabilities to subsequent toxic exposure"; thus "the risk of subsequent exposure to vaccines, birth drugs, antibiotics and other environmental stressors would be raised by prenatal ultrasound, not in addition, but as a multiplier" [emphasis added].17

ULTRASOUND AND AUTISM

Many researchers have noted that the safety of ultrasound devices depends, among other factors, on the amount of "output energy. . . to which the fetus is exposed."18 In the late 1980s, the ultrasound industry approached the FDA with a request to augment existing output levels "to enhance diagnostic capability," and in 1991, the agency acquiesced to an eightfold increase in allowable output exposure levels.¹⁸ When, twenty years later, FDA researchers compared ultrasound trends before and after the 1991 regulatory change—focusing in particular on the potential for "tissue heating"—they reported "a substantial increase in ultrasonic power over time" and cautiously concluded that their temperature rise estimates "could be considered potentially harmful."18 Stated more directly by other authors:

This FDA action ensured that babies born after 1991 would be exposed to even more radiation as compared to those born in the 1970s and 80s, hence these children have

"A single exposure to ultrasound produced cellular and DNA damage similar to 250 chest x rays" and "damage was permanent and heritable for ten generations and beyond."

Casanova frankly states that "[u]ltrasounds are being done without regards to the safety of the patients." a greater risk of radiation-induced genetic and/or brain damage that can lead to autism and other neurodevelopmental disorders.⁴

Researchers have pointed out that the autism epidemic took off at around the same time that ultrasound use and intensity increased. ¹⁹ To explain this association, they note the presence of central nervous system alterations in animals exposed to ultrasound *in utero*. For example, a study in mice found that fetal exposure to diagnostic ultrasound altered "typical social behaviors. . . that may be relevant for autism." ²⁰

Swedish researchers writing in 2016 compared autism rates in children born between 1999 and 2003 who had been exposed to ultrasound at either twelve or eighteen weeks' gestation. The authors found similar rates of autism in both groups but called for further research, noting that their results could not speak to current ultrasound practices. "Today," the authors stated, "higher intensity ultrasound scans are performed more frequently, at earlier stages during pregnancy and for non-medical purposes, implying longer exposure time for the fetus." 21

Manuel Casanova, a researcher at the University of South Carolina-Greenville, has coauthored numerous studies describing the autistic brain and delving into ultrasound's effects on the brain. Espousing a "triple hit" hypothesis of autism²² that involves (1) external stressors (2) during a critical period of brain development in fetuses with (3) underlying vulnerabilities, Casanova suggests that prenatal ultrasound may be a key stressor.²³ According to Casanova, ultrasound preferentially affects cells with a "proclivity for being deformed," activating mechanisms having to do with cell growth and cell division and causing certain cells "to divide at a time when they should not divide."24 "Ill-timed activation or overactivation" of certain pathways via ultrasound can also lead to unwanted cell proliferation or maldistribution of neurons.²³ Other researchers have confirmed the ultrasound-autism relationship within the "triple hit" context.25

Casanova frankly states that "[u]ltrasounds are being done without regard to the safety of the patients."²⁴ He points out that a third of all

ultrasound practitioners fail to adhere to safety regulations and notes that at least 40 percent of ultrasound equipment is defective. In addition, he observes that many practitioners "don't see anything wrong" with using ultrasound during the first trimester, even though safety regulations discourage first-trimester use in uneventful pregnancies.²⁴

ROLLBACK NEEDED

It is unlikely that the medical community will readily ban the lucrative practice of prenatal ultrasound, but consumers are in a position to help roll back the technology's overuse by withdrawing their consent. There is little evidence that diagnostic ultrasound is saving lives or improving outcomes, and considerable evidence that it is unsafe.26 Risks in addition to autism include fetal growth retardation, other brain abnormalities and both male and female infertility⁴ as well as broader vulnerability to disease.9 Given that ultrasound damage may not become apparent until years down the road, it behooves parents-to-be to learn the facts and decide whether a souvenir image or movie is worth the risk to their child's long-term health.

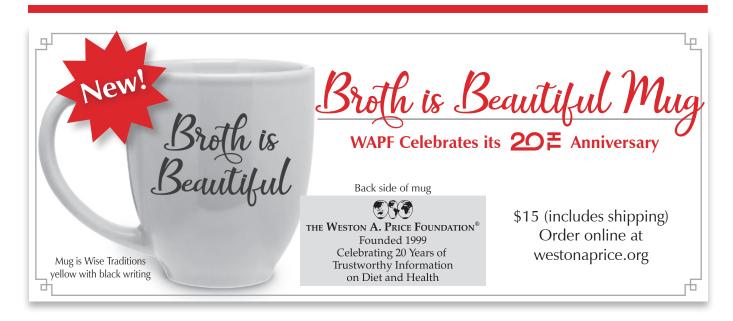
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Dissecting Those New Fake Burgers

By Sally Fallon Morell

The call to embrace these ersatz products aims not so much at vegetarians and vegans, but at "lessetarians," those interested in cutting back on meat. Meat alternatives now constitute about 5 percent of meat sales, and experts are predicting rapid growth during the next few years, similar to the growth of non-dairy "milks."

The same arguments used to promote earlier generations of "tasteless puck" like bean-and-mushroom patties are helping boost sales for the new products: "Eat our fake food and you'll be healthier and save the planet." Unfortunately, the new-generation fake foods are even faker than their predecessors, containing highly manipulated proteins, factory starches, artificial flavors and other questionable ingredients.

LAB MEAT

All the chic arguments are on display for laboratory-produced meat or lab meat. Sometimes also called "unmeat," "cultured meat" or even "clean meat," lab-grown meat is produced by culturing animal tissue. "Save the planet bite by bite" is one of the PR slogans. If we eat lab meat instead of real meat, the marketers claim, we'll save the land from desecration by cattle, cut down on water use, protect the air from methane-filled cow farts and forestall global warming. Enthusiasts tell us that lab meat would also be kinder because no animals would be killed.

As one puff piece puts it: "Livestock farming is a known contributor to greenhouse gas emissions, pollution, and deforestation, and a huge consumer of water, energy, and chemical fertilizers and pesticides. The production of meat through tissue culture could have immense effects in reducing the environmental impact of our agriculture system, minimizing threats to public health, addressing issues of animal welfare, and providing food security. Cultured meat represents the crucial first step in finding a sustainable alternative to meat production." I

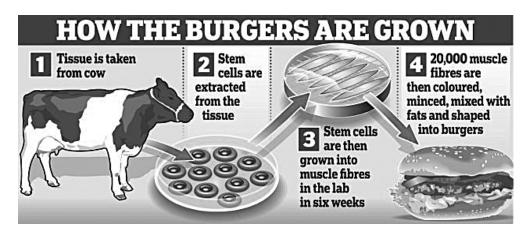
Proponents claim even more benefits: lab meat could be made on demand in poor countries that can't afford refrigeration, making "unmeat an enormous boon for energy-poor developing regions." And lab meat could provide "very soft and tender meat for elderly people." Lab meat would be healthier, too, because it could be engineered to contain less saturated fat

and heme iron, and more omega-3 fatty acids.2

According to the Australian Julian Savulescu, described as a "bioethicist," "Artificial meat stops cruelty to animals, is better for the environment, could be safer and more efficient, and even healthier. We have a moral obligation to support this kind of research. It gets the ethical two thumbs up."³

A dirty little secret about lab meat is that the cells need a nutrient-rich "serum" in which to grow. For animal cells, the serum comprises sugars (probably derived from corn), amino acids (probably made in China, and usually made out of corn or soybeans) and animal blood. The blood that all lab-grown meat so far requires is a product called fetal bovine serum or FBS. FBS is a byproduct made from the blood of cow fetuses. If a cow coming for slaughter happens to be pregnant (often the case with dairy cows), the cow is killed and bled, and then the fetus is removed from the womb and brought into a blood collection room. There, the still living fetus gets a needle inserted into its heart. It takes about five minutes for the fetus to die while its blood drains away. Technicians then refine the blood to make FBS. Since the demand for FBS is high (it's used for other purposes, such as making vaccines), millions of bovine fetuses meet their end in this cruel way. Does this really represent an "ethical two thumbs up"?

Recognizing this problem, a company called Meatable says it has figured out how to make a serum from stem cells taken from umbilical cords, called pluripotent stem cells. But A dirty little secret about lab meat is that the cells need a nutrient-rich "serum" to grow in. For animal cells, the serum comprises sugars, amino acids and animal blood.



Fetal bovine serum (FBS) made from the blood of cow fetuses is used to feed the stem cells.

The real answer to the crazy factory farm system is to put our animals back on pasture eating the food they were designed to eat.

other lab meat start-up companies have avoided using pluripotent stem cells because they are hard to control in a lab environment. Meatable has raised more than three million dollars so far to prove that it can live up to its claims.

Arguments for lab meat capitalize on the fact that factory production of beef (and other animal foods, from pigs to fish) is an abomination; basically, modern agriculture has turned the sacred cow into a receptacle for corn—which suits the U.S. Department of Agriculture (USDA) just fine because its mandate is to sell grain, not to promote any kind of rational agricultural policy. The result is vast monocropped fields poisoned with Roundup and other noxious chemicals and requiring huge amounts of water, along with animals crowded together in feedlots, creating a festering environmental nightmare.

All of the hype about lab meat begs the question; why not just eat meat from animals humanely slaughtered rather than promote a processed product tied to so much suffering? The real answer to the crazy factory farm system is to put our animals back on pasture eating the food they were designed to eat, using portable electric fencing to move them daily to new pasture. A pasture-based grazing system maximizes soil fertility and hastens the creation of topsoil. The Earth has millions of acres available to raise livestock this way, most of which cannot support the production of grains or produce. Properly raised, beef is the most environmentally friendly meat, because—unlike poultry, fish or pigs—beef animals will grow well without any grain whatsoever. The only water they need is the water they drink—which is much less per pound of beef than what's needed to produce a loaf of bread. But why mention such a sensible solution when you've got grant money to develop lab meat?

Will lab meat require less energy to produce than real meat, so that it "could be made on demand in poor countries that can't afford refrigeration?" One skeptic, Margaret Mellon of the Union of Concerned Scientists, speculates that the energy and fossil fuel requirements of large-scale cultured meat production may be more environmentally destructive than producing food off the land. The bioreactors needed

to produce lab meat require a lot of energy, as does the production of sugars and amino acids for the growth serum. Sorry, but I don't think that lab meat is a priority for "countries that can't afford refrigeration." These countries need live animals on small farms, so that they can collect eggs, milk and meat from the land and eat them immediately.

By the way, a good question to ask is whether lab meat will require more corn than feedlot beef? My guess is that the amount will be similar. Moreover, all that corn will be sprayed with Roundup and other chemicals. No one is making the claim that lab meat will be organic.

Furthermore, it would be a mistake to assume that lab meat is a clean product free of antibiotics and other harmful chemicals. In addition to FBS, the serum in which the cells are grown often contains antibiotics. One report touts cultured (lab) meats as sterile and therefore requiring "much less nitrate" to stay safe to eat, but wait a minute! If I eat a steak or hamburger from a grass-fed steer, it will contain neither antibiotics nor nitrates. Cultured meat production also requires a preservative, such as sodium benzoate, to protect the growing meat from yeast and fungus. Other items used in different ways during the manufacturing process may include nonorganic or GMO-derived collagen powder, xanthan gum, mannitol and cochineal.

Will lab meat products contain vitamins B₁₂ or B₆, or serve as a rich source of zinc and iron—as real beef does? No information on this question is forthcoming.

Proponents of lab meat claim that it could be healthier than beef if they engineer the product to remove the heme iron or to contain more omega-3 fatty acids. However, without heme iron, the product would be yellow, not red, and would require food coloring. Too much omega-3 would give the meat a fishy flavor. Lab meat fabricators do add fat to make the product tender and juicy, but what kind of fat? It's not grass-fed beef tallow, for sure! The added fat most likely is some kind of hardened industrial seed oil, or possibly coconut oil.

And that brings us to the subject of flavor. In spite of glowing reviews, the stuff just doesn't taste very good—"metallic" is one description

for it. However, according to Marie Gibbons, a researcher from North Carolina State University working on cultured meat production, there is "no limit" to what scientists eventually could do with flavor. "There's no doubt that [cultured products] can be manipulated to achieve good flavour—it's just a case of what chemicals react with your taste buds," she says. She thinks cultured meats could eventually be "tastier" than traditional meat, but those tastes will likely be added after production in the form of MSG and other artificial flavors.⁵

One thing for sure, lab meat ain't cheap. The first cultured beef burger patty, created by Dr. Mark Post at Maastricht University and eaten with a Steve Jobs-like flourish at a demonstration in August 2013, cost over three hundred thousand dollars to make. One company claims that it has gotten the cost down to just over eleven dollars per pound, still too expensive to compete with real meat. But that hasn't deterred investment in more university research and dozens of start-ups. Many university laboratories from around the world are working on cultured meat research, and there are over thirty start-up companies in the field, all flush with investor money and enthusiasm.

For example, a company called JUST (founded in 2012 as Hampton Creek, which produced such failed vegan products as Just Mayo) has about one hundred thirty employees and a research department of fifty-five scientists developing lab-produced poultry, pork and beef. They have received funding from Chinese billionaire Li Ka-shing, Yahoo cofounder Jerry Yang and Heineken International, among others.

Seems like investors are just lining up to throw their dollars at technology's latest thing. But I have a prediction for them. Lab meat will be no more successful than soy burgers or Just Mayo. People today want real food, and vegans are mostly too poor to afford highly processed food like "cultured" meat. But meanwhile, lab meat is a good way to separate a lot of dot-com millionaire fools from their money.

BIG YAWN BURGERS

The Beyond Burger, manufactured by the Beyond Meat company, advertises itself as "the

world's first 100% plant-based burger that looks, cooks and satisfies like ground beef."

The ingredients: pea protein isolate, expeller-pressed canola oil, refined coconut oil, water, yeast extract, maltodextrin, natural flavors, gum arabic, sunflower oil, salt, succinic acid, acetic acid, non-GMO modified food starch, cellulose from bamboo, methylcellulose, potato starch, beet juice extract (for color), citrus fruit extract (to maintain quality) and vegetable glycerin.

The company has made a few changes, according to a *Washington Post* article⁶ amusingly titled "Little flecks of 'fat' put Beyond Meat's burger a big step closer to beef." The changes include adding bits of cocoa butter, mung bean and rice proteins, and apple extract (so that it browns better when cooked), which "improves the taste and texture of the burgers."

A few national restaurant chains and grocery stores already sell Beyond Burgers. The Silver Diner uses the Beyond Burger glop for burgers and meatballs, with a vegan meatloaf coming soon. With all the hype, the Beyond Meat stock price has soared, up to over one hundred eighty dollars per share since its twenty-five-dollars-per-share initial public offering (IPO).

Is the Beyond Burger healthy and safe to eat? According to blogger David Gumpert, "I know many people here hate the idea of artificial-any-food, but I take a different view. So long as it's made from healthy and natural products—in this case, a variety of plant items—I say go for it, if there's a market for it. From all I can tell, Beyond Meat is much healthier than any of the meats put out by the Big Ag companies with their antibiotic-laden products from their polluting CAFOs."

Are Beyond Meat burgers made with "healthy and natural products?" Let's take a look, starting with pea protein isolate. Here's a description of how it's made:

The isoelectric precipitation process for pea protein isolate production consists in milling of the peas, solubilization of the proteins in 30 – 50°C water adjusted to pH 8 to 11 with a base, followed by centrifugation to remove the insoluble components. Starting material for the protein solubilization step can also be the pea residue resulting from the starch extraction process. The pea proteins present in the supernatant are then precipitated out at their isoelectric pH (4.2) to 4.5) by addition of a mineral acid, and they are recuperated by a second centrifugation step. The curd is suspended in water to remove the sugars and minerals and after reconcentration by applying a third centrifugation step, it is neutralized to pH 7 with a dilute base and dried using a spray-dryer to produce an isolate. [...] The isolates produced by isoelectric precipitation have poor solubility possibly due to protein denaturation and to their high phytic acid content which alters the solubility of plant protein isolates especially at low pH. This process also requires a large amount of water (extraction, washing of the curd and neutralization steps) and generates significant volume of effluents (isoelectric precipitation and washing steps) making it more or less attractive from an environmental point of view.⁸

Note that this process denatures the proteins and contains a high phytic acid content. Phytic acid blocks the uptake of important minerals like iron and zinc, already low in pea protein. (A regular burger contains a lot of zinc and iron, and in forms that are easily absorbed, not blocked by phytic acid.) Mung bean and rice protein isolates are manufactured in a similar fashion

More importantly, the peas have not gone through the critical process of soaking and cooking, which gets rid of pesky tannins and enzyme inhibitors, so expect digestive distress if you are eating a lot of Beyond Burgers (or maybe even one).

Making protein isolates also requires a large amount of water, generating a "significant volume of effluents." In other words, like beef raised in CAFOs, you need a lot of water to make a Beyond Burger, and the runoff is polluting.

The main oil used in Beyond Burgers is canola oil, which is bound to be GMO and loaded with glyphosate. And remember that glyphosate is an antibiotic, every bit as harmful to your gut flora as the antibiotics given to cattle in feed lots.

There's nothing wrong with the coconut oil—probably the only "healthy and natural" ingredient in the Beyond Burger.

A total of eight ingredients—yeast extract, maltodextrin, natural flavors, succinic acid (made with genetically engineered organisms), acetic acid, beet juice extract (for color), citrus fruit extract (to maintain quality) and apple extract—provide flavor components, and all are likely to contain free glutamic acid, otherwise known as MSG. A burger made with real meat gives us that real umami taste with the simple addition of salt.

With all these strange ingredients, it's comforting to know that the modified food starch is non-GMO. . . . However, I do wonder about the inclusion of cellulose from bamboo and methylcellulose—humans can't even digest cellulose! Another chance for digestive distress after a Beyond Burger meal.

Bottom line: there's nothing to celebrate in Beyond Burgers—they're made of the same ole', same ole' combination of isolated proteins, industrial seed oils and MSG-laden flavorings. Better to call them Big Yawn Burgers. The one innovation is the beet juice extract, to make the burgers look like they're bleeding. Let's stock up for Halloween!

While Beyond Meat stock shares have climbed and climbed, I predict that we will now see a slow decline as people realize that this yucky stuff is no better than the original "tasteless puck" veggie burgers. Maybe folks will get a warm and fuzzy good feeling about saving the environment, but that may soon evaporate with the tummy ache and headache (from all the MSG) that are bound to follow.

IMPOSSIBLE BURGERS—SOY DISGUSTING

A final fake meat product to hit the market is the Impossible Burger, made from genetically modified soy protein concentrate. Impossible Foods CEO and founder Pat Brown makes his commitment to GM soy and his long-term agenda clear in a recent press release:9

We sought the safest and most environmentally responsible option that would allow us to scale our production and provide the Impossible Burger to consumers at a reasonable cost. And the unambiguous winner was American-grown, milled and processed GM soy that meets the highest global standards for health, safety and sustainability. [emphasis in the original]

This choice allows us to continue making a product that rivals beef for flavor, texture, nutrition and versatility. And it keeps Impossible Foods on target to achieve our mission: to end the use of animals in food production by 2035, halting and reversing its catastrophic impact on climate, land, water and the ongoing meltdown in biodiversity.

According to Brown, we face a wildlife holocaust caused by animal agriculture.

In a recent TED talk, Brown reveals the typical viewpoint of today's scientists—life "evolved" by chance so there are mistakes, but we clever wizards can fix them. Animals are an unsustainable technology for transforming plants into meat, he asserts. It sounds "insane," says Brown, but humans making meat from plants "has to be done," and "we're going to do it better." This doesn't *sound* insane, it *is* insane.

Here's the list of ingredients in the Impossible Burger: water, soy protein concentrate, coconut oil, sunflower oil, natural flavors, 2 percent or less of: potato protein, methylcellulose, yeast extract, cultured dextrose, food starch modified, soy leghemoglobin, salt, soy protein isolate, mixed tocopherols (vitamin E), zinc gluconate, thiamine hydrochloride (vitamin B_1), sodium ascorbate (vitamin C), niacin, pyridoxine hydrochloride (vitamin B_6), riboflavin (vitamin B_2), vitamin B_{12} .

How is soy protein concentrate made? As far as I can tell, the manufacturing process does not involve a lot of heat, and therein lies the problem. There's probably no food that contains more antinutrients than

soy, and without heat applied in the processing, they will largely remain—actually will be hugely concentrated—in the soy protein concentrate.

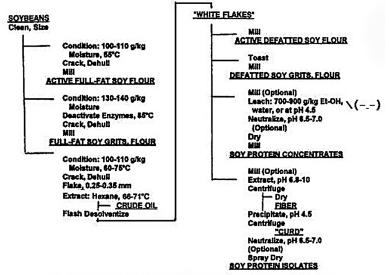
The antinutritional factors in soybeans include:

- Protease inhibitors (inhibit protein digestion, cause swelling of the pancreas)
- Saponins (cause agglomeration of red blood cells)
- Lectins (interfere with digestion)
- Estrogens (cause hormone disruption)
- Goitrogens (depress thyroid function)
- Cyanogens (degrade to cyanide in the digestive tract)
- Phytate (blocks mineral assimilation)
- Oligosaccharides (indigestible for humans, cause diarrhea and flatulence)
- Antigens (cause allergic reactions).

Processing may reduce the levels of some of these compounds, but never all of them. They are there in spades—along with lots of glyphosate residues—in a product that Brown has the effrontery to call "healthy" and "safe." An analysis by Moms Across America found that the Impossible Burger tests eleven times higher for glyphosate weed killer residue than the Beyond Meat burger, made from non-GMO peas.¹¹

But back to the ingredients. You'll notice that the Impossible Burger contains fewer flavoring ingredients than the Beyond Burger, just yeast extract and natural flavors, to give the product a meaty, umami taste. However, another source of the Impossible Burger's meaty taste—and of its red-colored beefy appearance and tendency to "bleed"—is soy leghemoglobin, described as follows:

Soy Processing for indirect food/supplement usage



(Modified from: Lusas EW, Riaz MN. Soy protein products: processing and use. J Nutr. (1995)

Soy leghemoglobin is short for legume hemoglobin—the hemoglobin found in soy, a leguminous plant. Leghemoglobin is a protein found in plants that carries heme, an iron-containing molecule that is essential for life. Heme is found in every living being—both plants and animals. (Heme in animals is carried by "hemoglobin" and "myoglobin" among other proteins.) [...] We make the Impossible Burger using heme from sov plants—identical to the heme from animals—which is what gives it its uniquely meaty flavor. . .. Back in our research days, we used to harvest leghemoglobin directly from the roots of soy plants. But we soon realized that in order to make enough plant-based heme to feed the world—and avoid the destructive environmental impact of animal agriculture—we would need to make it using fermentation. The heme in Impossible Burger is made using a yeast engineered with the gene for soy leghemoglobin. First, we grow yeast via fermentation. Then, we isolate the soy leghemoglobin (containing heme) from the yeast, and add it to the Impossible Burger, where it combines with other micronutrients to create delicious, meaty flavor.¹²

Is soy leghemoglobin safe? According to the Institute for Responsible Science, when Impossible Foods originally submitted the product to the U.S. Food and Drug Administration (FDA), the agency refused to grant it GRAS (Generally Recognized as Safe) status, noting that soy leghemoglobin has never been in the human food supply and lacks adequate safety testing. Furthermore, the testing that has been done identified forty-seven additional uncharacterized, unintended and untested proteins in the fermentation brew. In addition, soy leghemoglobin may contain many potentially dangerous metabolites and compounds.¹³

And there's another possible problem with soy leghemoglobin: will the body be able to incorporate the manufactured heme into the blood, or will it shunt the heme to storage in the liver, causing problems like hemochromatosis?

safe and can provide an adequate substitute for meat. It's a pity he did not interview some of the men in the Illinois prisons before he started his fundraising efforts—he's raised four hundred million dollars to date from tech billionaires like Bill Gates. Between 2003 and 2018, these Illinois inmates received a "planet-saving" diet virtually devoid of meat but loaded with imitation foods containing soy protein isolate and soy protein concentrate, with naked soy flour added to the baked goods. (Only the men got the soy diet; the women stopped menstruating after just a few months, so the Department of Corrections eliminated the soy and gave them meat again.) Some of the health problems suffered by the men included horrible digestive problems, such as pain after eating, nausea, diarrhea, constipation, flatulence and gas (remember, these are men living in close quarters); debilitating thyroid problems; heart arrythmias; growth of breasts (called bitch tits); and erectile dysfunction (called chemical castration).

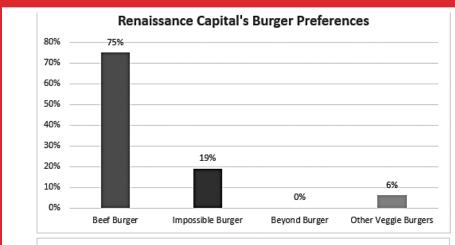
True, the soy the prisoners got did not

"bleed" like the Impossible Burger, but the men did a lot of bleeding, mostly in the form of bloody diarrhea.

Burger King has debuted Impossible Burgers in a few locations and promises to have them soon in every restaurant. But as one of our prison friends puts it, "Going to a fast food joint for a veggie burger is like going to your favorite prostitute for a hug."

The Impossible Burger won't prevent a wildlife holocaust—on the contrary. The monocropping of soy is killing animals and prompting loss of biodiversity. While objecting to the environmental damage caused by industrial livestock production, writer Anna Lappé observes that "just because [a meat substitute] is not meat, doesn't mean it's a planetary panacea." Lappé points to new evidence that "we are teetering on the edge of an era of massive extinction, propelled in large part by the very pesticides and practices used with genetically engineered crops like that soy destined for Impossible Burgers." Lappé also reminds us of the 1,345 percent increase in the amount of glyphosate used on GMO crops like soy between 1990 and 2014 (from about eight million pounds applied in 1990 to two hundred and fifty million pounds used in 2014).

In other words, the soy-laden Impossible Burger could lead to a human holocaust. Fortunately, it won't take long for folks to figure out that the Impossible Burger is just a creepy revival of the push to sell soy, the most toxic product in agriculture.



Which tasted better, Impossible or Beyond? 100% 100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% 0% Impossible Burger Beyond Burger

TASTE TEST

Recently a team of stock analysts from Renaissance Capital met for a taste test, pitting the Beyond Burger against the Impossible Burger.

And the winner was. . . real beef.

While the analysts managed to say good things about the new products, they overwhelmingly preferred the taste of natural meat. The runner-up was the Impossible Burger; if given the choice between Beyond and Impossible, the choice was unanimous for Impossible.¹⁵ Gotta hand it to soy leghemoglobin!

Sally Fallon Morell is the author of the cookbook Nourishing Traditions (1996) and many other titles, including her latest book Nourishing Diets (2017). She serves as founding president of the Weston A. Price Foundation.

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HONORING KIM SCHUETTE by her daughter, Jenna Schuette Talbot

Kim's passion for nutrition and holistic health began at the young age of sixteen, when doctors offered her little hope in treating a health condition. Determined to avoid a lifetime of prescription drugs, she healed herself through nutrition and natural remedies. She went on to earn her certification as a certified nutritionist and established Biodynamic Wellness, a health and wellness practice located in Solana Beach, California, serving clients across the country. Kim drew upon the dietary principles taught by Dr. Weston A. Price along with real food-based nutritional therapies and biotherapeutic drainage therapy to support gut and digestive disorders, hormonal imbalances, ADD/ADHD challenges and autoimmunity. Biodynamic Wellness continues today, with a strong team of nutritionists mentored by Kim, who are committed to supporting people in their health challenges.

Kim's kitchen was a popular place. There, you could always find a wise, listening ear and a nourishing meal in preparation. She was generous with her time and knowledge—humble and selfless in light of her impact and accomplishments.

Kim took the responsibility of her knowledge seriously; she taught whenever she could. In San Diego, she launched a WAPF mothers group to help moms apply the research of Dr. Price and create a healthy start for their families. She was a frequent contributor to the *Wise Traditions* journal and taught seminars across the country, including at WAPF's annual conference, on topics ranging from mindful conception and female hormonal concerns to children's health, healing with the GAPS diet and transitioning to a whole foods diet. She became a WAPF chapter leader in 2008 and received the Activist Award from the Foundation in 2012 for her work in children's nutrition and preconception nutrition. In 2014 she joined the WAPF board of directors as an active and invaluable member. Sally and WAPF's staff often turned to Kim for

her calm, wise and loving advice, and she was always willing to help. At conferences, she also gave of herself, sharing her knowledge and care with attendees.

Kim was more than a nutritionist or someone to call when your child had the stomach flu. She was your advocate. She took it personally and bore your burden with you. Her tenacity and devotion brought her right there in the trenches with you—asking tough questions at the hospital, coming over late at night for a high fever, welcoming you into her home for an after-hours appointment, researching and networking to find the right supplement or health care provider specifically for you.

On December 25, 2018, Kim passed away peacefully at home surrounded by her family. Kim will be remembered for her devotion to her family and friends, for helping heal so many people through her nutrition practice, and for her ardent Christian faith.



Kim Schuette, late Vice President of WAPF (right) with Kathy Kramer, Executive Director

Reading Between the Lines

By Merinda Teller

Debunking the Myth That Microwave Ovens Are Harmless

In 1974,
Consumers
Union told
the public to
"beware the
microwave
oven,"
warning that
credible
safety data
were lacking.

Does anyone in the United States *not* have a microwave oven? As of 2011, the U.S. Census Bureau reported "nearly universal" coverage—97 percent of U.S. households¹—up from about one in four households in the mid-1980s and barely one percent in 1971.² Apparently anticipating the growth trend that was to come, the Bureau of Labor Statistics added microwave ovens to the Consumer Price Index "basket of goods" over forty years ago.³

Defense contractor Raytheon introduced the first commercial microwave ovens just after World War II, repurposing magnetron tubes used during the war for short-range military radar.4 In fact, according to some historians, microwave radar was "the technology that won the war." Seeking new peacetime applications, Raytheon developed and marketed its "massive" and expensive Radarange microwave ovens to restaurants and airlines beginning in 1946; by the mid-1950s, Raytheon was licensing its microwave technology to other companies.4 Relatively affordable consumer models began catching on in the late 1960s, and, as of 2017, North America's nineteen billion dollar market share had made it the "numero uno region" for microwave oven sales.6

EARLY CONCERNS

Despite the microwave oven's meteoric rise to prominence in the American marketplace, consumer groups raised concerns about the appliance's safety early on. In 1974, with an estimated six hundred thousand microwave ovens in U.S. households, Consumers Union told the public to "beware the microwave oven," warning that credible safety data were lacking. (Some consumers also remained unpersuaded about the newfangled ovens' cooking abilities. A Connecticut woman stated, "Everything cooks so darn fast. You open the door and it's not done.

You leave it in another 30 seconds and it's hard as a rock."7)

Most of the initial health worries about microwave ovens focused on the potential for radiation leakage. Situating microwave ovens in the wider context of the electromagnetic spectrum, an expert tester of microwave ovens wrote in 2010 "In the electromagnetic spectrum there is nothing but a judgemental line of demarcation separating x-rays from microwaves."8 The professional added, "Similar to an x-ray machine, a microwave oven has a tremendous potential for harm if something goes wrong. It belongs, not in a kitchen, but in a laboratory where it is subject to regulation."8 Over time, critics began highlighting other issues as well, raising questions about flavor, leaching of plastics and, perhaps most critically, the altered nutritional and chemical properties of microwaved food.

COOKING FROM WITHIN

Contrary to conventional ovens, microwave ovens heat food "from the inside and not from the outside." In a uniquely violent cooking process, microwave ovens bombard food with waves that primarily zero in on a food's water molecules, bouncing "around and through an item being cooked" and generating frictional heat

Microwave ovens operate at a frequency of 2.45 gigahertz (Ghz)—the same radiofrequency used by pervasive in-home wireless technologies such as 4G Wi-Fi routers, Bluetooth earpieces, cordless phones and baby monitors.¹¹ What this means is that the electromagnetic waves from microwave ovens (and their fellow electronic devices) "whip every cell within range back-and-forth 2.45 billion times every second," producing, as one writer refers to it, "Shaken Cell Syndrome."¹²

Although companies and regulators generally are content to let consumers assume "that food from the microwave-oven is not better or worse than food cooked conventionally." the contrary is true.¹³ In fact, those who have studied the microwave oven's effects on food caution that the ovens not only produce heat but also "athermic" effects, "meaning interaction between microwave radiation and structures in living organisms not caused by frictional heat."14 According to a widely dissiminated article written in the mid-1990s, "There are no atoms, molecules or cells of any organic system able to withstand such a violent, destructive power for any extended period of time."15 The result is "destruction and deformation of molecules of food, and. . . the formation of new compounds. ... unknown to man and nature."15

In the early 1990s, Swiss scientists Hans Hertel and Bernard Blanc wondered what happens to people who eat microwaved food. They conducted a small study—self-financed because Switzerland's National Fund argued that "there was no need for research in this particular field of science"14—which showed that microwaveprepared foods caused immediate "abnormal changes in the blood of test-persons indicating disorder."13 Examining a variety of indicators, the research duo found that each one "point[ed] in a direction away from robust health and toward degeneration."15 In calling attention to the "destructive properties of microwaves," they also noted the potential for "an inductive transfer of radiation-energy. . . via irradiated food into living organisms."13

Swiss industry did not take kindly to the results of the study, which raised serious doubts about microwave safety. As Dr. Hertel wrote in 1999, "strong economic interests are at stake which impede the discovery of the truth." So

great was the immediate industry pushback that Professor Blanc quickly and publicly distanced himself from his results, while privately admitting "that he feared consequences and that the safety of his family was more important to him than anything else."14 Dr. Hertel stood firmer, despite aggressive attempts to tarnish his reputation. His compelling evidence in a 1992 television interview prompted the television host to tell viewers "to take their microwave ovens and put them in the cellar."¹⁴ In 1993, a regional court in Switzerland took more decisive action to silence Dr. Hertel, prohibiting him—under penalty of steep fines and even imprisonment—from "declar[ing] that food prepared in microwave ovens is dangerous to health and may lead to pathological changes in the blood as also indicative for the beginning of a cancerous process."17

FOLLOW THE MILK

While the Swiss scientists focused on changes in the blood of humans who consumed microwaved food, other researchers, around the same time, began looking at what microwave heating does to food, and particularly to various forms of milk. This work—which highlighted the worrisome microwave-induced transformation of beneficial nutritional components into more toxic forms—provided further support for the Swiss scientists' contention that microwaved food is a bad idea.

In the late 1980s and early 1990s, researchers showed that microwave warming of frozen human breast milk was "inappropriate" due to the technology's effects on the content of the milk's beneficial IgA antibodies,¹⁸ which protect breastfed babies from infection.¹⁹ A 1992 study by Stanford researchers confirmed that high-temperature microwaving of frozen breast

Dr. Hertel's compelling statements in a 1992 television interview prompted the television host to tell viewers "to take their microwave ovens and put them in the cellar."

TRANSFER OF MICROWAVE ENERGY VIA FOOD INTO BLOOD

In his study, Dr. Hans Hertel asked the question, "Does the microwave energy accumulate in the food, and does it pass from the food into the blood?" The study's results suggested that the answer is yes. Dr. Hertel wrote:

The energy which allows a body to maintain and control its functions is derived from sunlight, and is absorbed directly from the sun's rays as well as indirectly, i.e. by means of food. If this energy is changed, such as in the case of microwave radiation, then it retains its destructive quality in the food and consequently in the blood of the body that consumed it. The problem then lies not only in the fact that the destructive energy remains hazardous in the food, but also that it damages the body afterwards in the same way.¹⁴

The eyecatching headline screamed, "Super-heated babies' milk can lead to brain damage." milk not only "caused a marked decrease in activity of all the tested antiinfective factors" but also allowed undesirable *E. coli* bacteria to spread eighteen times faster compared to non-microwaved milk.²⁰ Even lower-temperature microwaving accelerated *E. coli* growth by a factor of five. The Stanford authors concluded that their findings raised questions about microwave safety at any temperature.

In a 1989 letter to the editor of *The Lancet*, Austrian scientists summarized research showing that microwave treatment of milk formula produced hazardous changes in amino acids (the building blocks of proteins) that could lead to "structural, functional, and immunological changes"; they also reported the presence in microwaved milk formula of an altered form of the amino acid proline which, unlike normal proline, is toxic to the brain, liver and kidneys.²¹ In a press blurb that picked up on the *Lancet* letter, the eye-catching headline screamed, "Super-heated babies' milk can lead to brain damage"; the article reported that "the time-

saving ovens turn proteins in milk into *poisons* that attack vital organs. . . with possibly fatal results" [emphasis in original].²²

In 2005, a Jordanian-based researcher compared various types of heat treatment (microwaving, boiling and pasteurization) for two types of milk (raw cow's milk and reconstituted powdered milk). Looking at the milk's cholesterol contents, the researcher determined that microwave heating was "highly detrimental to quality compared to the other heating method[s] due to its unique heating mechanism."23 Microwave heating-far more than the other methods—caused a significant increase in the level of carcinogenic cholesterol oxidation products, putting "a big question mark on the use of microwave oven in food processing and preparation."23 (As a secondary finding, the researcher also noted the nutritional "unsuitability" of powdered milk.)

Milk is a rich source of microRNA (abbreviated as miRNA), which plays an important role in a variety of cell functions as well as

RUSSIAN RESEARCH ON MICROWAVE OVENS

In contrast to the dearth of U.S. research on the microwave oven's downsides, Soviet scientists conducted extensive research following World War II, having observed adverse effects from the radar technology that gave rise to microwave ovens. In 2000, the newsletter, What Doctors Don't Tell You, provided a summary of this alarming body of research.⁴¹

First, Soviet scientists documented significant decreases in the nutritional value of microwaved foods—by some accounts, a 60 to 90 percent decline.⁴² This included notably decreased bioavailability (and absorption) of many vitamins and minerals, and lowering of metabolic activity of key substances in fruits and raw, cooked or frozen vegetables—even when microwaved for only a short time.

Second, the scientists described how accelerated structural breakdown and changes in food chemistry resulted in the creation of toxic byproducts in microwaved food, including cancer-causing agents and destabilized protein compounds in meat; carcinogenic substances in milk and grain compounds; cancer-causing free radicals in some plant substances (especially raw root crops); and "a binding effect to radioactivity in the atmosphere."

Third, in individuals who ingested microwaved foods, Soviet researchers documented:

- A higher percentage of cancer cells in the blood;
- Degeneration of the immune system and the body's ability to protect itself from malignant tumors;
- Digestive system disorders and gradual destruction of the digestive and excretory systems;
- A statistically higher incidence of stomach and intestinal cancers.

Finally, Soviet researchers showed that the microwave field created by the ovens could cause health problems within a five-hundred-meter radius, including deformed composition of the blood and lymph areas, degeneration and destabilization of cell membranes, interference with the brain's electrical nerve impulses, central and autonomic nervous system problems, and a cumulative loss of vital energy.

In 1976, this damning body of research prompted the Soviet Union to ban microwave ovens. Unfortunately, the ban was lifted in the 1990s after Perestroika "to promote free trade," and use of microwave ovens became commonplace. Now, Russian scientists who dare to question microwave safety get attacked and vilified just as they do in the West (Natasha Campbell-McBride, personal communication).

immune response. Research has shown that "the deregulation of miRNA is associated with aberrant cell functions leading to cancers and other diseases."24 Although miRNA in milk is generally stable, a 2018 study by Chinese investigators—using electron microscopy and other sophisticated laboratory methods—found that the "miRNA expression and total RNA content of the microwaved [cow's] milk samples were lower when compared with untreated [cow's] milk."24 Noting other researchers' belief that "microwaving not only destroys nutritional components, such as whey proteins, but also results in DNA damage," the authors stated that they "could not exclude the possibility that microwaves directly damage RNA."24

At present, the Centers for Disease Control and Prevention (CDC) advises American consumers never to thaw or heat breast milk in a microwave, stating that microwaving "can destroy nutrients... and create hot spots."25 U.S. hospitals warn against microwaving formula or breast milk for the same reasons.26 However, researchers in countries such as Israel²⁷ and Japan²⁸ are now advocating "high-power" microwaving of human milk for the purpose of eradicating cytomegalovirus (CMV). Displaying scientific amnesia about the conclusive body of earlier research on the dangers of microwaved milk, these investigators are calling for new studies to assess the effect of microwave heating on breast milk's bioactive properties.^{27,28}

OTHER DANGERS

Several other lines of inquiry have prompted doubts about the virtues of microwave cooking, including early research demonstrating the ovens' propensity to cook unevenly. As researchers noted years ago in The Lancet, uneven heating "and the presence of relatively cool regions" allows bacteria to survive even when "very high temperatures are recorded in other parts of a food."29 In 1981, in a "setback" for pork lovers, the Los Angeles Times described how the U.S. Department of Agriculture (USDA) suppressed evidence that microwaved pork due to inconsistent cooking—could harbor the organism that causes trichinosis. 10 According to the press report, the USDA kept the results of its study under wraps for months "for fear of alarming the public."

Microwaving has also led to legitimate worries about leaching of plasticizers such as phthalates and bisphenol-A (BPA) into microwaved food. Again, this is not a new concern. *The New York Times* noted in 1989 that "before microwave ovens, foods were not exposed to plasticizers at temperatures so high that the plasticizers became part of the food." Current research emphasizes the importance of considering the characteristics of the food being microwaved, and particularly its fat content, given that plasticizers such as phthalates are fat-loving. In the characteristics of the food being microwaved.

Although containers are now available that

"Before microwave ovens, foods were not exposed to plasticizers at temperatures so high that the plasticizers became part of the food."

AN EXPERIMENT

To assess assertions about microwave oven effects, you can conduct the following experiment (which made the rounds of online chat groups in the early 2000s):

- 1. Obtain two small house plants that are as similar as possible in all aspects (e.g., type, size, pot size/type, soil).
- 2. Label the two plants "A" and "B" and place them side by side so that their growing conditions (sunlight and temperature) are identical.
- 3. Label two glass water containers "A" and "B" to correspond to each plant.
- 4. Water the plants on the same schedule and using identical quantities of water. However, for plant "B" use water that you have previously microwaved for thirty to sixty seconds (in a microwave-safe container); be sure to allow the water to cool completely before using it for watering.
- 5. Document the plants' health daily.

As summarized in a 1999 health newsletter (*NATRENNews*, March-April 1999), MIT scientist Dr. Chiu-Nan Lai conducted a similar experiment with wheat grass, described in her book, *The Pursuit of Life*.⁴⁴ After ten days, wheat grass watered with microwaved water "grew only 60% in height and 50% in weight" compared to wheat grass watered with water warmed with electric heat.

About ten bags of microwave popcorn a year could account for about 20 percent of the "average PFOA levels now measured in the blood of U.S. residents."

are promoted as "microwave-safe," a 2014 study documented phthalate migration from microwavable polypropylene containers that were not supposed to contain plasticizers.³¹ Moreover, even when plastics are not involved, microwaving has the potential to trigger migration of other toxic substances, depending on the type of container or food packaging. A study of pre-1950s ceramic dishware found that the dishes leached "dangerously large amounts of lead" when used to microwave common foods.³² And in 2016, when researchers considered a novel food packaging material (nanosilver-coated low-density polyethylene), they found that microwave heating triggered silver nanoparticle migration that was "significantly higher when compared with oven heating for similar temperatures. . .and identical exposure times."33

Microwave popcorn bags are lined with chemicals that break down into perfluorooctanoic acid (PFOA), a toxin linked to infertility and cancer that is also found in Teflon pots and pans. As a result of microwaving, the PFOA migrates to the popcorn oil, where it produces concentrations that are "hundreds of times higher than the amount of PFOA that could migrate from nonstick cookware."34 According to a study by the U.S. Food and Drug Administration (FDA), "millions of unwitting consumers" may be ingesting PFOA from their microwaved popcorn; about ten bags of microwave popcorn a year could account for about 20 percent of the "average PFOA levels now measured in the blood of U.S. residents."34

DECLINE OR BOOM?

The microwave oven industry is intent on increasing its market in other countries such as India and China, where consumers increasingly are inclined toward a "high outlay on first-rate kitchen appliances." The microwave oven also has a long-established presence in Japan (home of leading microwave manufacturer Panasonic), where the average home size for a family of four is about eight hundred square feet. In that context, kitchens tend to be "quite compact" and may include just a two-burner cooktop and a combination microwave-convection oven. 36 Online Japanese cooking courses promote "new

and exciting recipes for fish which are cooked using a microwave," extolling advantages such as "no greasy pans to clean after cooking."³⁷

U.S. market research tells conflicting stories about where the microwave oven is going from here. On the one hand, some are predicting the appliance's "slow death," arguing that Americans are tired of it and that microwaves "aren't cool anymore." To support these claims, observers cite growing interest in haute cuisine and the popularity of slow cookers and crock pots as well as the "negative stigma" arising from lingering concerns "about radiation emitted by the ovens and the possibility that they lower the nutritional value of foods." 38

On the other hand, sales of "premium" and built-in (as opposed to countertop) microwaves are booming.³⁹ In addition, technocrats' continued push for "smart" homes is expected to drive future demand for "smart" microwave ovens that "can be connected to the end-user's smartphone and monitored remotely."³⁹ Other innovations—such as "advanced speed-cook modes, interactive recipe databases, and... colors that complement the kitchen decor"—may also help stave off the microwave's demise, at least for a time.³⁹

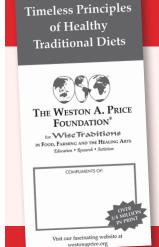
Judging by these market trends, the suppression of critical research has been successful, leaving the majority of American consumers still in the dark about microwaves' negative effects on food and human health. As one writer put it, back in 1992, "A funny thing happened on the way to the bank with all that microwave oven revenue—nobody thought about the obvious. Well, nobody who had any clout thought about it. Only 'health nuts' who are constantly aware of the value of quality nutrition, and the widespread 'denaturing' of our sustenance." Nonetheless, the fact is that the jury has long been in—and microwaves should be kicked *out* of every kitchen.

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The Wise Traditions Pantry

GETTING YOUR SPOUSE ON BOARD By Kelly the Kitchen Kop

Are your healthy eating choices causing conflict in your marriage? Is your spouse unwilling to eat better, or, even worse, sabotaging your efforts to get your family on track? If you are wondering what to do, read on.

OUR FAMILY'S TRANSITION

After I first began learning from the Weston A. Price Foundation about what I'd been unknowingly feeding our family, I immediately tossed out most of the food in the pantry—it was too disgusting even to give away. Next, I wanted to purchase a couple of expensive new kitchen gadgets; I discussed the intended purchases with my husband Kent, who said, "As long as you'll use them."

Early on, we tried some raw milk from a neighbor. When I exclaimed, "It tastes just like milk!", Kent looked at me like I was nuts and said, "What did you think it was going to taste like?" He didn't flinch when I started looking for a farmer who sold fresh raw milk—he would just tell everyone, "I grew up on a farm, and we drank this milk a lot."

Kent's great attitude continued when it came to our kids. It was priceless to have another person to help field the complaints about the lack of junk food in the house. We had a lot of good discussions about what was happening to the U.S. food supply. We agreed at a fundamental level that switching to a traditional, real-food diet was worth the time and expense to give our family a better shot at staying healthy over the long term.

NOT ALWAYS SO EASY

Sadly, not all spouses go along with changes in the kitchen as easily as Kent did. In addition to hearing things like "nobody likes the yogurt or the homemade bread I make," I often get comments like these from my readers:

- "He drinks soda every day and eats candy and then shares these with the kids."
- "I'm afraid this is going to drive a wedge between us in our marriage."
- "The kids liked my cooking when they were younger, but now they're complaining just like they've heard him do."
- "They go get fast food when I'm not with them."
- "He sees how my health has improved but thinks it can't really be related to what I eat."
- "He's freaking out over how much our grocery bill is."

When your spouse thinks you have gone off the deep end, it can help

to acknowledge that life changes are never easy, especially when it comes to something as comforting as food. Then, encourage your spouse to hear you out. Hopefully, the lines of communication are open between you. (If not, then I'd say your issues go beyond food, and some counseling might be in order.) The following sections offer suggestions and talking points you can use to help generate some deeper thinking.

DECISIONS AND CHOICES

Spouses are adults who need to make their own decisions. You don't need to give a long lecture, but a comment here and there can be helpful: "Did you know that . . .?" or "I read today that . . ." and then just drop it. It may also help to point out that when it comes to health, things are not going well in the world. You and your spouse may know many people who struggle with obesity, anxiety, diabetes, sleep issues, digestive troubles, infertility, cancer or other chronic diseases. Life expectancy in the U.S. is falling, and research suggests that many children will live shorter lives than their parents.

Explain to your spouse that it is difficult for children to learn how to live better and make conscious, healthy choices and be comfortable doing so, when they are watching a parent eat junk food. If your spouse does not have the motivation or self-control to cut out the junk and avoid fast food indulgences, then ask, for the sake of your kids' health, that it be eaten only at work or somewhere away from the children's eyes—being sure to ditch the evidence before getting home. Even that may not be wise advice, though, because kids are great detectives, and they will eventually find their parent out. If that happens, they will consider that parent a hypocrite and will think that it is okay to eat that way as long as it's hidden. That's certainly not a healthy attitude to cultivate about eating.

If your spouse still wants to eat out now and then, talk about making healthier choices at restaurants and watching out for foods that are typically loaded with unhealthy vegetable oils, like French fries. (Better yet, make your own French fries at home, frying them in beef tallow. That is what McDonald's used to fry in before it decided that saturated fat was the enemy.)

SUPPORT, NOT SABOTAGE

When you were growing up, the food supply probably already wasn't great (depending on how old you are), but it's much worse now. In fact, things have changed drastically. You can't blindly trust the government with what goes into your kids' bodies—it's your job to protect them!

Even if your spouse is not into healthy eating and is too stubborn to get on board anytime soon, ask him (or her) to at least consider making an effort to offer support in this area, rather than sabotaging your efforts. Remember, too, the power of example. A reader, married for thirty-seven years, shared this comment: "I realize that just because I decide I'm going to change, I shouldn't try to make him. One thing to remember: when they see how well you're doing, they will want to change. My husband noticed that I never got sick—even when he brought home the nastiest flu and colds. Just keep fixing healthy meals and providing healthy things around the house to snack on and give it time."

It may also be helpful to point out that well-nourished kids are much easier to parent. Not only is their behavior better, making them a joy to be around, but school comes easier for them, too. This means less homework hassles for you and your spouse to deal with every evening—trust me, I've been there, and it's not fun.

BETTER WITH BUTTER

Take it from someone who used to be a fast food junkie: after you start eating real food that nourishes your body, you won't even want the junk anymore. Eventually, it all tastes fake. Of course, until spouses find out for themselves, it may be hard for them to believe how much better real food tastes. Consider it your mission to prove to your spouse that real food is tastier. It's not that your spouse will love everything, but if

your spouse approaches this with an open mind, my bet is that he will like a *lot* of it. The bottom line is that eating well isn't a sacrifice at all.

To help get them on board, you can start by adapting their favorite meals to healthier versions. You may feel like this puts pressure on you to make your food taste really good, but this isn't difficult. Hello, butter! Butter is real food and that's a great place to start—put it on everything! How about a nice big grassfed steak fried in butter? Or some sourdough or other fresh-baked bread (with more butter)? Or pastured roast chicken with comfort foods like mashed potatoes and gravy? Or pastured bacon and eggs for breakfast? (Because "guess what, honey, those are good for you!") It's not that tricky to win someone over with traditional tasty foods like those. Real food doesn't mean eating only kale and lentils.

Readers of my blog have had helpful strategies to share. One reader wrote: "I try to get his input when I am planning meals for the week. So now he knows if he is craving tacos he doesn't have to go through a drive-thru; he can write it on the meal board, and it will show up in the next few days. Plus, I like the fact he is offering meal suggestions; it makes my job a little easier." Another reader stated: "There are some recipes that I make that his mom shared with me, and I substitute the best ingredients that I can and plan them occasionally because it means a lot to him. Sometimes they aren't the best thing I could make, but it keeps him happy enough that for the most part he has adopted a healthier diet."

If you're struggling to find recipes, remember that there are now many great options online for tried and true traditional dishes—it's getting easier and easier to pull this off. The *Nourishing Traditions* cookbook is loaded with delicious recipes and is a great place to start.

TREATS

Let your spouse know that changing to a healthier diet does not mean never being able to enjoy treats or other favorite foods. Healthier homemade treats actually taste so much better! There are many healthy ingredients that are just as delicious as the rotten ones you are working to replace. Try not to be a food Nazi about sweets;

Consider it your mission to prove to your spouse that real food is tastier.

Some people can get away with eating the Standard American Diet for a while, but not many, and not for long.

have them together as a family now and then, but as much as possible, make them yourself. Once in a while, you may want to buy "organic junk food" as a treat (something that is much easier to find nowadays at local grocery stores), but buyer beware; "organic" does not necessarily mean "healthy," and these items can be budget-busters.

A reader shared the following exchange with her husband about desserts:

We sat down and had a long conversation about why we were doing this in the first place and what was important to each of us. It was really a matter of deciding what we could compromise on. My husband really loves having dessert. He thought I was getting rid of all his treats. The compromise was that if we can get rid of the junk, that I would be willing to make desserts a little more often, but I make them with real ingredients. He's happy that I'm baking and has decided that he doesn't even miss those snack cakes.

PAY NOW OR PAY LATER

Boxed, processed and packaged foods and fast foods are a pretty horrible investment, particularly when you know how few nutrients they actually contain. Do a little digging online to learn what's in all of that toxic food you are transitioning away from. You'll see that a fast food burger is cheap for a reason—because it's factory-farmed meat from sick animals raised quickly and inhumanely.

Some people can get away with eating the Standard American Diet for a while, but not many, and not for long. I always wonder what chronic health issues our family dodged by switching our diet over to real food when we did. Getting sick is not a fun way to find out that what Joel Salatin, an author and Virginia farmer, says is true: "You can pay now or pay later." Or as Salatin also says, "Have you priced cancer lately?"

There are many ways to make a Wise Traditions lifestyle more budget-friendly. Buying in bulk and eating more local, seasonal foods are just two examples.

KEEPING THE PEACE

Not everyone will go "all out" as I did. For most, it may be a slower process of changing things gradually, and that's probably better, especially when it comes to maintaining marital peace. As one reader has reported, "He preferred that we make changes slower than what I tried in the beginning. He was more resistant when I tried to do it all at once."

As difficult as it may seem, try to nag your spouse less and just "live it" more. You can't do better until you know better—and hopefully, your spouse will "know better" soon. In the meantime, preserve the relationship. Continue being loving and compromise where you can, because that will give you more respect and credibility in your spouse's eyes.

Getting your spouse on board doesn't have to be a battle. The advice in this article can help smooth things out and help your spouse become more open and supportive toward your efforts to keep your family healthy, well-nourished and happy.

Kelly Moeggenborg is a wife and homeschooling mom of four kids, and the author of Real Food for Rookies, which helps people make the switch from junk food to real food while saving time and money. You can find her at KellytheKitchenKop.com where she's been writing for over ten years. If you subscribe to the newsletter at KellytheKitchenKop.com/free, you'll get a grocery store cheat sheet, as well as many free printables and access to the Real Food for Rookies online class.

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Homeopathy Journal

HOMEOPATHY FOR PRENATAL AND PERINATAL TRAUMA By Anke Zimmermann, BSc, FCAH

Many years ago, I read the books *The Secret Life of the Unborn Child*, by Thomas Verny, MD, and *Babies Remember Birth*, by David Chamberlain, PhD. Both authors used regression hypnosis to take people back to their birth experience, and both discovered that people often remembered many details of their birth—including who was present, what was said and how the parents felt about the new arrival. They were interesting reads, to say the least.

Ever since then, I have recognized that the beginning of life can provide useful clues to guide the selection of deeply healing homeopathic remedies. I've watched for signs indicating that clients might have suffered prenatal or perinatal trauma, and I have often used homeopathy successfully to help them. An infant's precious time *in utero*, the sometimes dramatic events that take place during labor and delivery, as well as the time shortly after birth all have the potential to affect an individual for life, sometimes crippling the person physically or mentally.

This connection generally remains unknown to the parents of the child or to the adult individual until they seek help for various concerns from a homeopathic practitioner or sometimes a regression therapist.

HOMEOPATHIC CASE-TAKING

Homeopaths have long known that a mother's state during pregnancy as well as events during labor and delivery can affect a child. When taking the case of an infant or child, a good homeopath therefore asks many detailed questions about the pregnancy, labor and delivery. The same attention to early experiences is a recommended part of a thorough case-taking for adult clients, although precise information about the pregnancy history and the birth may not always be available.

The homeopath may question the mother about her emotional state during the pregnancy; whether she experienced any traumatic events with strong emotions while pregnant; her dreams during that time; her relationship with her partner, family members and co-workers; any medical concerns and interventions; food cravings and aversions; and more.

This line of questioning is especially important if a child has suffered problems from birth or from an early age, as two cases from my practice will illustrate.

CASE ONE: A CHILD WITH TICS

I first met Liam, a sweet two-and-a-half year-old boy, in October 2009. He was very comfortable in my office and enjoyed exploring the toys and playing with me. Liam's mother described her son as a good-natured boy not prone to tantrums or misbehavior.

About six months earlier, however, he had started having trembling episodes during the night. By September, he had developed tics, various involuntary body movements and shudders during the day, and he often experienced more severe episodes during the night. Sometimes an affected muscle would throb, as if there was a heartbeat in it. Liam would also grimace and stick out his tongue involuntarily. He complained about being uncomfortable and unable to sleep with these symptoms.

Even as a baby, Liam had had some difficulties. He would wake six times a night and also twitched in his sleep. Sometimes he'd wake up crying, with a red-hot face. He also often laughed in his sleep. After he turned one, he started to wake a dozen times a night.

His mother thought the tics started after a virus. She gave him some magnesium, which helped somewhat. In August, Liam saw a pediatrician and a neurologist, who ran an EEG,

The beginning of life can provide useful clues to guide the selection of deeply healing homeopathic remedies.

Aconite is often indicated for ailments that come on after emotional shocks and frights, and ailments that result from wind exposure.

which came back normal. The neurologist speculated that the boy's tics were inherited and told the family that Liam would just have to live with the condition.

His mother reported, "His tics are worse when he is excited or nervous. For example, when his preschool class went to visit the fire hall, he had a lot of trembling and body shakes." She also noticed that his tics were worse when it was windy.

PREGNANCY HISTORY

Liam's mother reported that he had had a fast heartbeat and noticeable hiccoughs in the womb, which was cause for some concern from the midwives.

She also described the pregnancy as "stressful." She stated, "I was involved in a minor car accident, but I was unfairly blamed and this led to a lengthy legal issue. At the same time, we were moving to a new house. As if that were not stressful enough, at the six-month ultrasound appointment, the baby's kidneys were shown to be five millimeters above normal in size, which also caused me lots of stress and anxiety. Fortunately, they were normal size by the end of the pregnancy." To top it all off, Liam's mother described an incident that occurred when she was eight months pregnant: "I was walking our dog in the woods and he decided to chase a bear! I freaked out and had a little asthma attack."

ASSESSMENT AND PLAN

Liam's mother had suffered from a number of shocks and frights when she was pregnant with him. I suspected that her frights had transferred to the baby and that he needed the remedy she herself had originally needed at the time.

I gave Liam *Aconitum napellus*, also known as Aconite, which is often indicated for ailments that come on after emotional shocks and frights, and ailments that result from wind exposure. Aconite can also be the indicated remedy when an acute condition with a fever comes on suddenly in the night in children. It was peculiar that Liam's symptoms increased with wind and also that he woke up in the night with red-hot cheeks.

Liam took infrequent but increasingly

higher-potency doses of Aconite for the next two years. Whenever he received a dose of the remedy, he had a slight initial aggravation—with a worsening of the tics—and then a lasting improvement. By age four, he had completely recovered from his tics and shivers, much to his family's delight. His tics were not "genetic" after all, in spite of the neurologist's opinion.

Any time that a violent or frightening event occurs, such as being involved in an accident or disaster or being frightened by an animal, a homeopath thinks of Aconite. It can release a shock or fright that has been held in the body for decades, or which may have been passed on during pregnancy, as likely happened in this case.

CASE TWO: FEAR OF FALLING ASLEEP

Hannah was a lanky, ten-year-old girl with fine features and beautiful large eyes. Her mother brought her to my office in June 2015 for frequent headaches and stomach aches. Both had been intensifying, with almost daily headaches and a couple of vomiting episodes with the stomach aches.

Hannah's mother characterized her daughter as "very anxious and a total worrywart." As a baby, Hannah was clingy and wanted to be held all the time. She was the kid who sat on the sidelines at the pool or playground, crying, and was generally afraid to try new things.

The family wondered whether Hannah was nervous about her mother's upcoming remarriage. Hannah was excited about the wedding but also anxious. The family was already seeing a counselor to help Hannah with her anxiety. Her mother reported, "Hannah has never slept well. As a baby, she was terribly colicky and didn't sleep through the night until she was six. She often has nightmares and even had night terrors when she was younger. Now, she has trouble falling asleep and is awake for hours past her bedtime several times a week. My husband and I separated two years ago and she is afraid to sleep over at his house. She is actually afraid to go to sleep—it's a huge problem for everyone."

Hannah added, "My brain just won't shut off. I lie in bed and read and read to try to shut it off, but it doesn't work. I think about terrible things like intruders and things on the news.

Things grow bigger in the dark. I get so scared, I end up crying."

PANIC DURING DELIVERY

I suspected that something had happened early on. I asked Hannah's mother to come back on her own so I could interview her regarding her pregnancy and delivery.

Hannah's mom admitted, "I was terrified of giving birth to her! I had a full-on panic attack right in the middle of labor. I was so scared I blacked out. I can't remember parts of the delivery; it was horrible! Then I hemorrhaged after she was born and was told I could bleed to death. And then I collapsed in the shower."

I hope the reader recognizes the remedy for this situation, as it was the same one that I gave to Liam: Aconite. This poor mother had suffered a panic attack during her delivery and then became even more frightened after hemorrhaging and being told she could die. Had someone given her Aconite during the delivery, the whole drama likely could have been avoided.

I gave Hannah one dose of Aconite 10M. On the follow-up visit two weeks later, there was good news. Hannah's mother reported a "profound change" in her daughter: "She seems much lighter and is laughing more. The night after the remedy was a bit rough, but it is easier now for her to fall asleep."

At the next follow-up in July, the mother reported: "It's incredible! Hannah is going to bed at 9:00 PM and is asleep by 9:30. It's amazing, she's never been able to do that!" In the meantime, Hannah had also agreed to take an art workshop—something she would not have done before. Her mother reported Hannah to be much more expressive about matters troubling her, including disclosing that she was afraid to be without her mother.

I thought this was interesting and speculated that Hannah's mother's fear of dying during the delivery may have imprinted itself on Hannah, leading to the girl's fear of falling asleep and her overall anxiety. Now, Hannah was able to realize and verbalize her inner state. However, because her sleep had been getting a bit worse again in the few days preceding the follow-up, I gave Hannah another dose of Aconite 10M.

A TRANSFORMATION

In August, Hannah's mother reported more good news: "Hannah jumped off a five-meter diving board. Never before had she done this. I feel like saying to her, 'Who are you?' She is a totally different child. She is much more confident about trying new things and is asking to have sleepovers at her father's house."

Her mother reported some temper outbursts and throwing of napkins. "But when she is in a good mood, she is much happier. She is also eating much more and drinking lots of water. Her headaches are much better and there are no more stomach aches. The wedding is this weekend, and she feels okay about it now, whereas only three weeks ago, she was so scared of me leaving on my honeymoon. Her sleep is okay. Sometimes she does not even want to read at night; she just turns off the lights and goes to sleep. She is a real character now, so lively and funny!"

At that point, I simply advised the family to repeat the Aconite remedy as needed if the sleep relapsed. By the end of November, Hannah was doing a lot of drawing and artwork and had developed a new interest in baking and cooking. Her teacher told the family that Hannah was a natural leader.

In my office, I witnessed her dancing and performing modeling poses. I could barely get over the change in this child, from a timid, fearful little wisp of a girl to this blossoming, expressive and confident young lady. All of this personality and passion had been hidden by the shock she experienced during her birth and was now released by this marvelous remedy, Aconite.

UNLOCKING TRAUMA

If a problem has been present from birth, keep the possibility of prenatal or perinatal trauma in mind. Know that homeopathy may offer just the key to unlock this trauma and free a human being to live to her full potential. More broadly, always remember that homeopathy offers many remedies for a range of possible scenarios.

Anke Zimmermann, BSc, FCAH, is a classically trained homeopath living and working on beautiful Vancouver Island in Canada. You can learn more about her at ankezimmermann.net.

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SHOPPING GUIDE UPDATE

The new phone number for Thrive Market is (866) 419-2174.

Contact Carolyn Graff at shoppingguide@westonaprice.org with updates and additions to the Shopping Guide

Technology as Servant

DYEING TO LOOK GOOD By John Moody

The National
Cancer
Institute
estimates that
companies
use over five
thousand
different
chemicals in
the
manufacture
of modern
hair dye
products.

Americans spend almost one hundred billion dollars per year on cosmetics and personal care products. This accounts for over one fourth of all cosmetic spending in the world! Over her lifetime, the average woman in developed countries will invest as much as twelve thousand dollars on hair dye alone. But this one isn't just for the ladies—many men also dye their hair, and not just older men. Over the past twenty years, the proportion of men who dye their hair has been steadily increasing to its current level of about one in ten men.

Yet chasing beauty (or vanity) comes with a cost, and not just to the bank account. Personal care products and cosmetics—including hair dyes—contain a wide array of harmful ingredients, including some with well-documented risks and others with potential risks that haven't even been tested

THE LARGEST ORGAN

Before discussing hair dyes, it is important to recall that our skin is our largest organ. It should come as no surprise, therefore, that what we put on it quickly ends up in our bloodstream, lymph nodes and other parts of the body. Recent studies confirm that this is the case for pretty much any chemical applied to the skin—including those in sunscreens, deodorants and tattoo inks.

For example, a study published in *JAMA* in May 2019 reported that it takes just one day of use for sunscreen ingredients "to enter the bloodstream at levels high enough to trigger a government safety investigation." According to a professor of biology at North Carolina State University, substances applied topically can pose even greater dangers to our health than substances that we ingest: "When you eat something, it's broken down by your liver and digestive system. But when you put something

on your skin, there are times when it can enter your bloodstream without being metabolized."6

A recent study by public health researchers at the University of California-Berkeley suggests that constant chemical exposure from personal care products may be contributing to the rise of early puberty in U.S. girls, particularly following maternal exposure during pregnancy.7 The researchers found that when pregnant women had higher body burdens of phthalates (a group of chemicals often found in fragrances and scented personal care products) and triclosan (a phenol used as an antibacterial). their daughters—but not their sons—experienced puberty at younger ages. A press release about the study described researchers' suspicion "that many chemicals in personal care products can interfere with natural hormones in our bodies" and pointed to rat studies showing that exposure to these chemicals can alter reproductive development. Unfortunately, girls are facing an onslaught of pressure to use cosmetics and other such products at earlier and earlier ages.

On the male side of the equation, there has been a precipitous drop in sperm counts in developed countries over the past four decades or so—a decline of as much as 50 to 60 percent.⁸ Researchers believe that this trend, too, may be linked to widespread and constant unnatural exposure to chemicals in everyday products.⁹

A HOST OF HAIRY CHEMICALS

What about hair dyes and their potential risks? Although consumers may not realize it, hair dyes are a veritable stew of chemical factory sludge. The National Cancer Institute (NCI) estimates that companies use over five thousand different chemicals in the manufacture of modern hair dye products. ¹⁰ Many of these chemicals are known endocrine and hormone

disruptors, classified as probable carcinogens by the International Agency for Research on Cancer (IARC),¹¹ while many more have received little to no study at all for safety.

While it may be difficult to prove definitively that the chemicals in hair dyes lead to increased health problems such as cancer, the available evidence is troubling. Describing non-Hodgkin lymphoma (which typically arises in the lymph nodes), the NCI points to research showing that hair dye users had increased risks for several different subtypes, particularly in women who started dyeing their hair before 1980.10 The NCI adds, "Although these results are consistent with the idea that earlier hair dyes were more carcinogenic, it is also possible that the absence of increased risks for hair dye users who began using dyes after 1980 reflects lower cumulative exposure levels or insufficient time since first exposure for any increase in risk to become apparent."10

Numerous other studies have found associations between hair dyes and increased rates of various types of cancer¹² and other diseases.¹³ (A comprehensive list of studies on hair dyes and their links to cancer published in 2013 is worth perusing.¹⁴) Given the types of chemicals used in hair dyes, this isn't surprising.

TWO COMMON HAIR DYE CHEMICALS

Let's look at two of the most common chemicals found in hair dyes: PPD (paraphenylenediamine) and PTD (paratoluenediamine or toluene-2,5-diamine). These two chemicals play a key role in the formulations where they are found, forcing open the hair's cuticle so that it will accept a new color.

Madison Reed, a home hair color company that brags about its avoidance of "harsh" ingredients, describes why PPD has a "reputation for negative side effects":

Most commonly, PPD can cause reactions ranging from mild skin irritation to more severe allergic contact dermatitis. Sensitive individuals may experience dermatitis skin inflammation and irritation commonly referred to as eczema. Eczema may first be noticed on the upper eyelids or rims of the ears after application of the hair color. . . . In more serious cases, there may be marked reddening and swelling on the scalp and the face. An allergy to PPD can result in widespread contact dermatitis, as well as hives and, in rare severe cases, anaphylaxis. . . [P]eople who frequently work with PPD such as hair colorists—often develop dermatitis on their hands. This can occasion-

However, the alternative to PPD used by Madison Reed—PTD—also has some significant safety concerns. In 2007, the European Commission's Scientific Committee on Consumer Products issued its opinion that use of PTD "cannot be considered safe based on the available data" and described the chemical as "an extremely potent skin sensitiser." The committee recommended that studies on genotoxicity and mutagenicity in "finished hair dye formulations" be conducted in accordance with

FOUR THOUSAND NINE HUNDRED AND NINETY-EIGHT TO GO

relevant scientific guidelines.

Note that PPD and PTD are just two possible chemicals in hair dyes, out of five thousand! What problems and risks might be associated with other ingredients?

Take a look at a single hair dye product and ponder the ingredients, which are just for one part of the kit:

Isoascorbic acid, polyglyceryl-4 oleyl ether,

Numerous studies have found associations between hair dyes and increased rates of various types of cancer and other diseases.

HOW HAIR DYES WORK

If you have ever painted your house, you have a bit of an idea how hair dyes work. Generally, you start by using a primer to create a flat color on which to put the new color. In hair dyes, this is often done by using bleaching and similar agents.

Then, you apply the paint, which often contains numerous additional chemicals—usually volatile organic compounds (VOCs)—added to get the paint to spread evenly and stick to the surface. With hair dyes, various chemicals help the pigments "stick" by altering the pH of your hair and forcing open the cuticles, where hair color is found.

oleic acid, oleyl alcohol, phenyl methyl pyrazolone, sodium metabisulfite, fragrance/perfume, monoethanolamine (MEA), polyglyceryl-2 oleyl ether, resorcinol, water, trideceth-2 carboxamide MEA, pentasodium pentetate, 2-Amino-3-hydroxypyridine, ethanol/SD Alcohol 40, ammonium hydroxide, hexylene glycol, PEG-2 oleamine, ammonium acetate, sodium diethylaminopropyl cocoaspartamide, p-aminophenol and 2-methylresorcinol.¹⁷

Compare the above list with Silk and Stone's three hair dye ingredients: "indigofera tinctoria (indigo), lawsonia inermis (henna) and neem." It reminds me of when we first started reading food labels!

The mix of dyes, bleaching agents, artificial fragrances and other chemicals present in hair dyes is not something most people would ever tolerate in food, so why do people think it is any better repeatedly applied to the head? European versions of many American foods contain completely different ingredients from those found in the same U.S.-based products; in similar fashion, hair dyes available in the EU may not contain over two hundred banned chemicals—but few if any of those same chemicals are off-limits in the U.S. The bottom line is that U.S. consumers face products with far more risk.

Another consideration with modern cosmetics, including hair dyes, is the lack of studies on complete formulations. Like vaccines and pesticides, individual ingredients are often married to other chemicals to make them more potent, but safety studies generally look at each chemical on its own—and often only study a few of the chemicals at all. There is some irony in conducting isolated research on single chemicals when manufacturers purposefully create their formulas to have greater activity and impact when combined. Research on combined and synergistic effects is much needed but almost completely lacking.

ARE NATURAL ALTERNATIVES ANY BETTER, AND DO THEY WORK?

Since it appears best to avoid standard hair dyeing approaches, what about the natural alternatives? There are many ways to color your hair naturally, in fact, from my daughter's favorite summertime highlights (acquired by spending as much time outdoors in the sun as she possibly can) to all sorts of recipes and approaches that use common foods and plants.

Natural hair dyes have two main drawbacks. The first is the issue of durability. Because natural approaches generally do not use dangerous

and harsh chemicals to force open the cuticles, they don't penetrate as deeply into the hair, and thus don't last nearly as long. The second issue is that of the color palette. Natural approaches simply will not offer the range of colors one can get with modern hair dyes. You aren't going to get a bubble gum pink or sonic the hedgehog blue and—depending on your natural hair color—you may have trouble getting too far from your original shade.

Nonetheless, there are a fair number of organic and natural brands of hair dyes on the market these days, many with far safer formulations and good customer reviews. Unfortunately, I have reached the point where I have too little hair left to try them out! However, just because a hair product is natural or organic does not guarantee that a consumer will not have a reaction or issue with a particular product or ingredient. Moreover, claims of "natural" or "organic" ingredients should not be taken at face value—check the ingredients just as you would do for food or any other product. Many so-called natural formulations still use a number of problematic ingredients, like those already mentioned, to get the naturally derived colors to penetrate and stay.

PLANT-BASED HAIR DYES

The level and intensity of modern cosmetic use, especially in the U.S., may be somewhat of an anomaly, but "painting the barn," as the saying goes, is many thousands of years old. While doing research for *The Elderberry Book*, ¹⁸ I came across a number of studies on Greco-Roman body care and cosmetics, and found that the elder (usually called elderberry in the U.S.) was used in many different cosmetic preparations, including all-natural hair dyes. Other cultures have used coffee grounds, herbs

THREE NATURAL HAIR-DYEING TIPS AND TRICKS

- 1. If you want to try natural dyes but do not want to risk a fiasco around your face, save some of the locks next time you get your hair cut—this will give you some hair with which to experiment without risking your whole head!
- 2. Your shampoo, conditioner and other hair care products can make a big difference to the effectiveness of natural hair dyes. Some ingredients—like silicone or glycerin—can create a barrier on your hair that prevents pigments from working properly. Make sure your shampoo or other hair care products won't cause problems.
- 3. Know that natural approaches take about two days to set fully, so it is best to go easy on your hair until the third day to get the maximum benefit and duration from the new shade.

and other plants to make cosmetics, including ones for the hair.

A number of natural storebought formulations use plant-based ingredients: beet, turmeric, alum, neem and more. Henna is one of the most popular natural hair coloring options, and many major brands now offer henna-based lines in response to consumer demand. Usually, these products use henna or other natural ingredients in combination with one another to produce varied and desired shades and tones.

DIET AND LIFESTYLE

Why does our hair lose its color to begin with? Well, no one is quite sure! A number of factors appear to play a part, with genetics and the immune system ranking near the top. 19 Also, dietary deficiencies, including nutrients such as folate and vitamin B12, can lead to an early gray (and grave)! 20 Eating well and living well may not prevent your hair from losing its natural color, but for some people, a healthy diet and lifestyle may delay and minimize the progression. At the end of the day, we should all realize that a gray head is a "crown of glory"—something to embrace as we age instead of risk our health trying to prevent.

John Moody is the fortunate husband to Jessica, father to five fantastic kids and a well-known writer and speaker on issues relating to health, homesteading and more. Embracing the wisdom of Weston Price allowed him to save his health and help countless others over the years. John is the author of The Frugal Homesteader (homesteaderhandbook.com) and The Elderberry Book. Visit abbyselderberry. com for fantastic traditional foods like elderberry syrup made by John's farm and family.

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UPDATES TO THE FIND REAL FOOD APP!

Find Real Food App – The Weston A. Price Foundation's Online Shopping Guide to the Highest Quality Food Available

UPDATE! Check out the NEW features requested by subscribers:

- Search by grocery store name, brands, keyword AND zip code
- Search for approved local farms or see where their foods are sold
- "Favorites List" Add foods/brands you want to try and print a list
- "Highlights & Features" to learn why each food/brand meets quality standards for inclusion in the guide! (Coming soon)

Currently, new features are available only on the WEBSITE and not the mobile phone app. Learn more at: FindRealFood.INFO



Wise Traditions Podcast Interviews

INTERVIEW WITH THADDEUS OWEN

BIOHACKING OUR HEALTH



HILDA LABRADA GORE: My guest today is Thaddeus Owen, the Primal Hacker, Thaddeus takes the best of ancestral practices in today's modern world to optimize health. He explains why diet alone may not be enough to get us to where we want to be and suggests that light and temperature are the missing pieces to our wellness. Thaddeus is a health expert with a master's degree in holistic nutrition and a bachelor of science in chemical engineering. He educates us about the benefits of natural sunlight and being outdoors. He warns us about the biological confusion that occurs when our bodies are exposed to the blue light emitted by our many screens and even our LED and CFL light bulbs. But Thaddeus doesn't just leave it there. He gives us the science behind what's going on and he offers plenty of practical advice to go from just so-so, average health to optimized health.

If anyone were to see you today Thaddeus I don't think they would have any idea that you once struggled with high anxiety and health issues. Can you tell us a little bit about that journey?

Thaddeus Owen: Yes, absolutely. Now I give very large presentations to big groups of people and am out in the forefront on social media for the things that I talk about. But ten years ago, I never thought that I'd be doing this. For my entire life I had very, very high anxiety. I didn't know why and it was very hard to solve. I actually ended up going on medication for a year and then weaned myself off as I was searching for the answer. I began looking thoroughly into health and nutrition and ended up getting a holistic nutrition master's degree. For that master's degree, one of the sections I had to learn was on traditional foods and the Wise Traditions diet. I got into the Weston Price style of living, and that is actually what led me down the path of this concept called biohacking, which is a fairly niche concept. But the long and short is I adopted the Wise Traditions diet. I tipped over into this biohacking niche, solved my own anxiety issue, and found out what the root cause was, how to fix it, and how to help other people do the same thing. Through that journey not only have I helped other people with how to think about health and nutrition, but learned that a lot of these ancestral practices have so much more than just nutrition at their foundation.

There are actually two other things in addition to nutrition that I think are super-important and can help people overcome a number of health issues. My own anxiety was overcome through having the right diet—getting my brain and whole body the right nutrients it needed doing the very difficult inner, emotional work that most people, me included, are afraid to do and even talk about with anyone else. And then using some of these biohacking techniques that merge ancient traditions, overcome modern technology and solve the problems of indoor living, I was able to overcome my anxiety problems, never to return in five years now. It was very powerful. I am doing things I never thought I would do before.

HLG: That is so fantastic. Now, help me understand biohacking because what comes to mind when I hear that term is a person who has a cabinet full of supplements and they're willing to do anything to improve their health. And maybe they're going to CrossFit daily and are super intense. If that's a misperception, tell us what it means to be a biohacker.

TO: At its essence, biohacking is about optimizing human biology. We know so much about ancient practices and about the human body from modern science. By taking a look at ancient practices that worked and the modern science of human biology, quantum mechanics, quantum physics and quantum biology—we are

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now understanding more about how the human body works so that in biohacking we take advantage of all that information so that the environment outside of us, meaning where we live, and the environment inside our body are both truly optimized for better health and longevity. Rather than focusing on having average health by taking supplements or doing whatever it is to create the level of average health that most doctors and medical professionals talk about, we strive for optimal health. And we do that by utilizing appropriate technology to overcome our indoor, sedentary, toxic and modern lifestyle and utilizing ancient practices that humans have used forever to be healthy.

HLG: I see. I guess I was stereotyping the biohacker when really, it's a person who doesn't want to settle for less than being as strong physically and mentally as possible and live their best life.

TO: Absolutely. The term "biohacking" can turn some people off and it sounds kind of tech-y. It can bring up images of people that go all in on supplements, high technology and expensive gadgets. But really at the bottom of it is how to make yourself optimally healthy. Each person is unique and what I have found is that often if you study and practice on yourself, you don't need supplements, expensive gadgets and other high-tech objects. There are very basic things that you can do.

HLG: Is that why you call yourself a primal hacker instead of a biohacker?

TO: Yes, absolutely. Part of my journey was delving deep into the biohacking world and doing all the supplements and buying the technology. It's like every modern person who is aspiring to get the latest phone and the latest gadget—it's the same race that happens in biohacking. What I found was that ultimately this lifestyle wasn't very healthy. I wanted to separate my burgeoning philosophy of how to be healthy with this new term. My idea incorporates part of biohacking in that we want to optimize health using all the available information and technology. I see it as merging the ancestral and ancient practices of health, nutrition, movement and information that we gain from our environment to help overcome a modern lifestyle where we're inside 90 percent of the time. We have more electromagnetic radiation around us than at any point in human history—up to eighteen times more radiation than ever before, everywhere on the planet. Plus there are other factors to consider such as our soils which are losing certain minerals that aren't being added back. So even if you were to live like a caveman or practice only ancestral practices, you might not be optimally healthy because of other factors.

There is an appropriate time and place for technology. However, what we recommend is going to the technology and supplement solution *last* after you *first* fix your environment.

HLG: Please take us from the theoretical to the practical and tell us one way we might live more like our ancestors did.

My three tenets that I think are the most important are light, temperature and food.

PODCAST QUOTES

Here are some quotes from some amazing recent episodes:

"Land that is healthy, strong, and regenerated is going to produce food that makes our bodies healthy, strong, and regenerated." ~John Arbuckle, WT podcast #196

"By 2030, 50% of kids will have chronic disease. That's one in two kids! They and their parents will spend their days—and all of their money—chasing health." ~Hilary Boynton, WT podcast #197

"Healthy or not, we are all living with cancer. All of us have cancer cells in our bodies. It's only when something goes off kilter, when something in our terrain gets out of balance, that the cancer picks up momentum and takes center stage." ~Nasha Winters, WT podcast #191

What I have found in all of my research, all of my studying and all of my self-practice that made the most difference in my personal life and makes the most difference from a research standpoint is morning sunlight.

TO: What I have found in all of my research, all of my studying and all of my self-practice that made the most difference in my personal life and makes the most difference from a research standpoint is morning sunlight. Morning sunlight is accessible to everybody. It is 100 percent free. Our ancestors certainly would have been outdoors during the morning sunrise. The time when the sun is rising in the morning is a magical time that sets our body's circadian rhythm. The Nobel prize in 2017 was given for circadian biology and recognizing how important it is to human health. Morning sunlight sets your circadian rhythm for the whole day. It builds hormones in your body that you need, such as melatonin and thyroid hormone, and it programs a bunch of information into your body through your eyes and skin that we now have all the latest science on. Based on an ancestral practice just being outside barefoot on the ground in the morning sunlight provides this needed information that keeps our body optimally healthy. Everybody can do it, and it is free.

HLG: Wow, this is so different from how most of us live. Not only are we not getting morning sun, but we might not get any sun on any given day.

TO: It is an unfortunate aspect of modern life that we often watch what we call "screen rise"

instead of going outside to look at the sunrise. When people first wake up, they often turn on the phone to get messages or a laptop to get right to work. You're flooding your body with light information. Most people don't think of light as "information," but all those texts and emails are going through the air as information, and our devices pick them up with antennas. Our body also picks up this information from the environment. Most people live indoors 90 percent of the time and are addicted to their technology, phones and social media-staying in contact with everyone—and turning on the artificial overhead lights, like LED and compact fluorescent lights. These devices and indoor lighting offer one bit of information. It's blue, it has very high spikes of blue light. That blue light is constantly giving our body the information that it's always summertime in the middle of the day. The modern lifestyle is providing lots of information to people without them necessarily knowing that they're getting it through their eyes and skin into their brain and bodies. Yet everyone is going along and many have high anxiety, depression, mitochondrial disease without finding out the solution or cause.

HLG: In our Wise Traditions circles, we say that food is information, so it makes sense to me that light could be information as well. And in these

THE WISE TRADITIONS PODCAST: TALK TO US! WE'RE LISTENING!

We had some unique episodes this summer:

RFK Jr. on vaccine safety - #193 "RFK Jr. speaks out"

Dr. Geraldine McGuire on restoring a rainforest in Australia - #199 "Harmonious living"

Hilda Labrada Gore (our podcast host) offering her top picks of what she's learned from the show - #200 "Holistic Hilda's health tips"

Leo Sharashkin on bees and the art of beekeeping - #198 "The buzz on bees and honey"

Steven Sashen on minimalist footwear - #195 "Feet first"

What else would you like to hear on the program? We are open to your suggestions!

Email us at podcast@westonaprice.org to tell us what you'd like to hear. If you have ideas for who should be a guest on the show, please fill out the application on the podcast page on our website (just under the listener survey): http://chapters.westonaprice.org/podcast-guest-suggestion/.

same circles we also talk about food, farming and the healing arts and look for wisdom in those categories. What you are talking about definitely falls in the healing arts category. But why is it that the food component isn't sufficient to help us live as our ancestors did?

TO: My three tenets are light, temperature and food. Food is 100 percent information, not just the vitamins and minerals in it, but food also provides light information. And that's something most of us don't think about. Where your food was grown had a certain amount of ultraviolet light—of red light and blue light. That plant absorbed those photons from the sun and made carbohydrates and other things inside the plant by absorbing these particles and waves from sunlight, and embedded that in the plant as information. When we eat those plants or animals that ate those plants, our body receives that sunlight information. If we're purchasing food from the coast of California but living in northern Wisconsin, that information that our body is receiving may not be appropriate to where we live because our body is trying to deconstruct that light information, even from food, including the vitamins and minerals that are included in that food that may be different from our local environment.

There is more information that comes from the sun and light than we even know. Our body has receptors for light information. Two of the main receptors are called melanopsin and neuropsin. The job of these two receptors is to take information from sunlight and translate it into our body to build the correct hormones, tell our body what time of day it is and set our internal clocks and keep us healthy.

Basically, neuropsin measures ultraviolet light. The day starts out with no ultraviolet light at sunrise; it becomes increasingly stronger throughout the day; and it wanes and goes away at sunset. Our body actually picks up those changes in ultraviolet light and tells our body what time of day it is, setting our circadian biology.

Melanopsin is in our eyes and skin and picks up blue light from the sun. Blue light starts out in the morning, increases during the day and then starts to decrease and goes away at night.

Moonlight and firelight have almost zero blue light. When we turn on an LED or CFL light or a device after sunset, it provides blue light to your skin and eyes, telling your melanopsin receptors that it's daytime and to stop producing melatonin, which gives us the benefits of sleep. Melatonin is the body's master anti-cancer hormone. Instead, the body starts producing cortisol to keep us awake and alert because it thinks it's daytime.

There's a ton more information that programs other hormones and neurotransmitters in our body that come directly from light, but that's just one example of how light information directly affects us and our health.

HG: Maybe this is why people have trouble falling asleep after they've been on their computer, phone or watching TV, because that blue light interferes with their natural circadian rhythm.

TO: Yes, this is huge. I gave a TEDx talk a year ago on this exact subject. I did a lot of research for that talk on blue light and especially artificial light at night. There are thousands of research studies that have directly studied artificial light and its effect on sleep. Harvard Medical School released an article around 2016 summarizing this topic and the American Medical Association in 2017 sent a letter warning cities not to install LED streetlights because blue light in LEDs negatively affects human health. Light at night affects sleep by destroying your melatonin and increasing cortisol, which is the stress hormone. If you are watching television and fall asleep even for eight hours, you might wake up still feeling tired because you are missing out on the rejuvenating benefits of sleep by exposing yourself to light at night.

HLG: I've seen articles and maybe even read the studies you've talked about, and yet even though I have the knowledge, it's very difficult to apply. In other words, I think we're really addicted to our devices.

TO: Here's an interesting thing. We know from studies that being out in full spectrum sunlight increases dopamine in our brains. It's a pleasure hormone and also the hormone of addiction. So the sun is almost making us addicted to being outside. When we live mostly indoors with blue-shifted light, we lose that dopamine hit from being outside and tend to then over-indulge in social media, which for a very brief time increases dopamine. We keep going back for more and more dopamine hits because we're not getting the natural dopamine we get from being outdoors.

HLG: So you said light, temperature and food are part of the biohacking optimal health plan. I still don't quite get why food isn't enough.

TO: I wish it was that easy. You look at all the different diets, and new diets keep coming out, and people keep looking for more superfoods. It's because diet alone doesn't work. And if we simply look at what Dr. Price studied when he went around the world and looked at indigenous cultures, not only were they eating a native diet, but every one of them

was connected to the outdoor environment. They all were getting natural light through their eyes and on their skin. None of them were living a completely indoor lifestyle.

If we think about just eating the right foods, one of the things we have to understand about the information contained in food is that in those indigenous diets, somebody living in a northern climate would not have access to carbohydrates all year round. When you begin eating carbohydrates, but you're exposed to outdoor or indoor lighting situations that tell your body it's winter, it is a challenge because your body is made to burn fat potentially during winter, not carbohydrates. So just eating the right foods but eating too many carbohydrates in the winter tells your body that it's still summertime while the light information is telling your body it's wintertime. There's a mismatch in that information and it causes confusion in the body.

Food is important but combining that with the right light environment is key. Also when blue light hits the melanopsin receptor, DHA is destroyed. So when DHA is destroyed there are mechanisms that recycle it. But if we're never outdoors in the right light environment, those recycling mechanisms start to lose the DHA as it gets destroyed over and over in the blue light environment we're in. So eating the right amount of DHA-containing foods and protecting yourself from too much blue light then increases your overall health.

We know that high omega-3 and DHA in the body are very beneficial, and the reason people are deficient is not just that they're not eating enough; it's because the light that they're exposed to is destroying some of the DHA that they eat.

HLG: It's almost like the light is the secret sauce to help us get the most out of the very food we're eating. Let's pivot for a moment and talk about temperature. How can we be more primal or ancestral in our approach to the temperature we're in?

TO: This is more critical than I realized. I was focused on food first and then on light, but all of a sudden as I was doing this research it dawned on me because I came across so many studies on temperature and its effect on human physiology. Humans were designed to use cold. We were never designed—or evolved depending on your belief system—to live in an indoor environment at 70 degrees Fahrenheit all the time. We get into our SUVs and turn on our heated seat, go to our heated garages, our heated offices, the heated gym—we are living at 70 degrees for our entire lives. In the summer we use air conditioning to be cooler than the outdoor temperature and keep us again at 70 degrees.

We know there are pathways in the brain that make use of cold. And there are systems that get turned on in the body. Our DNA has epigenetics and our environment dictates what genes are expressed in our DNA. If we're never cold, we're never expressing these genes that are coded in

our body for cold. In fact, those genes help us stay alive longer and stay much healthier. Both getting cold and getting hot like a sauna have massive benefits to athletic performance, longevity, inflammation, muscle acquisition and fat loss.

Today people are doing "cold thermogenesis protocols" which use cold to lose fat, and there are also sauna protocols. We've seen data from Finland where people who use saunas often have a longer lifespan. They live longer the more they use saunas and get hot.

Getting our body uncomfortably hot and uncomfortably cold has very big benefits and actually is a lot easier and less uncomfortable than you might think if you do it the right way.

HLG: This is fascinating. And it reminds me of that viral video of children in some Scandinavian country who get in a sauna and then run outside and play in the snow in their underwear. This is part of the Wise Traditions, isn't it?

TO: It is. There are easy ways to do this that can be accessible to most people. Essentially, we're not experiencing the temperature fluctuations we need to be fully human and fully healthy. It is super-appropriate to just get outside as often as possible. In a cold environment, your body will adapt. There is such a thing as cold adaptation and it will take more or less time depending on the technique that you're using. Once you're cold-adapted, you're very resilient to cold and interestingly, you're more resilient to heat as well. You can stand longer times in hotter temperatures with less stress, and your body will actually have less stress overall from any situation the more cold-adapted you are. It can be as simple as turning down the temperature in your house, even just at night. You can roll down the windows once in a while when you're driving in the fall or winter and go outside with fewer clothes. Bring a hat and gloves with you and cover up when you really need to, but try to go longer and longer outdoors without as many layers, and your body will cold-adapt. There

are some special techniques that allow you to do this faster and more intensely and also safely. But your body is made to cold-adapt and if we never experience that, I don't think we can have ultimate longevity and health.

HLG: This is really drawing me in and I've actually been working on cold adaptation. I've been going outside with a light jacket instead of a heavy jacket. To my surprise, it hasn't been as hard as I expected. It is cool to see my resiliency and realize I can manage the cold better than I anticipated. But going back to your point, you're not just bringing these facts out of thin air. You have looked at studies and you're convinced that temperature fluctuation is good for our health and longevity.

TO: Yes, there are quite a number of studies on sauna and cold use, especially NASA astronauts getting cold. Scientists have looked at sherpas and noted how they have such high performance and are so cold-adapted. I then began experimenting on myself, and I look at others who have done experimentation and have seen results. It's not just that I see and believe the data, I try these out on myself to see whether it works. I can then tell others about my personal experience.

HLG: I know football players or other athletes

who take ice baths after a competition. so it seems that some of this thinking is out in the conventional world as well.

TO: It is, and most people commonly look to ice to reduce inflammation. You don't want to do it after weight lifting because your body will drop inflammation too quickly and not allow your body to adapt to the weight you just lifted and to build additional muscle. But after an athletic event where you do need to recover quickly and get back to training, it's a great way to reduce inflammation and improve performance. What most medical doctors and athletic trainers are not looking at is that not only can cold reduce inflammation but also it can improve athletic performance. The head trainer of the Washington Wizards basketball team attended our retreat. He is doing biohacking for the Wizards. This idea is not well known or well-studied yet the research is out there. And the anecdotal evidence from people who are using it, including from Lance Armstrong, is very compelling.

HLG: In the show notes on our podcast page for this interview we have put links to articles from your blog about heat and cold therapy (primalhacker.com/blog/primalhacker-cold-thermogenesis) and some of the studies that you've mentioned, because we really want to wrap our minds around these concepts. Thaddeus, the final question: If the listener could do only one thing to improve his or her health, what would you recommend that they do?

TO: I'll go with what I have found most beneficial in my life and from what I've learned from the medical research—it will benefit every human on the planet. Get outside within forty-five minutes of sunrise in the morning and, if possible, stand barefoot. Do this just five minutes minimum. If you can just get outside at sunrise for five minutes for three weeks, believe me, it will change your health.

WISE TRADITIONS IN SPANISH



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All Thumbs Book Reviews



Cancer and the New Biology of Water: Why the War on Cancer Has Failed and What That Means for More Effective Prevention and Treatment By Thomas Cowan, MD Chelsea Green Publishing

A decade ago, I found myself chatting with Tom Cowan at the Wise Traditions conference. The conversation was wide-ranging—touching on farming, food, economics, art, politics and health. I realized that Dr. Cowan was far more well-rounded than the average doctor, with a broad and deep knowledge of the world. Back then, he had written perhaps one book. Now, he has many—each one well worth reading. Few authors are able to combine practical experience, historical observations and information from many fields and disciplines in the manner he achieves.

Cancer and the New Biology of Water isn't long (under two hundred pages). This is probably a good thing, as it offers plenty to consider; a longer book might confuse and overwhelm. The book describes what is wrong with the conventional cancer paradigm and why it has failed us; explores different therapies that offer an alternative to the standard "cut, burn and poison" approach promoted by mainstream medicine; and gives practical counsel. Given that roughly a third of modern people will face cancer in their lifetime, who among us doesn't need to consider treatment options, if not for ourselves, then for those we love?

Cowan's books always contain a wealth of source material (often straight from the main-stream medical establishment's mouth), which I greatly appreciate. And when he says that the current approach to cancer has failed, he isn't engaging in hyperbole—he is merely quoting what the medical establishment has found, time and again, in its own research. One of the cited studies states, "The overall contribution of curative adjuvant cytotoxic chemotherapy to 5 year survival in adults was estimated to be 2.3% in

Australia and 2.1% in the USA." In other words, chemotherapy contributed almost nothing.

Cowan digs deep into a number of fascinating facts. One especially helpful observation concerns how the medical system covers up its failure to make any real progress in treating, curing or preventing cancer—in spite of hundreds of billions of dollars of investment. It does so by moving the goalposts from actual patient outcomes to surrogate markers, which makes it possible to sell a false bill of goods (and incredibly large hospital bills) to those looking for effective treatment options.

Modern cancer treatment benefits from some of the world's brightest and most wellmeaning thinkers and untold sums of money so why does it continue to fail? Dr. Cowan gives a compelling answer: it's because our understanding of cancer is flawed. The two main hypotheses that undergird all modern cancer research—that genetic mutations (also called oncogenes) are the cause of cancer, and that our DNA controls (all by itself) everything that happens in our cells and thus, to a large extent, us—have led scientists down the wrong path. Because modern researchers remain committed to an erroneous framework for understanding cancer's causes, they are unable to make progress in stopping cancer's effects—no matter how well-intentioned or well-funded they may be.

What is the right framework? Dr. Cowan seeks to persuade us that cancer points to a deeper problem—cell dysfunction—but not at the genetic level. Rather, we should be looking at the cytoplasmic space that makes up the preponderance of the cell. He states, "When our life forces are weak or disturbed, when the structure of water in our cells is amiss, the disease we call cancer arises." Thus, the "abnormal number or types of chromosomes, mutations, [and] abnormal proteins synthesized" that we normally consider "cancer" are not cancer's causes but merely secondary effects.

When energy generation, meaning our mitochondria—which is our life force—and

"When our life forces are weak or disturbed, when the structure of water in our cells is amiss, the disease we call cancer arises."

All Thumbs Book Reviews

gel in our cytoplasm go awry, the stage is set for cancer to develop. The very basis of cancer diagnostics relies on this phenomenon. Citing Otto Warburg's work on the metabolic origins of cancer, Dr. Cowan states, "To dispute the centrality of this Warburg phenomenon in cancer is to dispute the fundamental basis of modern oncology diagnostic practices. . . .Placing the source of cancer in the mitochondria is consistent with my premise that cancer is a loss of cellular integrity due to the deterioration of the intracellular gel structure." When the gel structure deteriorates, the cells no longer have a healthy space between them but begin to clump together—the hallmark of cancer.

Cowan avoids a long discussion of causes and prevention, which he has covered elsewhere, and instead considers how and why different therapies and approaches work in light of his assertion about cancer's real cause. These chapters are unique, combining Cowan's practical experience helping hundreds of patients face various types of cancer with other clinical and research information. He is not afraid to point out the promises, perils and limitations of popular alternative treatments. In an age of X-is-the-answer-for-everything marketing, it is refreshing to see a balanced—even restrained—discussion of alternative therapies.

What do the approaches Cowan describes have in common? They help restore proper cellular integrity and function. Some do it by addressing the sodium-potassium gradient of cells. Some do it by mimicking fever or other conditions, which help the body regenerate at the cellular level. As I worked through the book, I found myself eager to see how Cowan would connect the dots between causes and possible treatments, and also how various approaches could work synergistically. Dr. Cowan's

hypothesis also explains why some treatments help such divergent disease conditions—if the root cause of many disparate diseases is disrupted water structure and power generation in our cells, then it makes sense that a single treatment could provide benefit for the wide range of symptoms that this underlying disorder contributes to or creates.

Cowan's recommendations for those facing cancer are forthright; he notes that while some have had great success with various alternatives, his best outcomes generally combine surgical removal, when possible, with alternative therapies. He adds a few more options to consider, including high-dose vitamin C and saunas. By book's end, the reader, in partnership with a qualified holistic doctor who deals with cancer, will have an array of resources to support his or her journey to overcome this modern killer.

A few of the books that I review get a second reading or end up on our family bookshelf. *Cancer and the New Biology of Water* will get both, along with two thumbs up. This is a mustread for anyone wanting to explore the causes of cancer and effective treatments in an age of mainstream medical snake oil.

Review by John Moody

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/or 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 coil binding.

All Thumbs Book Reviews



Body Belief: How to Heal Autoimmune
Diseases, Radically Shift Your Health, and
Learn to Love Your Body More
By Aimee E. Raupp
Hay House

Many people come to the Weston A. Price Foundation because they or a loved one are unwell, perhaps suffering from one of the autoimmune diseases that plague our society. *Body Belief* stands out by incorporating more than just diet, supplements, exercise and stress relief—Aimee Raupp wants readers to understand that healing requires a radical change of belief.

Raupp looks at autoimmunity from both a Western and traditional Oriental medicine perspective, noting how little Western medicine has to offer. She presents an extensive list of symptoms that—if occurring on a regular basis—may indicate an autoimmune disease. The idea is to follow her program for eight weeks and then revisit the list to assess improvement.

While introducing readers to epigenetics, which explains how we can influence the way our genes express themselves with different lifestyle choices, Raupp emphasizes the fact that our brains hear everything we say to our bodies. Her premise is this: just as autoimmunity represents the body attacking itself on the cellular level, on an emotional level people with autoimmune disease are attacking themselves with toxic thoughts. To be truly well, this must stop. Though beliefs directly affect chemicals in the brain, we can change our beliefs by taking an honest look at what we say to ourselves about our self-worth, relationships and ability to heal. Offering tools to change inner conversations to become more healing and uplifting, Raupp proposes a goal of building new habits of thought.

Raupp's three-phase dietary plan seeks to heal the gut, which is directly involved in autoimmunity. The plan is quite restrictive, going from "prep" to "purify" and finally to a lifelong "reawaken" phase. Raupp encourages people to dive in at their own pace, however, eventually cooking almost everything from scratch and buying only high-quality foods. Some people may find that the most restrictive phase leaves them hungry, and if they are already too thin, they may lose even more weight.

The book lists healing foods that are allowed as well as foods to avoid, which include dairy, legumes, grains and pseudo-grains, nuts and seeds, nightshades, egg whites, alcohol and coffee. Raupp distinguishes between commercial versus grass-fed, hormone-free and antibiotic-free dairy products but argues that dairy contributes to a leaky gut and isn't friendly for those with autoimmune diseases. From her perspective, individuals should heal before adding back butter, cream, yogurt or cheese. While this may be true for some, Raupp does not acknowledge that for others, whole, raw and fermented grass-fed dairy products are an important aid in gut healing.

Raupp also lists "foodstuffs" that even healthy people should never eat again, including gluten, soy, added sugars, artificial sweeteners, food chemicals and processed vegetable oils. I understand the rationale for most of these, but is it really necessary for a healthy person with healthy digestion to avoid gluten-containing grains for life? No more artisan sourdough bread slathered with grass-fed butter? Oh, break my heart! I don't see why people who tolerate gluten-containing grains should not enjoy them, if properly prepared. Raupp does recommend plenty of top-quality bone broth, liver, seafoods, fish roe, pasture-raised meats, egg yolks, sweet potatoes, roots and other vegetables, cultured vegetables, cultured ghee and organic olive and coconut oils. All very wise, for sure. The book ends with recipes that follow the outline of her three-phase healing plan.

Some personal adjustments to the *Body Belief* protocol may be necessary. However, Raupp's focus on body-mind healing, deeply and intrinsically nourishing foods and other healthy habits and healing modalities are enough to give this book a thumbs up! Review by Alana Sugar

On an emotional level, people with autoimmune disease are attacking themselves with toxic thoughts. To be truly well, this must stop.

Unconventional Medicine:
Join the Revolution to Reinvent
Healthcare, Reverse Chronic Disease,
and Create a Practice You Love
By Chris Kresser
Lioncrest Publishing

Today's health care system in the United States costs over three trillion dollars per year. It is far and away the most expensive health care system in the world. One would hope it is worth it. One would hope the U.S. has the longest average life span and that it is getting longer. One would hope we have the lowest infant mortality rates. And one would hope we have no ongoing plagues and that we are quickly controlling or eliminating any new ones. One would hope—but no, none of those things is remotely true. The U.S. is nowhere near the top in the life-span category, and we no longer expect children to live as long as their parents. The ongoing plagues of cancer and heart disease continue to top the list of causes of death. New epidemics like autism are exploding at a rate that threatens to crush Western civilization in a few decades.

By every basic measure, U.S. health care is not working and is not worth it. Not only does it not help patients, but medical professionals are getting sicker from their work. Burnout is common. A typical work schedule for a primary care physician is sixty to seventy hours per week at the office, plus on-call duty. Medical practitioners are increasingly demoralized and depressed because they see that their best efforts are having no positive effect. Each day is another cycle of rushing patients through the office as fast as possible and giving them drugs that usually don't work and often make things worse.

Chris Kresser spells out the factors behind why U.S. health care is not working. Factor number one: there is no financial incentive for it to work. Health care is an industry that will not make money if there are no sick people. The more sick people there are, the more money the system makes. It is that simple. Pharmaceutical companies control the industry and dictate medical practices that lead to bigger profits, not healthier people. They also maintain a lot of influence over medical research, ensuring that profits will continue to take priority over health.

Meanwhile, government politicians busily shoot at the wrong target. They seem to be aware that the U.S. has a slight health problem, but they think the root cause is that too many are unable to afford the overpriced health care system. The arguments continue over how to fund unlimited access for everyone. Even if this economic pipedream were possible, they might notice—after they stop patting themselves on the back—that we still have a problem. Will they realize that it is not worth bankrupting ourselves for this system, or will they blame patients for not correctly following their doctor's advice? I shudder to think what kind of legislation that might inspire.

As long as the pharmaceutical industry maintains its massive lobbying influence over government policy, we cannot depend on government to solve anything. If you need emergency treatment due to injury, the conventional system is very good. While we wait for the rest of it to collapse under its own weight, Kresser outlines an unconventional alternative system that includes more natural approaches and fewer pharmaceuticals. It also does not drain the life out of practitioners and is way less expensive. The thumb is UP.

Review by Tim Boyd



Health care is an industry that will not make money if there are no sick people.

SACRED COW

We're excited to tell you about a new film in the works that will be out in Summer 2020. *Sacred Cow* is a documentary by real food dietitian Diana Rodgers, who also lives on a working organic farm. It's the story of why cows are good for you and good for the planet, and features Joel Salatin plus many other experts in sustainability and human nutrition. The Weston A. Price Foundation has made a donation to help make this film happen, and we encourage our members to check it out. Visit sacredcow.info for more information.



Fat Heals, Sugar Kills: The Cause of and Cure for Cardiovascular Disease, Diabetes, Obesity, and Other Metabolic Disorders By Dr. Bruce Fife Piccadilly Books

Another great book by Dr. Bruce Fife! With so much already written about fat and sugar, you may think you already know everything there is to know about both. If you think that, I respectfully say: wrong. Fife's past books have focused primarily on the profound efficacy of coconut oil. This book is different, offering an insightful discussion of good fats (with coconut oil being just one) as the gateway to avoiding refined sugar's disastrous effects. Discussion of fats and sugars in the same book was long overdue.

If perchance you are a holistic practitioner with clients who come to you with symptoms of heart disease, diabetes, obesity, joint issues, allergies and many other common disorders, you should purchase this book in quantity and make it available to them. I recommend it especially for new clients who need an easy read that educates them on why the wrong fats and refined sugars are making them so sick.

Written in easy-to-understand language that even a high school student can comprehend, Fife details some fascinating facts about the astronomical amount of refined sugar we consume without realizing it. The same goes for the bad fats that are highly damaging to our heart, arteries and overall health. This book is truly a wake-up call for both young and old.

Fife details why fats—and saturated fat in particular—are essential for good health, describing their role in regulating immune function, inflammation response, digestive function, insulin sensitivity, healthy brain function and sympathetic nervous system activity, among other functions. He also shares case studies of individuals who discovered the right fats and eliminated refined sugar, illustrating why lowfat diets are killing us. He discusses Weston Price and traditional diets, explaining why the right fats are a superfood and energy source and showing why eating more fat and avoiding refined carbs is the secret to maintaining a normal weight.

This book provides a whole new outlook on the importance of good fats in our diet. I especially loved its accordance with the diet philosophy of the Weston A. Price Foundation. This book deserves a place on your personal or office bookshelf and would make a great gift for those who are struggling with health issues and have no idea where to even begin.

Review by Maria Atwood, CNHP

MIRACLE ON MONTGOMERY FARM: THE ALMOST TRUE STORY OF HOW AN ORPHANED CALF AND A CRIPPLED LAMB HELPED SAVE THE FAMILY FARM by CYNTHIA K. LANDIS AND MICHELLE SHELLY

This book would be a great before-bedtime read for the conscientious eight-year-old in your life. Like *Charlotte's Web* in that the barnyard animals can speak to one another but not to humans, this book tells the story of Rowdy Ruby (an orphaned calf) and Gabby Abby (a crippled lamb), two loveable misfits who team up with a particularly determined dung beetle to save the family farm. The problem with Montgomery Farm (and many farms across the country) is that fertilizers and pesticides have destroyed the soil and killed off all the "unseen miracles"—like the dung beetles—that work behind the scenes in a healthy ecosystem. The farmers are good people and well-meaning, but they need some help (and a few catastrophic wake-up calls) to realize the error of their chemical-dependent ways. Their misguided reliance on chemicals has led them into an unsustainable cycle where the crops are failing and the creditors calling. Just when it seems that all is lost, the farmers pray for a miracle, and the animals do, too. As the reader will see, God sometimes works in mysterious ways. With bee die-offs occurring in record numbers and butterflies only getting scarcer, this book and others like it are helpful in educating the next generation of gardeners, farmers and food consumers about the importance of soil health and ecological interdependency as well as the key miracle of insects and pollinators that help produce the food we all depend on.

The Non-Tinfoil Guide to EMFs: How to Fix Our Stupid Use of Technology By Nicolas Pineault N&G Media, Inc.

Here is Nick Pineault's description of popular pseudo-science: "Science is not a thing, or a person. If it were a real person, it would be the weirdest bipolar guy I've ever met—someone who's clearly unstable, unpredictable, probably dangerous and who seems to change his mind every other day." This book is about the technology that generates electromagnetic fields (EMFs). This includes cell phones, Wi-Fi, power lines and just about any electronic device. The popular thinking is that all these toys make life better. How did we ever get along without them?

Pineault examines the devices' social, psychological and physical impact. As one example, a lot of people are so busy playing "Angry Birds" on their smartphone that they don't have time to talk to you. They don't even have time to look where they are going, and they walk into things like walls, traffic or open manholes. The more connected they are to electronic devices, the less connected they are to real people.

The telecom industry rigs its studies to show that its products are perfectly safe. Good thing we have government to oversee the industry, right? Unfortunately, the Telecommunications Act of 1996 says companies cannot be held liable for any negative health effects from their towers and antennas. To me, that means the industry can do whatever it wants; if people get hurt, our government does not care.

Industry carried out cell phone safety testing decades ago on a dummy that simulated a two-hundred-and-twenty-pound man. This approach seemed to assume that large men are the most vulnerable to EMFs—so if these men are OK, we all are OK. Many "experts" like to claim that because these devices emit non-ionizing radiation, they do not cause cancer. That sounds great until you start looking at all

the studies showing that non-ionizing radiation *does* cause cancer.

Some new products are hard to believe. Apparently, toilets just aren't smart enough, so companies have designed the iPotty. I found a link on Amazon, where I learned that "Parents can give children a comfortable and fun place to learn to use the potty." Wow, that sounds better than a magazine rack in the bathroom! However, Amazon says the iPotty is not currently available. One potential customer couldn't resist asking, "Does it include a gift card to download 'Angry Turds' from the App Store?" Someone else asked: "Can I get one in adult size? With wheels and a motor to run errands around town?" Let's get one for each workstation at the office. We would never have to budge from our desks. Productivity will hit an all-time high.

If you think we've hit *bottom* now, oh no, not yet. Now we also have Bluetooth diapers that will send an alert to your smartphone when they need to be changed. These *are* available on Amazon and will set you back fifty-five dollars. This is why we need 5G. The Internet of Things will connect everything down to our underwear.

You may want to rethink installing a "smart" TV in the bedroom (or next to that magazine rack). Samsung recommends that customers not discuss personal matters around their "smart" TV even when turned off, because it is listening and will sell the information to a third party.

How do we protect ourselves? First, when buying a device, ask yourself whether you really need it. You can be very sure that if it has the word "smart," it is not smart. If you must buy it, do you need to leave it turned on all the time? Does it need to be by your head when you sleep? Do you need to carry it around in your underwear? If the answer to any of these is "yes," you will probably need help from experts in electronics or psychiatry to lower the risk.

Review by Tim Boyd



The Telecommunications Act of 1996 says companies cannot be held liable for any negative health effects from their towers and antennas.



Miller's Review of Critical Vaccine Studies: 400 Important Scientific Papers Summarized for Parents and Researchers By Neil Z. Miller New Atlantean Press

The first book I ever read on vaccines—titled Vaccines: Are They Really Safe and Effective?—was by researcher and author Neil Z. Miller. I used it as a reference many times while making my documentary, The Greater Good, about the vaccine controversy in America. Recently, I have begun referencing my colleague's latest book, Miller's Review of Critical Vaccine Studies. The book summarizes scientific evidence of vaccination's risks and harms and is a must-read for anyone curious about or concerned with vaccine safety and efficacy.

As vaccine consultant for the Weston A. Price Foundation, I contribute to the quarterly Vaccination Updates for the *Wise Traditions* journal. In the past, I have spent hundreds of hours tediously searching for studies. This time around, with the help of Miller's book, I was able to quickly and efficiently find the section on influenza vaccines, where summaries of twenty-five studies lay before me, all in one place.

Almost all of the included papers are peer-reviewed studies published in prestigious journals indexed by the National Library of Medicine (the world's largest medical library): The Journal of the American Medical Association, The New England Journal of Medicine, The Lancet, Pediatrics, the American Journal of Public Health and many others. Miller also reviews different types of studies: meta-analyses, systematic reviews, randomized placebocontrolled studies, cohort and case-control studies, scientific commentaries and animal research. Nearly all provide crucial evidence indicating serious deficits in vaccine safety or effectiveness.

For years, I have tried to understand why medical professionals and the mainstream media

say there are no credible studies demonstrating that vaccines can cause harm—even though the U.S. Supreme Court deems vaccines to be "unavoidably unsafe," and the U.S. government has paid out more than four billion dollars to those with proven vaccine injury and death claims. Do these professionals and journalists not want to know the truth? Are they lazy? Well, now there is no excuse, for they have a book that clearly presents all of the studies and confirms vaccine tradeoffs and side effects. It is all there for them to read—unless, of course, they choose not to.

If I could recommend this book to one group of people only, however, it would be to parents. More than 50 percent of American children have one or more chronic illnesses, and hundreds of studies show that vaccines increase rates of acute and chronic illnesses such as neurological disorders, autoimmune conditions, autism, allergies, seizures, diabetes and cancers. Yet the Centers for Disease Control and Prevention (CDC) continues to add more vaccines to the childhood schedule. When parents follow the CDC's recommended schedule, their child is likely to receive seventy-two to seventy-four doses of vaccine from gestation to age eighteen—despite the lack of even a single study proving that vaccines administered in the recommended combinations are safe. If parents knew that all vaccines licensed by the Food and Drug Administration (FDA) are exempt from double-blind placebo-controlled testing-the gold standard for testing new drugs—they might think twice about injecting their children with vaccines containing human and animal viruses, retroviruses, mercury, aluminum, formaldehyde, antibiotics, polysorbate 80, MSG, detergent and a multitude of other toxic substances.

Each of the twenty-four chapters contains several studies on the chapter's topic—such as aluminum adjuvants, pathogen evolution, sudden infant death or health care workers who reject vaccines. Usually, there is one study per page, with a headline, a direct quote from the

For years, I have tried to understand why medical professionals and the mainstream media say there are no credible studies demonstrating that vaccines can cause harm.

study and the scientific citation. Miller follows this information with bullet points explaining, in his own words, enough of the paper's pertinent findings for the reader to understand the study clearly. For example, bullet points for a study about aluminum adjuvants note that (1) aluminum in vaccines travels from the injection site to distant organs such as the spleen and brain, where it is still detected one year later; and (2) aluminum remains in cells long after vaccination and can cause neurologic disorders and autoimmune/inflammatory syndrome induced by adjuvants (ASIA).

In addition, each chapter begins with vital yet practical background information. For example, the chapter on mercury includes a brief history of the neurotoxic preservative thimerosal, with comments noting that the chapter's studies "provide strong evidence that vaccines containing mercury significantly increase the risk of neurodevelopmental effects, including speech and sleep disorders, developmental delay, attention deficit disorders, premature puberty, mental retardation and autism."

Even when the findings buried in a vaccine paper are critical of vaccines, such papers often boast favorable conclusions. As Miller says, "Authors of research papers often put a positive spin on studies with undesirable findings." He also explains methodological problems such as poor study design and study bias and does an excellent job of forewarning his readers about the moral and ethical breaches to which vaccine scientists can be a party.

Miller is forthright in letting readers know that his book does not include studies that support vaccination. For that information, he directs readers to the websites of the CDC, FDA, World Health Organization and vaccine manufacturers. To this, I would add a word of caution. Simple searches on these entities' websites will virtually guarantee that one finds only pro-vaccine positions and science; on the other hand, anyone

willing to engage in more extensive digging will find evidence that vaccines not only cause damage but are not always terribly efficacious. For example, the CDC recommends flu shots for pregnant women, but manufacturers disclose in package inserts that they have never studied the vaccines in that population. With diligent searching, one can also find on the CDC's own website the agency's estimate that flu shots worked just 9 percent of the time in 2018–2019.

The single most important argument within the vaccine debate is that of informed consent. If you want to be informed, I encourage you to purchase Miller's book. If you want to have the right to say no to vaccine mandates, look for action alerts from the Weston A. Price Foundation that give detailed steps on how to fight legislation that denies you and your children the right to bodily autonomy and privacy.

Miller's goal is "to shed light on poorly publicized and unpopular aspects of vaccination." I think he has done a brilliant job. I give his book a big thumbs up, and I thank him for making my work life easier. I also thank him for being a tireless advocate who is not afraid to expose the truth. This book should find prominent placement on the shelves of any reference library.

Review by Kendall Nelson

INVITATION TO WAPF MEMBERS

We invite all current members of the Weston A. Price Foundation to join our exclusive members-only closed group on Facebook. Two thousand members have already joined. Go to this link and click on the Join Group button and answer the questions it asks: facebook.com/groups/westonapricefoundation. (Please note: It may take a week or so to verify your membership and add you to the group once you ask to join on Facebook.)

This is an opportunity to be part of an active and supportive online community as you navigate our dietary recommendations. This group was created for current WAPF members as a supportive forum for questions, comments and discussion about food, farming and the healing arts. We welcome all members regardless of your level of familiarity with our dietary recommendations! (Please note: It is beyond our scope to answer individual medical questions.) Here's what members are saying about being part of this group:

Linda L.: "I can't express enough how much it means to me to have a safe place for discussion of these sometimes controversial topics. The members here are respectful of one another and it fosters a wonderful community of encouragement. A seemingly rare thing these days."

Renate D.: "I love love love love this group! One of my favorite parts of being a member. I feel like I know some people here even though we haven't met. I'll definitely be at the conference in November so we can chat in person."



Ideological Constructs of Vaccination By Mateja Cernic, PhD Vega Press Ltd

Vaccination is the sacred cow at the center of a storm of controversy today. When the two highly charged sides clash, you can almost hear the thunder and see the lightning. Many books have been written on the subject, and there will probably be many more to come as each side uses all available means to promote its point of view. Each side believes that if it can just emphasize its points more clearly, the other side will finally come to its senses and see reason.

This book looks at the evidence and history of vaccination and does a brilliant job. I really like the graphs and charts showing the data in a way that makes it easy to see the impact (or lack thereof) of vaccination on disease. The author also effectively dismantles the fantasy of herd immunity. It is a fact that vaccines do not always work; if they work at all, they generally work for less than ten years. So by the time children reach adulthood, their vaccines are no longer effective.

It is not hard to do the math and see that less than half of the "herd" is protected by vaccines at any given time. In short, there is no vaccine-based herd immunity, and there never has been. With current technology, there never will be. Another result of the push for herd immunity is that vaccines shift mild childhood diseases to teens and adults in whom the diseases tend to be more severe.

But this book goes beyond arguments over vaccine effectiveness and looks at the thinking, mentality, ideology and even religious fanaticism surrounding the issue. Dr. Cernic defines ideology on the first page of the introduction as "interest-driven constructs of reality" that are promoted at the expense of other views. "Interest-driven"—not science-driven.

The pro-vaccination side tends to consider vaccine science to be as well established as the law of gravity. Proponents view themselves as

"objective" and "rational" and believe the truth is obvious. Therefore, anyone who questions vaccination must be weak-minded, deranged, dangerous or even a genocidal maniac. However, this attitude already gives the lie to the myth of objectivity. There is nothing objective or scientific about demonizing the opposition. In fact, by doing so, you have changed the subject. If you disagree with me and start questioning my intelligence, character, ancestry or how ugly I am, any of those things may be true but you are no longer addressing the facts of the original argument. If you have no good response to my points, derision is just a common way of distracting everyone and making it look like you have won the argument anyway.

The case of Andrew Wakefield is a well-known example of "scientific" overreaction. Wakefield performed a small study looking at a possible cause of autism, which came to no sweeping conclusions about vaccines but suggested more study would be a good idea. For that he was demonized and crucified.

There is also an implicit belief that scientists as a group are completely objective—somehow fundamentally different from the rest of us mere mortals. This book and many others debunk this perspective. Far from being transcendent beings who are immune to the biases and influences that plague the rest of us, scientists involved in a study are typically *less* objective than the general public. As experts, they have gone on record with their views on their subject of expertise. When they participate in a study on that subject, they care about whether the study proves them wrong or right. They don't want to look stupid any more than you or I do.

There is a bigger problem with studies that are made public. They are generally not controlled by the scientists doing them, but by the sponsors—the corporations—that are paying for them. These entities are not paying for science; they are paying for marketing. They want studies that show "you need our product

It is not hard to do the math and see that well under half of the "herd" is protected by vaccines at any given time.

or you may die."

Cernic says that functionally speaking, science and religion are two sides of the same coin. (You can look up the definition of religion online, and you will find about twenty different definitions, but I don't like to waste time arguing about semantics, so I won't.) Science and religion are both about what you believe to be the best or only path or methodology to find the ultimate truth. The view that science and religion necessarily conflict becomes nonsensical when you see that the boundaries between science, religion, history, morality and ethics are artificial. They are all connected. When you try to disconnect them, trouble starts. When you disconnect science from morality or ethics, you end up with nuclear weapons, GMOs and Twinkies.

Ironically, "the science is settled" is not a scientific statement but a statement of religious intolerance and authoritarian dictatorship. It certainly does not represent the behavior of someone who believes in truly objective science. Cernic describes the example of a pediatrician who posts on Facebook that he will expel any parents who do not vaccinate from his practice and file a report with Child Protective Services (CPS). This is an example of intolerance taken to a whole new level. I am not immediately able to think of any major religion that condones taking children from their parents for any reason. Such an attitude is mostly associated with barbaric cultures in their final death throes, which are practicing child sacrifice.

There are too many good points in the book to summarize them, but I want to highlight one more. Cernic cites a study showing that human fetal DNA fragments and retroviral contaminants in vaccines modify the genes of babies and small children especially. They cause autoimmune disorders and possibly other problems. In this era, which considers personal responsibility as quaint and outmoded, blaming health problems

on genetics has a certain appeal. Blaming the genes is essentially like blaming God or Mother Nature, depending on your religious inclination. "It's not our fault." Well, sorry, but even if there is a genetic component to autism, it is not a naturally occurring genetic defect. And bad genes don't cause epidemics.

OK, I can't resist discussing one more point. This is an example from Slovenia, the home country of the book's author, illustrating that shenanigans like this go on all over the world. Slovenia has stonewalled Cernic's attempts to obtain vaccine safety data for years. The institution responsible for protecting public health in Slovenia defended its stonewalling with a statement that included the following choice nuggets: "Individuals or larger groups could start rejecting vaccination en masse" and "The public may build up skewed images and wrong attitudes." After seeing statements like that, I don't really need to see the data. Those statements tell me everything I need to know.

It would be nice if we could slaughter this sacred cow and turn it into some nice, juicy, *fat* steaks. Everyone would be happier. Although this book may be a little too deep for the average shallow reader, if you have the mental horsepower, it is a great book. The thumb is UP.

Review by Tim Boyd

DOCUMENTING HOPE PROJECT SEEKS PARTICIPATION BY WAPF PARENTS

Epidemic Answers has an important initiative called the Documenting Hope Project (@documentinghope). Part of the project is a study called the Children's Health Inventory for Resilience and Prevention Study a.k.a. the "CHIRP Study."

The study is an IRB-approved private online survey that asks about what children in the U.S. are eating, their chemical exposures at home and school, EMF exposures, industrial sites nearby, their medical history, consumption of medical products, preconception and prenatal health of parents, family medical history, etc.

Epidemic Answers is asking U.S. parents of children 1-15 years old to volunteer a few hours of their time (ranging between 3 and 6 hours) to protect the health of current and future generations of children. The survey can be saved and completed at your own pace in the comfort of your home.

The organizers are especially interested in participation by WAPF parents. The survey includes questions about consumption of raw milk, cod liver oil, fermented foods, bone broth, etc.

Each parent participant will receive a free comprehensive health report on their child upon completion, as well as discounts to various natural and healthy-living focused companies.

Learn more and volunteer today: DocumentingHope.com/CHIRP-Study

A tooth with five or six miles of microscopic tubules cannot be sterilized.

Root Cause Directed by Frazer Bailey Produced by Justin Lyons

Medical procedures never leave dead tissue in the body. . . with one exception. A root canal leaves a dead tooth in your mouth. What could go wrong? In the case featured in this video, the result was anxiety attacks followed by chronic fatigue and general depression.

Ben tried everything. There were blood tests, supplements, cupping, crystals, chiropractors, homeopaths, naturopaths, juicing, parasite cleanses and medical marijuana. Then there was the weird stuff. Nothing worked. After all that, he stumbled onto the root canal issue and began to investigate.

Dr. Weston Price did pioneering work establishing a link between root canals and chronic health problems, including heart disease and cancer. He found that when he transplanted a tooth with a root canal to a rabbit, that rabbit developed the same medical syndrome as the original owner of the tooth. When he transferred the tooth from one rabbit to the next, the medical syndrome consistently followed.

Follow-up studies have confirmed Price's findings. Dr. Jerry Tennant found that 96 percent of cancer patients had an infected tooth in the same acupuncture meridian. Other experts have found the same thing at similar percentages. One study of eighty-seven "well-done" root canals showed that they all had toxins. A tooth with five or six miles of microscopic tubules cannot be sterilized.

So, what to do? To resolve the symptoms, you must remove the root cause. As Dr. Hal Huggins put it, you can't dry off until you get out of the shower. Does everyone who has a root canal have cancer? No. Does everyone who has cancer have a root canal? No. But if you have ruled everything else out, then you are going to have to deal with the root canal.

Dentists perform about twenty-five million

root canals each year in the United States. In other words, it is big business, and most dentists don't want to talk about the downside of this business. Step one will be finding a dentist who knows what they are doing.

Nobody likes having teeth pulled, but right now, that is the only option. It is also just the first step. Dentists also need to clean up any infection in the surrounding area and remove periodontal ligament. Ozone has proven very effective at clearing infection out of bone.

Some tooth replacement options are better than others. Titanium implants are popular today, but they can trigger autoimmune problems for some people. You are also planting metal in your mouth right on an energy meridian. That doesn't sound like a good idea. Zirconia implants are better but not perfect. The experts in the film think a bonded ceramic bridge is the best, though still not a perfect option either.

This video shows up-close views of a root canal being done, and those views are not for the squeamish. There is also some adult language and visual images, but the information is good and the thumb is UP.

FAT: A Documentary Produced by Serena Scott Thomas, Vinnie Tortorich and Peter Curtis Pardini Fat Squirrel Films

Jim Abrahams is one of the producers of the popular 1980 movie *Airplane!* His son, Charlie, began to have seizures by the age of one. Because of Abrahams' success in the movie business, he had the money to go to experts all over the U.S. They all gave him the same answer, saying the only options were drugs or brain surgery. His son tried all that, and it didn't work. Then Abrahams stopped by a medical library, and one of the first things he came across was the ketogenic diet. He read that it completely cured a third of seizure cases, improved another third and did nothing for the final third. The family

tried it. Contrary to the dire prognoses of all the experts, his son is now a healthy adult teaching elementary school.

None of the experts Abrahams talked to mentioned anything about the ketogenic diet, even though the diet is not a new discovery. When one of the experts was asked later why not, he explained that they had not yet explored all the medical options. There is the medical mindset in a nutshell—dangerous drugs and surgery are the preferred approaches over a simple change in diet.

Vinnie Tortorich takes us on a tour through the history of how we landed on the health paradigms we have today. He starts his history with Ellen White, who didn't want us to eat anything with a face. Then there was John Kellogg; when Ellen White convinced him that sex was bad, he invented Corn Flakes to stifle the evil sex drive. (I'm not sure how he thinks we all got here or how life will continue to exist.) Along the way, any voices of reason were overwhelmed by the likes of Ancel Keys, the McGovern Report fiasco and continuing government recommendations.

And the popular media. Tortorich does a very effective job of illustrating the power of the media. You see beer commercials full of guys with ripped abs playing volleyball on the beach. Just buy the beer and you could be one of them! His best example is from his own experience on the Oprah show. The show was about men who dated older women (certainly an important topic everyone needs to be informed about), and he happened to be dating an older woman at the time. He was bamboozled into misrepresenting who his girlfriend really was, and he was not happy about that. He decided to take control and tried to sabotage the show by making outrageous claims. He succeeded in turning the show into a complete circus and was sure it would never air.

Oprah was literally dancing in the aisles because she knew this was exactly the kind of garbage the American public ate up with a shovel. The show aired more than twenty years ago and to this day remains the seventh most popular Oprah show ever. That is the power of the media.

Many WAPF members will recognize familiar names and faces like Nina Teicholz and Gary Taubes in this film. They do a good job of revealing the real science that discredits our fat-phobia. The thumb is UP.

Bottle of Lies: How Poor FDA Oversight & Fraud in Generic Drug Industry
Threaten Patients' Health
https://www.democracynow.org/2019/5/20/
bottle of lies how poor fda

Around 90 percent of all prescriptions filled in the U.S. are generic drugs, most of them made in pharmaceutical plants in India and China. The U.S. Food and Drug Administration (FDA) recently said the quality of drug factories in those two countries scored below the world average. Of course, from that, the FDA concluded "the quality of the drug supply has never been higher." Well, that's good news. That is the kind of regulation your tax dollars are buying.

After doing some digging, investigative journalist Katherine Eban found some interesting little factoids about generic drugs. The FDA inspects pharmaceutical factories overseas, so everything is fine, right? Well, everything certainly looks fine when the FDA announces its "surprise" inspections overseas up to two months in advance.

Peter Baker was a thirty-two-year-old FDA investigator relocated to New Delhi to inspect Indian factories. He carried out inspections that were not announced ahead of time. His findings were somewhat different from those of other FDA inspectors. Baker found that data fabrication teams come in ahead of FDA inspections to shred and fabricate documents, invent quality data, invent standard operating procedures and so forth. At a company called Wockhardt, he

The FDA announces its "surprise" inspections overseas up to two months in advance.

More than two hundred products in over forty countries were filed with falsified data.

found seventy-five torn batch records indicating that insulin the company was manufacturing was contaminated with metallic particles but nonetheless had been released to patients in India and the Middle East. Baker inspected eighty-six plants in both India and China, and he found at least some data fraud or deception at sixty-seven of those plants.

Baker left the FDA in March 2019. This might have been due to the experiences he had in India. He was followed, threatened and, in one case, poisoned with tainted water at a plant. Some of the investigators that he worked with were spied on. A hotel room was bugged. And based on this sort of experience, he was diagnosed with post-traumatic stress.

Not only are FDA inspections announced two months in advance, but the FDA turns to these same plants to arrange its inspectors' local travel and hotel ground transportation. What happens is that inspectors are picked up at the airport in a luxury car. They're taken to a hotel, where their rooms are magically upgraded, and they never get a bill. There are trips to the Taj Mahal, shopping trips, massages and golf outings. The schedule must be grueling.

Whistleblower Dinesh Thakur found that more than two hundred products in over forty countries were filed with falsified data; the company was literally running tests off the brand drug and submitting the results as its own data for the generic version of the drug. He found this kind of information on a Powerpoint presentation shown to a subcommittee of the board of directors. He took this to the FDA.

The FDA did investigate. During the criminal investigation of this company (Ranbaxy) for fraud, the FDA greenlighted Ranbaxy to manufacture the biggest generic drug in U.S. history, the first generic version of Lipitor (the popular cholesterol drug). Millions of doses of Lipitor had to be recalled because one of the ingredients turned out to be glass fragments.

Thakur also found that the quality of drug

production is different for the U.S. and European Union compared to the rest of the world. When discussing the poor quality of the company's AIDS drugs for Africa on a conference call, a Ranbaxy medical director said: "Who cares? It's just blacks dying." This gives us some idea of the mentality and ethics of large pharmaceutical companies.

Almost no drug manufacturing takes place in the U.S. because it is much more expensive; and it is easier to bypass environmental regulations in other countries, which companies do. In most cases, there is also less regulation overall.

The interviewer asked Katherine Eban. "What can an individual do?" (besides quit taking drugs you don't really need, but that's just me). You usually can't tell from the label that a drug is generic. The brand name will be there, but there is no information on where the drug was made, which is a problem for generic and non-generic alike. Part of Eban's response was, "Well, I do take generic drugs. Of course, we all take generic drugs." Uh no, "we" don't, but the number of Americans taking some kind of drug is so high I won't quibble over a few percentage points. This video is not very strong on solutions, but it gives us more good reasons to stay away from drugs as much as possible. The thumb is UP.

RESTAURANT RATERS NEEDED FOR OUR NEW 12 SPOONS SITE

WAPF members: please consider being restaurant raters on our new 12 Spoons restaurant rating site. We need hundreds, if not thousands, more restaurants listed.

To register, you will need a separate 12 Spoons user name and password. Click the 12 Spoons logo on our homepage (lower right side of the home page). Follow the steps to get your user name and password.

If you rate four restaurants, let us know and we will offer one year's free membership. Do eight and we will offer a discounted rate to the conference (\$250 full conference).

Pharmaceutical Fraud
Luke Yamaguchi
https://www.darksidevaccines.com/pharmaceutical-fraud/
(16.5 minutes long)

Merck is one of the top five pharmaceutical companies in the world and rakes in about forty billion dollars per year. In 1999, it put Vioxx on the market to treat arthritis. Before it was even released, Merck scientists became concerned about the risk of cardiovascular events from the drug. In response to those concerns, Merck decided to do no studies of that risk.

In 2004, Merck had to withdraw Vioxx after a clinical trial did show increased risk of heart attack and stroke. *The Lancet* medical journal estimated conservatively that thirty-eight thousand people died from the drug. Other estimates go as high as sixty thousand deaths. In 2007, Merck paid nearly five billion dollars to settle twenty-seven thousand lawsuits. Vioxx brought in two and a half billion dollars per year while it was on the market.

This is probably one of the most expensive disasters in pharmaceutical history, but not the only one. We get a few peaks at the mentality lurking inside this mess from CBS News at the time of the Vioxx scandal. The headline read, "Merck created hit list to 'destroy,' 'neutralize' or 'discredit' dissenting doctors." Merck emails also came to light saying things like, "we need to seek them out and destroy them where they live." In 2011, the company pleaded guilty to a criminal charge over marketing and sales of Vioxx and paid nine hundred and fifty million dollars. This was only the latest in a series of fraud cases against not just Merck but a number of other pharmaceutical companies, but no individual went to jail or was held liable. It was just the cost of doing business.

Does this give us any broader insights? Does this inspire confidence in the safety of vaccines, for example? Merck is the number one producer of vaccines in the U.S. and number two in the world. Merck is currently being sued over a shingles vaccine as well as the measles-mumps-rubella (MMR) vaccine and the human papillomavirus (HPV) vaccine Gardasil. The Vaccine Adverse Event Reporting System (VAERS) has logged thirty-nine thousand adverse events from the shingles vaccine, including one hundred and forty-two deaths. Because the shingles vaccine is not covered by previous legislation exempting manufacturers from lawsuits over bad vaccines, you can actually sue companies for that one. There are sixty shingles vaccine lawsuits in the works now.

Are vaccines somehow different and safer than Merck's other drugs? Look at the vaccine package inserts. The hepatitis B vaccine insert says the company has not evaluated it for things like cardiovascular or fertility effects, among others.

How well does the MMR vaccine work? In 2019, there was a mumps

outbreak in Indiana. Nearly all patients had been vaccinated. In 2017 in Washington state, there were forty-two mumps cases—all vaccinated twice. In 2016 in Missouri and at Harvard, the story was similar. In 2019, there was even a mumps outbreak on a Navy ship, even though the MMR vaccine is required for all military personnel. It should not be surprising to learn that Merck has been found to have faked the tests for the vaccine's mumps component.

Robert F. Kennedy, Jr. is going after Merck and Kaiser Permanente in court over Gardasil. He makes the interesting point that if his claims against Merck are wrong, Merck has a slamdunk case of slander against him. Why aren't they suing him? He knows they don't dare. Not only is he not wrong, but if Merck sued him, he would immediately file for discovery, forcing Merck to make public a whole lot more information that it doesn't want us to know.

Merck is not the only drug maker in trouble. GlaxoSmithKline is the world's largest vaccine manufacturer. It recently coughed up three billion dollars for a fraud settlement. Former New York Attorney General Eliot Spitzer said money is not deterring corporate malfeasance. Maybe somebody actually needs to go to jail.

Merck has a statement on its website saying that its mission is to save and improve lives. I guess that could be true. The company doesn't say which lives. The lives of stockholders, maybe? The lives of patients or customers, not so much. The thumb is UP for this video.

CORRECTION

Tim's DVD Review of *The Big Secret* (Summer, 2019) incorrectly spelled the name of director and producer Alex Voss. Voss and Susan Downs, MD were both directors and producers of the film. The film has been removed from Amazon Prime but can be accessed at:

vimeo.com/ondemand/thebigsecret.

Vaccination Updates

THE FLU SHOT: UNSAFE, INEFFECTIVE AND NOT NECESSARY By Kendall Nelson, Director, *The Greater Good*

Why do vaccine scientists consider the flu shot to be "working well" when it fails more than 50 percent of the time?

The influenza virus was first discovered in 1933. By the mid-1940s, scientists had produced a vaccine given with the aim of protecting military personnel against respiratory infection during World War II. In 1960, health officials began recommending influenza vaccines for all adults over sixty-five years of age. By 2010, the U.S. Centers for Disease Control and Prevention (CDC) was urging influenza vaccines for nearly everyone—including infants over the age of six months, children, teens, pregnant women, healthy adults and health care workers.¹

Influenza (also called flu) is a contagious viral respiratory illness that infects the nose, throat and sometimes lungs. It can cause mild to severe illness, and at times can lead to death. Symptoms may include fever, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, fatigue, vomiting and diarrhea. More serious complications of influenza include dehydration, bacterial ear and sinus infections, bronchitis and pneumonia. Those at highest risk for influenza complications include persons sixty-five years or older, young children, pregnant women, and anyone with autoimmune, lung, heart, kidney or blood disorders.²

Flu viruses mainly spread when people with influenza cough, sneeze or talk. Tiny droplets of virus can land in the mouths or noses (or possibly be inhaled into the lungs) of people who are nearby. Less often, a person might get the flu by touching a surface or object that has the virus on it and then touching his or her own mouth, nose or, possibly, their eyes. People with the flu are most contagious in the first three to four days, and the illness's average duration is about one week.³

NOTHING TO BRAG ABOUT

According to the CDC, the best way to prevent seasonal flu is to get vaccinated an-

nually. The agency asserts that the vaccine is particularly important for people who are at high risk of serious influenza complications, including those with chronic health conditions. The CDC also claims that influenza vaccines are both "safe" and "effective," despite numerous studies showing that flu shots can cause harm—and the government's own data showing that the vaccines are not very effective.

Take the 2018–2019 flu vaccine, for example. Through February, CDC scientists reported the flu shot's effectiveness rate to be about average (47 percent),⁴ but when a tougher strain of influenza virus emerged, it was found to be virtually worthless.⁵ In fact, the estimated 9 percent effectiveness for that strain dragged the overall effectiveness rate for the season down to 29 percent.⁵

For other infectious diseases, vaccine scientists generally do not deem a vaccine successful unless it is at least 90 percent effective. So why do they consider the flu shot to be "working well" when it fails more than 50 percent of the time and has not surpassed a 60 percent efficacy rate over the past fourteen years? Worse yet, with every passing year, the CDC uses more fear-based marketing to promote universal flu vaccination, unjustifiably claiming the vaccine prevents millions of illnesses and doctor's visits.

Governmental pressure to vaccinate typically begins in late summer and early fall. In addition, health care professionals and, more frequently, the mainstream media start alerting the public as to the "dire" nature of influenza and the importance of getting one's annual flu shot. For most of us, it is impossible to avoid the advertising campaigns on television and in print. Wherever we go—physicians' offices, hospitals, pharmacies, schools, grocery and big-box stores, shopping malls and even airports—we are marketed to and often coerced.

MISLEADING DATA

The CDC's website traditionally has stated that about thirty-six thousand Americans die from the flu each year. This figure is commonly accepted and widely reported by the media and the scientific community. For the 2018-2019 U.S. flu season (October 1, 2018 through May 4, 2019), the CDC reported between 37.4 million and 42.9 million flu illnesses; from 17.1 million to 20.1 million medical visits; between 531,000 and 647,000 hospitalizations; and between 36,400 and 61,200 deaths.⁷

A physician who submitted a "request for correction" to the U.S. Department of Health and Human Services (HHS) has written that the data on influenza deaths are "false and misleading." The writer notes that although the CDC acknowledges a difference between "flu" deaths and "flu-associated" deaths, it uses the terms interchangeably and avoids telling us that the much-publicized figure of thirty-six thousand is not actually an estimate of yearly flu deaths "but an estimate—generated by a [mathematical] model—of flu-associated death."8 Fraudulently, the CDC is bundling flu and pneumonia deaths together, thus grossly inflating the numbers. The physician also points to "significant statistical incompatibilities between official estimates and national vital statistics data."8 According to the National Center for Health Statistics, deaths for which the cause is listed as influenza on death certificates number little more than one thousand per year.9

TYPES OF INFLUENZA VACCINES

The U.S. Food and Drug Administration (FDA) has licensed different flu vaccines for use in different age groups to protect against the two main types of influenza virus: types A and B. Traditional flu shots are trivalent (three-component) vaccines that are meant to protect against three viruses: two influenza A viruses (H1N1 and H3N2) and one influenza B virus. A quadrivalent (four-component) vaccine, intended to protect against an additional B virus, is also routinely available.¹⁰

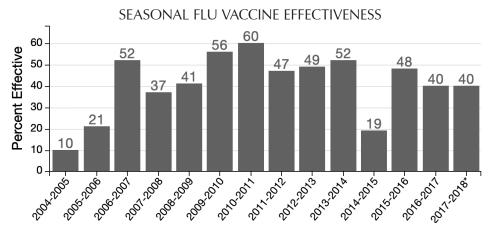
Influenza vaccines available in the United States are either inactivated injectable vaccines or live attenuated nasal spray vaccines. The live nasal spray vaccine (FluMist) was withdrawn in 2017–2018 due to its 97 percent failure rate during prior flu seasons. For the 2018–2019 season, however, the CDC recommended a reformulation of FluMist for non-pregnant individuals aged two through forty-nine.¹⁰

Because influenza viruses are always changing, vaccine scientists must continually update the vaccine. Every year, public health officials try to predict which viruses are most likely to circulate in the world. This "best-guess" policy is based on early observations of flu activity in the Southern Hemisphere. After assessing which viruses are prevalent there, the World Health Organization (WHO) and the CDC select the viruses and subtypes that will be in the current year's vaccines in the U.S.^{2,10}

WHAT'S IN THAT VACCINE?

Influenza vaccines are sold by multiple drug companies and contain varying amounts of different ingredients, including adjuvants and preservatives that may cause adverse reactions. Depending on the manufacturer, the vaccines may include flu viruses, chicken egg proteins, genetically engineered (GE) dog kidney cells, GE caterpillar cells, antibiotics, formaldehyde, cetyltrimethylammonium bromide, polysorbate 80, gelatin, squalene oil and thimerosal (a mercury-containing preservative).

While the CDC says these ingredients are safe, Dr. Joseph Mercola warns that all of them may be poisonous, carcinogenic or potentially harmful to the skin and the gastrointestinal, pulmonary, immune and neurological systems. They can also cause allergic reactions in some



Source: https://www.cdc.gov/flu/vaccines-work/effectiveness-studies.htm

Influenza
vaccine
injury and
death claims
are the
leading claims
submitted to
the National
Vaccine
Injury
Compensation
Program.

individuals.¹⁰ The safety of the vaccines' GE components is unknown.¹¹

INFLUENZA VACCINE INJURIES

Before getting a flu shot, you should know that influenza vaccine injury and death claims are the leading types of claims submitted to the National Vaccine Injury Compensation Program (NVICP), and the second most frequently compensated. Congress established the NVICP in 1986 to give families of vaccinated children an avenue for vaccine injury compensation, while absolving drug companies from liability for injuries and deaths. To date, the NVICP has compensated a total of six thousand three hundred and fifty-eight claims, paying victims over four billion dollars-and two-thirds of the claims involved flu vaccines.¹² As of July 1, 2019, individuals had filed five thousand three hundred and eighty-four NVICP claims for injuries and deaths following influenza vaccination, including one hundred and seventy-two deaths and over fifty-two hundred serious injuries.11 These high numbers take on even more import when one considers HHS's own admission that less than one percent of all vaccine injuries are ever reported.

Common influenza vaccine reactions include fever, sore throat, cough, nasal congestion, nausea, fatigue, joint and muscle pain, headache, soreness and redness or swelling at the injection site. More serious complications include shoulder injury related to vaccine administration (SIRVA), shock, brain inflammation, asthma and wheezing, narcolepsy and paralysis, Guillain-Barre syndrome (GBS) and death. Influenza vaccine risks are higher if the recipient is sick, is allergic to an ingredient in the vaccine, has a history of GBS or has had a previous vaccine reaction.¹¹

INFLUENZA VACCINATION DURING PREGNANCY

Naturally occurring influenza illness during pregnancy has been associated with an increased risk of autism in the offspring. ¹⁴ This finding is the reported basis for the CDC's recommendation that pregnant women get flu vaccines. However, we must remember that

the whole purpose of a vaccine is to provoke an inflammatory response. Thus, as one health writer points out, the argument that flu shots in pregnancy will prevent autism is flawed: it ignores the fact that, "by doing so, women are trading a *hypothetical* risk of inflammation due to *possible* influenza infection *for the virtually guaranteed risk of inflammation due to vaccination*" [emphasis in original].¹⁵ Moreover, brain inflammation is involved in autism's pathogenesis.¹⁶

Many doctors instruct pregnant women to get two influenza vaccines if their pregnancy spans more than one flu season. In this scenario, the developing fetus would be exposed to a double dose of mercury-containing thimerosal *in utero*, followed by two more shots in infancy and then annually until death. These recommendations come despite data demonstrating that mercury exposure via maternal transfer, particularly during the first trimester of a woman's pregnancy, can result in severe damage, including death.¹⁷ For children aged six to eight months, the CDC recommends two influenza vaccine doses four or more weeks apart.¹⁸

A recent Freedom of Information Act lawsuit filed by Robert F. Kennedy, Jr. on behalf of the Informed Consent Action Network (ICAN) forced the FDA to admit, for the first time, the shocking fact that government agencies, including the CDC, are recommending influenza vaccines for pregnant women—during any trimester of pregnancy—even though the FDA has never licensed the vaccines for that purpose and despite zero safety testing for pregnant women in clinical trials.¹⁹ Nor has the FDA ever tested or approved thimerosal for use in pregnancy. Seasonal flu vaccine manufacturers' Safety Data Sheets discuss thimerosal by warning: "Exposure in utero can cause mild to severe mental retardation and motor coordination impairment."20

During the 2009–2010 influenza season, the FDA and CDC recommended that pregnant women receive two influenza vaccines—a seasonal flu shot and the A-H1N1 "swine flu" vaccine. This combination of two untested flu shots may have resulted in thousands of fetal deaths. The government's Vaccine Adverse

Events Reporting System (VAERS) revealed a jump in fetal deaths of 4,250 percent when compared to earlier years.²¹

Regrettably, no one warned pregnant women about the unknown safety risks of doubling up on flu vaccinations, even though vaccine manufacturers, the FDA and the CDC knew there was a risk. Neither of the flu vaccines given in 2009–2010 was ever tested for safety or efficacy in pregnant women, and each contained twenty-five micrograms of mercury per dose, exceeding the Environmental Protection Agency's (EPA's) safety levels by several-thousand-fold for a developing fetus during the first trimester.

Package inserts of the A-H1N1 vaccine caution: "It is not known whether these vaccines can cause fetal harm when administered to pregnant women or can affect reproduction capacity."22 However, numerous studies show that influenza vaccines are, in fact, harming pregnant women and their fetuses. For example, the CDC's own data demonstrated that women who received certain flu shots from 2010 to 2012 had a 7.7-fold greater odds of miscarriage than women who did not receive the vaccines.²³ A 2017 Kaiser study of over forty-five thousand women, published in JAMA Pediatrics, showed an elevated risk of birth defects and a 20 percent higher risk of autism in children whose mothers received a first-trimester flu shot.24

A large study utilizing the CDC's Vaccine Safety Datalink database found no significant differences in illness rates among vaccinated and unvaccinated pregnant women or their children.²⁵ However, other evidence indicates that pregnant women who receive flu vaccines are four times more likely to be hospitalized for influenza-like illness than unvaccinated pregnant women.²⁵ Children who receive trivalent inactivated influenza vaccines are three times more likely to be hospitalized for influenza-related complications than children who do not get the vaccine.²⁶ Studies also show that children who receive influenza vaccines are more likely than non-vaccinated children to develop respiratory infections; specifically, influenza-vaccinated children have a significantly increased risk of developing acute non-influenza respiratory illnesses from rhinoviruses, coxsackieviruses and echoviruses.²⁷

VACCINE SHEDDING

A little-disclosed fact is that influenza vaccines are responsible for spreading disease to other people through a process called shedding. According to the CDC's website, both children and adults vaccinated with live-attenuated influenza vaccine (LAIV) "can shed vaccine viruses after receipt of LAIV," although the CDC also asserts that post-vaccine shedding occurs less than it does following infection with wild-type influenza viruses.²⁸

A study published in the *Journal of American Physicians and Surgeons*, which analyzed eighteen years of data, found that people who received live-virus influenza vaccines could transmit the disease to people they came in contact with, including pregnant women and those with weak immunity.²⁹ Even more troublesome, these researchers hypothesized that live-virus influenza vaccines could potentially cause a "super virus" if the vaccine strain were to recombine with another viral infection contracted by the vaccinated person.²⁹

FLAWED RECOMMENDATIONS

Two other groups of people for whom the government "highly recommends" influenza vaccines are the elderly and health care workers. However, studies show that influenza vaccination does not lower influenza-related death rates in the elderly, and policies that mandate influenza vaccination for health care workers on the grounds of protecting patients are not supported by science.³⁰

THIMEROSAL IN FLU VACCINES

The World Health Organization and other agencies that are supposed to protect public health maintain that small doses of the vaccine preservative thimerosal—present in multidose vials of influenza vaccines—are safe, regardless of multiple shots or repeat vaccination. However, many experts have serious concerns about the safety of thimerosal in any amount, especially when considering its additive or synergistic toxicological effects. Thimerosal is approximately 50 percent ethylmercury by weight and has been linked to "attention disorders, speech delays, language delays, Tourette syndrome, misery disorder, seizures, epilepsy, sudden infant death syndrome, narcolepsy, heart disorders, neurological disorders, asthma and allergies." According to Robert F. Kennedy, Jr., there are at least one hundred and sixty-five peerreviewed scientific studies showing an association between thimerosal and neurological injuries alone. ¹³

Due to public outcry, manufacturers reportedly removed thimerosal from childhood vaccines as a "precautionary measure" in 2001. Today, however, all multiuse vials of influenza vaccine still contain the mercury-based preservative. Moreover, ethylmercury is fifty times more toxic than the methylmercury found in fish and twice as persistent in the brain. The state of California recognizes thimerosal as a reproductive toxicant that has been found to cause severe mental retardation or malformations in the offspring of mothers who were exposed to the neurotoxicant while pregnant.

Individuals over age sixty-five account for more than nine in ten influenza-related deaths. In the 1980s and 1990s, notwithstanding a fourfold increase in the percentage of seniors who received influenza vaccines, CDC epidemiologists found that national influenza-related death rates actually increased.³¹ Today, because seniors appear to have low immune responses to influenza vaccines, the CDC recommends that the sixty-five-plus age group receive the Fluzone High-Dose influenza vaccine, which contains four times the amount of flu virus antigen as the vaccine previously used for seniors. The FDA approved the Fluzone High-Dose vaccine in December 2009, even though the CDC's Advisory Committee on Immunization Practices (ACIP) made no indication that it was better than the prior Fluzone formulation. Between 2013 and 2017—when High-Dose Fluzone was widely administered—the flu death rate among Americans over sixty-five years of age jumped 328.6 percent.¹²

Another falsehood perpetuated by the CDC about flu vaccination is that it reduces all-cause winter mortality for seniors by about 50 percent. This is an astonishing claim, given that only about 5 percent of all winter deaths are attributable to influenza.³¹ Some CDC researchers admit that extensive selection bias may explain the astounding overestimation of influenza vaccine effectiveness in the elderly.³¹

Studies cited by authorities to justify mandating influenza vaccines for health care workers are also flawed, driving biased recommendations. Critical reviews show that there is no reliable evidence that vaccinating health care workers against influenza benefits patients.³² Such unethical policies represent nothing less than an act of tyranny, forcing many health care workers to submit just to keep their jobs.

LOW-INTEGRITY MARKETING

The marketing strategies designed to increase influenza vaccination uptake are equally lacking in integrity and scientific support. According to a revealing *BMJ* review, officials' justification of influenza vaccine policies often relies on low-quality studies that fail to substantiate claims of safety and effectiveness.³³ The

author of the review notes that whereas labs test thousands of people with influenza-like illness every year, only about 16 percent of all respiratory specimens actually test positive for influenza—and influenza vaccines are not designed to protect against the other 84 percent of respiratory illnesses we may mistake for flu.³³

Policy-makers say little about the association of influenza vaccines with febrile convulsions in young children and narcolepsy (a sleeping disorder) in adolescents. Australia suspended flu shots in children under age five after discovering that one in every one hundred and ten influenza-vaccinated children was experiencing febrile convulsions; H1N1 influenza vaccination in Finland and Sweden was associated with a spike in narcolepsy among adolescents (about one in fifty-five thousand vaccinated teens).^{33,34}

A study in *Lancet Infectious Diseases* revealed that annual vaccination of young children against common influenza strains could be counterproductive, preventing them from acquiring more comprehensive immunity and leaving them unprotected against pandemic strains.³⁵ In contrast, people who are naturally exposed to circulating influenza viruses (meaning unvaccinated individuals) are more likely to gain cross-protection against other strains.¹

MANDATES AND PROFITS

Sadly, we are seeing an explosion in new vaccine legislation attempting to take away the right to bodily autonomy not only for ourselves, but also for our children. American children who adhere to the CDC's recommended childhood vaccine schedule receive up to seventy-four doses of sixteen different vaccines from womb to age eighteen. Many of these vaccines—including flu shots—are mandated for school admittance. While vaccine exemptions are available in some states, other states have passed severely restrictive laws that force some parents to homeschooling their children. California, Maine, Mississippi, West Virginia and, most recently, New York deny parents the right to both philosophical and religious exemptions, leaving notoriously difficult-to-obtain medical exemptions as the only way out.

Many of the individuals administering mandated vaccines are not medical doctors, nor are they under the supervision of a medical doctor. For example, it has become increasingly common for pharmacists to administer vaccines. Incomprehensibly, a new law in Oregon makes it possible for dentists to give vaccines to patients of any age during dental check-ups, including annual flu shots as well as the measles-mumpsrubella (MMR) and human papillomavirus (HPV) vaccines.³⁶ Neither pharmacists nor dentists know a patient's medical history, nor do they examine the patient. Furthermore, pharmacists and dentists are unlikely to monitor, record or report vaccine reactions effectively.

How can we live in a free society, when we are asked to choose between educating our children and forced vaccination? Mandating flu vaccines is particularly reckless given the clear lack of studies demonstrating that the vaccine is either safe or effective. Moreover, the FDA is content to leave testing for safety and effectiveness in the hands of vaccine manufacturers, which is equivalent to letting the fox guard the hen house. And when manufacturers conduct vaccine safety trials, they are not required to use the scientific gold-standard—a placebo-controlled study design. For no other category of drug on the market are companies allowed to get away with this.

Legislators who vote to mandate vaccines receive financial incentives from pharmaceutical companies and other health care industries. (If you want to know how much money your legislators have received from those who profit from vaccines, visit opensecrets.org.) Past CDC directors are also guilty of benefiting from vaccine sales. For example, Brenda Fitzgerald resigned in January 2018 after the media reported her financial conflicts of interest, including sizable investments in both tobacco and health care. The tobacco conflict is relevant to vaccines because

new technology uses tobacco leaves to produce influenza vaccines in a much shorter time than compared to conventional production methods; clinical trials have already taken place.³⁷

Is it because vaccines are "big business" that ethics are breached all the time? Analysts expect the global vaccine market to draw total revenues of 59.2 billion U.S. dollars by 2020.³⁸ The global influenza vaccine market is expected to grow at a compound growth rate of 6.37 percent to reach 7.5 billion dollars by 2024, up from 5.2 billion dollars in 2018.³⁹

And it is not just pharmaceutical compa-

BUILDING NATURAL IMMUNITY IN OUR CHILDREN

The decision not to vaccinate does not mean that parents can be careless about protecting their children from disease. It's up to parents to provide the kind of diet that will give their child robust natural immunity—and that's the same kind of diet that will give a child good health overall. Here's a bucket list of items that will keep your children healthy and strong.

FOODS RICH IN VITAMIN A: Vitamin A is our number one protection against disease; the immune system cannot function without vitamin A. This vitamin protects against colds and flu, and in the case of measles, will protect against side effects such as blindness and seizures. Vitamin A requires vitamins D and K2 as co-factors; vitamin A taken alone can have toxic side effects, but vitamin A taken in the context of a diet containing vitamins D and K2 is highly beneficial, not detrimental. This is good news because the foods that provide us with vitamin A usually also contain vitamins D and K2—foods like butter from grass-fed cows, egg yolks from pastured chickens, aged natural cheese, shellfish and organ meats like liver. In addition to these foods, cod liver oil can provide vitamins A and D on a daily basis. Before the advent of vaccinations, the medical profession knew that the vitamin A in cod liver oil would protect children against all sorts of infections, including measles. Use only cod liver oil containing natural vitamins. (See westonaprice.org/cod-liver-oil/ for more information and product recommendations.)

RAW MILK: Raw milk is a complete, highly digestible food for growing children; it is also a powerful immunity builder. A key component of our immune system is antibodies, such as immunoglobins, which raw milk provides. The raw whey proteins in raw milk are also our best source of glutathione, the body's key detoxification compound. Studies from Europe indicate that children who drink raw milk have fewer respiratory infections, and less asthma, allergies and skin rashes compared to children who do not consume raw milk. The presence of immune compounds and glutathione explains these results.

FERMENTED FOODS: Fermented foods like raw sauerkraut, homemade kefir and aged raw cheese contain beneficial protective bacteria. Eaten on a daily basis, the bacteria in these foods colonize the intestinal tract where they provide powerful protection against pathogens. Fermented foods are also a great source of vitamin C.

BONE BROTHS: Homemade bone broth contains high levels of glycine, which supports the liver's detoxification mechanisms. Moms should include broth-making as part of their routine and use it in soups, sauces, stews and gravies.

AVOID PROCESSED FOODS: It's a difficult thing to do in this age of industrial food production, but parents will confer the great blessing of good health on their children by keeping them away from processed food as much as possible, especially refined sweeteners like sugar, high-fructose corn syrup and agave. Early studies showed that children who eat a lot of sugar get sick more often. Sugar uses up nutrients that the body needs to support the immune system. Vegetable oils are known to depress the immune system, while natural saturated animal fats support the immune system. Cook in animal fats like butter and lard, and give your children butter instead of margarine and spreads. Make your own salad dressing using olive oil rather than purchasing ready-made dressings, which are made with the cheapest oils and loaded with additives.

In short, the recipe for protecting your children from disease and ensuring they will grow up healthy and strong in the process is an old-fashioned, home-prepared diet rich in butter, eggs, cheese and nutrient-dense animal foods like liver and red meat. Fruits and vegetables can serve as vehicles for butter and cream! The addition of raw milk, fermented foods, bone broths and, above all, cod liver oil to your child's diet will compensate for the occasional junk food that cannot be avoided. This is the Wise Traditions diet—vastly superior than vaccinations for protecting your children from disease throughout their growing years.

nies and politicians that profit from the sale of vaccines. Blue Cross/Blue Shield pays your doctor a forty-thousand-dollar bonus for fully vaccinating one hundred patients under the age of two. If your doctor manages to vaccinate two hundred patients fully, their bonus jumps to eighty thousand dollars. But there is a catch—under the insurer's rules, pediatricians lose the whole bonus unless 63 percent of their patients are fully vaccinated, and that includes the flu vaccine.⁴⁰

The U.S. government also profits from vaccines. For example, HHS has accumulated 3.8 billion dollars in vaccine tax revenues, which are currently sitting in the Vaccine Injury Compensation Trust Fund. The money in this fund comes from a seventy-five-cent excise tax on all vaccines recommended by the CDC, and is collected to compensate vaccine injury or death claims for covered vaccines. What very few people know is that the government pockets an "administrative fee" of seventeen cents each time it collects the seventy-five-cent tax. According to the Health Resources and Services Administration (HRSA), over 3.4 billion doses of covered vaccines were distributed in the U.S. from 2006 to 2017, which means that the U.S. government made five hundred and seventy-eight million dollars during that time period. And, with your tax dollars, the same government hires the best attorneys available to litigate against families with vaccine-injured children who try to collect from the NVICP.41 The U.S. government is also the largest purchaser of vaccines, spending in excess of five billion taxpayer dollars each year for these products.42

If you want to avoid involuntarily receiving a flu vaccine, do not sign a consent form while in the hospital that says you agree to be given

"biogenics/biologics." If you do, you are consenting to get a flu vaccine even while under anesthesia. And unless you ask for a copy of your medical records, you may never know that you received one.⁴³

The bottom line is that the FDA and CDC exaggerate the successes of flu shots while going to great lengths to conceal their dangers. There can be no denying that influenza vaccines are injuring people, yet our government and many employers mandate the vaccines for school children, teachers, health care workers and military personnel. We can no longer wait for our government to do the right thing—we must stand up and make our voices heard. The history of influenza vaccines has *not* proven the shots to be safe, effective or necessary.

Kendall Nelson is a documentary filmmaker actively engaged in directing, producing and distributing media that matter. With over twenty years of television and film experience, Nelson's lifelong commitment is to bring about awareness through her work. In addition, she is an advocate for the causes she cares most about, including health freedom, simple living and real

VACCINE ACTIVISM IN UTAH





The annual "Holy War" (football face-off) between Brigham Young University and Utah State University took place on August 29. Sixty thousand people attend this game each year.

After weeks of planning, over sixty-five Utah parents, from all over the state, showed up to educate their neighbors on vaccine injury and death; the connection between vaccines and abortion; lack of safety testing; and flaws in vaccine policy.

Large, clearly printed signs were spaced far enough apart for people to read and consider the messages, as they walked toward the big game. Conversation about vaccines was overheard by several participants. Many stopped to hear more, to listen to personal and tragic stories from parents of children injured or killed by vaccines, and to share their own tragic stories, bringing on tears and hugs. Some offered stealthy thumbs up. Others avoided eye contact. Some were rude.

This was the first time that many of these parents had done anything like this. They were moved by both the overwhelming positive responses and by the negativity. A lot of eyes—both children's and adult's—were opened. Our feeling is that this quietly bold, educational, in-person interaction is very successful, and we need more of it.

food. She is also a proud Idaho chapter board member of the International Women's Forum.

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Legislative Updates

FEDERAL POLICY UPDATE By Judith McGeary, Esq.

NATIONAL POLITICS TURN THEIR FOCUS TO AGRICULTURE

For many people, the concept of "antitrust law" seems confusing and not important to their own lives. Why should you care?

First and foremost, antitrust law is about keeping the market functioning properly. To function, a free market needs a competitive marketplace, with many sellers and many buyers, and the free flow of information. Under these conditions, no seller will be able to take unfair advantage of the buyers, but rather each seller will be obliged to offer goods on attractive terms and to be responsive to buyers, who otherwise will simply turn to another seller. When a small number of sellers (or buyers) dominate the market, though, that system breaks down.

If it's about market competition, why is it called "antitrust"? Congress originally established the antitrust laws to check the abuses threatened or imposed by the immense "trusts" that emerged in the late 19th century. These trusts controlled or threatened to control entire nationwide markets for rail transport, steel, petroleum and banking. The antitrust laws were established to ensure that these trusts did not permanently undermine competition in these or other markets.

The people who saw the threat posed by the trusts also saw that the consolidation of economic power would inevitably undermine our democracy, by placing more and more power in the hands of a few entities, who then would have greater control over our laws and regulations.

This is precisely what has happened in agriculture in the U.S. We have a cycle of everlarger companies, who are able to distort the marketplace to their economic advantage, and then get legislators and regulators to write the rules to favor them, gaining yet more economic power and continuing this spiral.

The losers are farmers, consumers and

anyone who values open, transparent economies and government. Consider these statistics:

- In the past three decades, the top four largest pork packers have seized control of 71 percent of the market, up from 36 percent. Over the same period, the top four beef packers have expanded their market share from 32 percent to 85 percent. The top four flour millers have increased their market share from 40 percent to 64 percent.
- Today the top four sheep, poultry and fluid milk processors now control 57 percent, 53 percent, and 50 percent of the market, respectively.
- The top four grain companies control as much as 90 percent of the global grain trade.
- During just the past two years there has been a wave of consolidation among global seed and crop-chemical firms, so that three companies now control nearly two-thirds of the world's commodity crop seeds. Those same three companies now also control nearly 70 percent of all agricultural chemicals and pesticides.
- In the United States, the four largest corn seed sellers accounted for 85 percent of the market in 2015, up from 60 percent in 2000. Over the past twenty years, the cost for an acre's worth of seeds for an average corn farmer has nearly quadrupled, and the cost of fertilizer has more than doubled. Yet corn yields increased only 36 percent over that time, and the price received for the sale of a bushel of corn increased only 31 percent.
- Agribusiness conglomerates are posting record earnings, but the farmers who sell to them are going bankrupt. Median on-farm income was negative in 2017 and 2018, and most likely will be negative again in 2019. Concentration, low prices, anticompetitive practices and other manipulations and abuses

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of the agricultural economy are driving small family farmers out of business. Eighty-one percent of America's farmed cropland is now controlled by 15 percent of farms.

These facts are not the result of inevitable market forces, but rather are directly tied to policy decisions made in Washington by legislators on both sides of the aisle whose campaigns are funded by these same companies.

Yet, there is a growing awareness nationally of the problems posed by corporate consolidation in numerous areas of people's lives. And as concern about the problems in banking, communications and other industries increase, so does the awareness of this problem in the realm of our food supply. It has become a significant topic on the campaign trail for presidential contenders, and there are several bills—some filed, some in the works—that seek to tackle pieces of the problem.

Senator Cory Booker (D-NJ) has introduced the Food and Agribusiness Merger Moratorium and Antitrust Review Act of 2019, S.1596. The bill is co-sponsored by Senator Jon Tester (D-MT) (an organic farmer himself) and Sen. Jeff Merkley (D-OR). The bill would impose a moratorium on large agribusiness, food and beverage manufacturing, and grocery retail mergers. It would establish a commission to review mergers, concentration and market power in agriculture and food sectors, and would identify which actions—including what new antitrust laws—are needed to address the problems.

Another bill, introduced in the U.S. House,

looks at another angle of this consolidation issue. At the bottom of the food chain, so to speak, there are still many "family farmers." Yet they are not the independent sellers that most people envision. In many industries, the farmers have only one buyer for their product in their region, as a result of the corporate consolidation. This is particularly true in the poultry and hog industries, where the companies own the animals from birth to death, and the farmers act as essentially contract labor hired to raise them. Yet because the farmers are raising the animals on their land, they are legally responsible for the pollution in our waterways—even as they are forced to follow the companies' requirements for how to raise them! This system is unfair, and it contributes to significant water pollution issues near factory farms.

In response, U.S. Representatives Ro Khanna and Mark Pocan have introduced H.R. 3844, the Farmer Fairness Act, which would require big meat and poultry companies to be co-permitted with contract growers, essentially making them liable for the waste their animals create. At the least, if these companies control the means of production, they should be responsible for the results.

WHILE EPA PLANS TO GREEN LIGHT GLYPHOSATE, GERMANY PLANS TO BAN IT

Two very different government actions took place the first week of September, both related to glyphosate, the active ingredient in the most widely used herbicide globally, Roundup. The opportunity for people to submit comments

Germany's **Environment** Minister Svenja Schulze announced that Germany plans to phase out glyphosate, with a complete ban in 2023, in order to reverse an alarming drop in insect numbers.



Austria recently notified the Euopean Commission of its intention to completely ban glyphosate and France intends to fully ban it in 2022.

to the U.S. Environmental Protection Agency about regulating glyphosate ended—and the very next day, Germany's Environment Minister Svenja Schulze announced that Germany plans to phase out glyphosate, with a complete ban in 2023, in order to reverse an alarming drop in insect numbers.

A study in 2017 showed three-quarters of flying insects had disappeared from Germany's nature reserves over the previous twenty-five years, and scientists widely suspect pesticides have played a role in Europe's so-called insect Armageddon. And an Australian study this year found that 40 percent of insects worldwide face extinction.

"A world without insects is not worth living in," Schulze said in a statement announcing the phaseout of glyphosate. "But with the right measures in many areas, the trend can be reversed."

Schulze also announced an annual fund of one hundred million Euros for insect research and protection, half of which will be spent on insects like pollinators in agriculture and coastal areas. The ministry will spend another twenty-five million Euros to launch a nationwide system to monitor insect populations and change pesticide laws to keep synthetic chemicals at least five meters from watercourses.

Glyphosate is the subject of a fierce debate

on both sides of the Atlantic about whether it causes cancer in humans. Bayer, which last year acquired Roundup's original maker Monsanto, is fighting thousands of legal cases in the U.S. in which plaintiffs say glyphosate caused their cancer. Bayer denies glyphosate is dangerous for humans and points to the findings of the European Food Safety Authority (EFSA) and the European Chemicals Agency (ECHA), neither of which classed the substance as carcinogenic.

However, a 2015 monograph by the WHO's International Agency for Research on Cancer said it is "probably carcinogenic to humans." And each of the three American juries to consider the issue so far has found that, not only is it carcinogenic, but that Monsanto covered up the evidence of that fact—awarding hundreds of millions of dollars in punitive damages.

Austria recently notified the European Commission of its intention to ban glyphosate completely, and France intends to ban it fully in 2022.

In contrast, the U.S. EPA's approach is to continue allowing extensive use of glyphosate, with no warning labels and very few restrictions on its application. The agency published its proposal and accepted public comments over the summer—and soon we shall see whether they heed any of the thousands of comments they received in response.

SAMPLE SCRIPT ON THE PRIME ACT

My name is ___, and I live in ___ [town]. I urge Representative ____ to co-sponsor H.R. 2859, the PRIME Act. This bill will make it easier for small farms and ranches to succeed financially and to provide consumers with greater access to locally-raised meats. The bill simply removes the federal ban on the sale of meat from custom slaughterhouses directly to consumers and venues serving consumers within a state, subject to state law.

The PRIME Act has multiple benefits. (Then pick some of the talking points below, based on your legislator's interests and/or party):

If your legislator's website talks about these issues and/or he or she is a Republican, focus on the benefits of the PRIME Act in:

- Reducing federal regulatory overreach, by returning greater flexibility and control to the state governments;
- Reducing unnecessary regulatory burdens on small businesses.

If your legislator's website talks about these issues and he or she is a Democrat, focus on the benefits of the PRIME Act in:

- Reducing transportation miles and greenhouse gases, by supporting local infrastructure for farmers and ranchers;
- Reducing stress on the animals from long-distance hauling;
- Supporting small farms, instead of factory farms—and by reducing the costs for these small farms, we also increase affordability and access for consumers.

You can conclude by saying, "Please support our local farmers and consumer choice by co-sponsoring H.R. 2859."

PRIME ACT NEWS

In the last issue of *Wise Traditions* (Summer, 2019), we reported that the PRIME Act had just been refiled. The Processing Revival and Intrastate Meat Exemption (PRIME) Act, HR. 2859/S.1620, would allow states to permit the intrastate distribution of custom-slaughtered meat to consumers and wholesale outlets. Current law exempts custom slaughter of animals from federal inspection regulations only if the meat is for personal use; to sell cuts of meat to consumers, even at local farmers' markets, farmers and ranchers must send their animals to one of the often far-away slaughterhouses that meets USDA regulations.

H.R. 2859 continues to gain new co-sponsors, now totaling thirteen Republicans, five Democrats and one Independent, in addition to the original filers (Rep. Massie (R-KY) and Chellie Pingree (D-ME)). On the Senate side, S. 1620 was filed by Sen. King (I-ME) and has been joined by three Republicans: Senators Rand Paul, Lamar Alexander and Marsha Blackburn.

We need to get more sponsors to get this bill to move forward, whether as a stand-alone or, as is more likely, an amendment to some other larger bill. You can help by calling your U.S. Representative and both Senators, and urging them to co-sponsor H.R. 2859/ S.1620.

See the sidebar on page 92 for a sample message for calls/emails: Use the same script for calling both of your U.S. Senators to urge them to co-sponsor S.1620.

The quickest option is to talk to whichever staffer answers the phone. To have a greater impact, if you are a livestock producer, take an extra minute and ask to speak to the specific staffer who handles agricultural issues. Briefly explain to the staffer any problems you have faced with lack of access to inspected slaughterhouses, and how the PRIME Act would help your business and benefit your customers. Personal stories about the positive economic impact the bill could have are the most effective way to get their attention.

Whether a producer or consumer, you can ramp up the impact of your call by picking the talking points that are likely to appeal to your legislator. What do they care about? The great thing about the local food movement in general, and about the PRIME Act in particular, is that it can be seen as positive by people from every spot on the political spectrum.

Take a moment to visit your Representative's website and take a quick look at his or her bio and the list of issues discussed. What angles appeal to them? If you don't have the time to do that, the next best option is to make assumptions based on their party, and angle your letter or phone call accordingly.

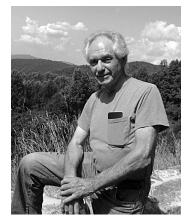
That may sound complicated, but the whole process can take less than ten minutes. You go to house gov and type in your zip code. Click on your U.S. Representative's name, and skim the bio—or just look on the home page for the parentheses (D) or (R) to tell you which party they are in. Click on the contact option, call their office and talk to the staff for two to three minutes, using the sample script and picking your talking points based on what you saw on their website. That's it. Repeat the process for both your U.S. Senators (by visiting senate.gov).

This article began with a discussion about the problem with corporate consolidation—that it affects not only the marketplace, but also our political system. One way to counter that is through better antitrust laws. And while we work on those, we can also counter it by being active, engaged citizens. Passing good laws, like the PRIME Act, is an uphill battle in the face of corporate power, but it is possible. . . with enough people power. Please add your voice to this effort!

REMEMBERING MARTIN W. BOKSENBAUM, LEHIGH VALLEY, PENNSYLVANIA CHAPTER LEADER

Please join us in remembering Martin W. Boksenbaum, a very active WAPF chapter leader since 2013. Martin was a life-long educator and activist, believing fervently in his power to make the world a better place. He taught at the junior high school, high school and college levels with a focus on mathematics, retiring in 2001. His early activism included working for racial equity with the Brooklyn chapter of CORE, and, with Earl Price and many friends, helping to organize the Committee for Peace and Freedom and the Brooklyn Civil Rights Defense Committee.

More recently, he turned his focus to the community, creating the Alliance for Sustainable Communities-LV, a nonprofit organization for fostering a self-sustaining local economy. A founding member of the Alliance, he served on its steering committee and became a driving force behind many of its efforts, including the yearly Directory of Sustainable Lehigh Valley organizations and businesses, and formation of the Beyond Capitalism Working Group. Martin will be missed by numerous colleagues, friends and family members.



Winter 2010	Joel Salatin on the Politics of Food; Saving the Polish Countryside; Biological Farming; Glutathione in Raw Milk.
Fall 2012	Vitamin & Mineral Synergies; Bacon; Protect Against Tooth Decay with a High-fat Diet; Kombucha.
Winter 2012	Vitamin A Synergies; The Story of Zinc; Natural Skin Cream; Slovenian Soups and Stews; Soy Infant Formula.
Summer 2013	Our Broken Food Supply; The Marketing of Crisco; GMOs in Europe; Insights of a Meat Processor; Natto.
Fall 2013	GMO Dangers; Roundup Dangers: Culinary Traditions in Romania; The Battle for the People's Milk.
Winter 2013	Beyond Cholesterol; Cancer as a Healing Strategy; Grain Traditions in Russia; Push to Pasteurize Breast Milk.
Spring 2014	Dr. Price's Scientific Approach; Weston Price and the Fluoridationists; Cows and Climate; Economics of Raw Milk.
Summer 2014	Nutrition for the Elderly; A New Look at Alzheimer's Disease; In Defense of Wheat; Dangers of Vegetable Oils.
Fall 2014	What Causes Heart Attacks? The Myogenic Theory of Heart Disease; Thrombi in Heart Disease.
Winter 2014	Effects of Smart Phones on the Blood; Dangers of Smart Meters; Protection Against EMR; U.S. Dietary Guidelines.
Spring 2015	Cleansing Myths and Dangers; Toxicity and Chronic Illness; Gentle Detoxification; Great Nutrition Pioneers.
Summer 2015	Vaccination Dangers Issue.
Fall 2015	The Scandal of Infant Formula; Vitamin D in Cod Liver Oil; Cod Liver Oil Controversy; Fermented Fish Foods.
Winter 2015	Water Issue: The Fourth Phase of Water: Sewage in a Glass: Water Stressors: Teaching WAPE to College Students

BACK ISSUES OF Wise Traditions AND OTHER INFORMATIVE LITERATURE

ne Fourth Phase of Water; Sewage in a Glass; Water Stressors; Teaching WAPF to College Students. Spring 2016 Folic Acid and Glyphosate; Why We Need Saturated Fats; Cod Liver Oil Testing; Flint, Michigan Cautionary Tale. Summer 2016 Vitamin A; Healthy Fertility; Recovery from the Pill; The Concussion Epidemic; EMR and the ADHD Child. Fall 2016 Recovery from a Low-Carb Diet; Why We Need Carbs; Salt; Nutritional Yeast; Big Box Stores; Addictions. Men's Health; Protein Powders; Fueling the Modern Athlete; Restoring Male Fertility; Glyphosate in Collagen. Winter 2016 Type 2 Diabetes; Couch Potato or Marathon Runner?; Weight Loss; Costa Rica; Moving Heavy Loads; MSG. Spring 2017 Summer 2017 Cholesterol Sulfate and the Heart; Vitamin D Dilemmas; Five Obstacles to Cure; The Adrenal-Heart Connection. Fall 2017 Why Do We Get Cancer; Support for Pediatric Cancer; The Tijuana Clinics; GCMaF and Raw Milk; Black Salve. 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. Winter 2018 Glyphosate and Non-Hodgkin's Lymphoma; Dangers of Sunscreens; Chronic Disease and Vaccines. Surviving in the Aluminum Age; The Cannabis Craze; Fluoride Dangers; Risks from Tablet Use. Spring 2019

Rancidity Testing of Cod Liver Oil; Getting Informed about 5G; The Ketogenic Diet; Ukraine's Traditional Foods. Summer 2019

> All articles from all journals are posted at westonaprice.org. Back issues are \$12 (includes shipping & handling).

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. Special issues are \$12 (includes shipping & handling).

HEALTHY 4 LIFE DIETARY GUIDELINES AND RECIPE BOOK in English, Spanish and Italian \$10 each (includes shipping & handling) 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 & handling), 60¢ each for 100 or more.

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TRIFOLD FLYERS

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Cod Liver Oil, Our Number One Superfood How to Protect Yourself Against Cancer with Food Nutrition for Mental Health

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RAW MILK UPDATES by Pete Kennedy, Esq.

NATIONAL RAW MILK SAFETY - NO OUTBREAKS FOR FIRST 2/3 OF 2019

In recent years there has been a trend of fewer foodborne illness outbreaks attributed to raw milk consumption even as the demand for the product has increased. That trend has continued so far in 2019; through the first eight months of the year not a single foodborne illness outbreak has been blamed on raw milk.

A possible factor in the decline in raw milk outbreaks are the educational materials on raw milk production and handling made available by organizations such as the Raw Milk Institute and the Farm-to-Consumer Foundation. In the future it's possible that the state extension services might get involved in providing training to raw milk dairies; at least one state extension service is considering doing this now. With the decline of the conventional dairy industry it might not be too long before there are a number of states that have more dairies producing milk for direct consumption than dairies producing milk for pasteurization. There are thousands of test results from licensed retail raw milk dairies around the U.S. showing a much lower rate of positive pathogens than for tests done by conventional dairies.

In addition, a Canadian study published in September 2018 found, "The rate of unpasteurized milk-associated outbreaks has been declining since 2010, despite increasing legal distribution. Controlling for growth in population and consumption, the outbreak rate has effectively decreased by 74 percent since 2005." The continued decline in foodborne illness outbreaks has reduced much of the fearmongering on raw milk and has helped create the opportunity for a major expansion of laws allowing raw dairy access around the country.

1. Whitehead J, Lake B. Recent trends in unpasteurized fluid milk outbreaks, legalization, and consumption in the United States. *PLOS Currents Outbreaks*. 2018 Sep 13. Edition 1. doi: 10.1371/currents.outbreaks.bae5a0fd685616839c9cf857792730d1.

ALBERTA, CANADA – DAVID RAND

Good news from Canada! The Crown has decided to stay proceedings in its prosecution of Innisfail farmer David Rand for alleged violations of Alberta's dairy law. Earlier this year the Crown brought charges for the "unlicensed production or processing of dairy products," selling raw milk, and "obstructing, hindering or impeding [any inspectors] in carrying out their duties" under the Alberta Dairy Industry Act. Each of the charges carries a maximum twenty-five thousand dollar fine. A trial was slated to take place sometime this fall. (See *Wise Traditions Spring*, 2019 issue, "Canada - Raw Milk Enforcement Moves to Alberta" for background.)

According to a letter Rand posted on his farm's Facebook page, what the stay means is that the court hearing the case considers the case file closed and has cancelled the fall trial. Rand and his wife Charmaine were told that even though technically the Crown has one year to reopen a case file after the granting of a stay, in practice, it rarely does so. Rand has worked on an effort to legalize raw milk sales in Alberta, a difficult fight to win. Canada remains the most oppressive nation in the world when it comes to enforcement against raw milk sales and distribution, but the stay in the Rand case is a significant step in the right direction.

CALIFORNIA

The California Milk Advisory Board (CMAB) promotes milk in California and invests heavily in milk research. They are the "Got Milk?" people. (The Got Milk? campaign, by the way, invested about forty million dollars, one dollar per person in California, to advertise conventional milk, only to see milk sales go down throughout the campaign.) In a recent CMAB publication, the organization identified "organic, unprocessed milk" as an important trend. That's the mainstream dairy industry acknowledging the growing sales of raw milk! The trend report comes from an unbiased, third-party, high-power marketing agency that did its due diligence.

Raw milk is gaining grudging acceptance among regulators throughout the U.S. because sales are growing and the raw milk dairies are the only small- and medium-sized dairies making money. Recent reports on raw milk safety (see above) are contributing to the realization that raw milk is in fact a very safe food.

As more and more people find that they cannot tolerate ultraprocessed industrial milk and discover the health properties of raw milk, Nature's perfect food, sales and acceptance will only continue to grow!

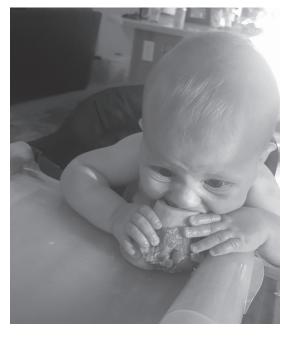
NEW INFORMATION RESOURCE FOR WAPF MEMBERS

Consult with Pete Kennedy on state laws, regulations and policies including food freedom legislation and issues regarding consumer access to raw milk, cottage foods and on-farm meat and poultry processing. (Pete cannot give individual legal advice or recommend support for or opposition to pending legislation.) Contact Pete at pete@realmilk.com.

Healthy Baby Gallery

Jedidiah was born at home weighing nine pounds, very healthy and without complications. Mom and dad have been following a Wise Traditions diet for the past four years, and it shows in Jedidiah and his older sister, Rees. He has been such an even-tempered, happy baby—and the comment we get most is that he's so "healthy looking." He weighed twenty pounds at three months! He is eating a Wise Traditions diet himself, and marrow and paté seem to be his favorites!





Twin boys of Kimberley and clinical nutritionist Gabriel, members for over ten years, in the west coast of Ireland, born last November. Kimberley and Gabriel followed the Wise Traditions diet before and during pregnancy. Kim had a wonderful pregnancy without complication, a natural birth and recovered very fast. The boys were born at thirty-seven weeks at six and seven

pounds. They are great feeders and love mummy's milk. They are never sick and sleep very well. Their parents attribute all this to all the healthy saturated fats mom consumed during pregnancy and preconception. The family eats loads of butter, raw milk, eggs, bone broth and fatty meats—and takes cod liver oil. Says Gabriel, "Thank you so much for everything, WAPF crew, and for all your guidance through this very confusing chapter of our lives. We are now immersed in a bubble of love with our two beautiful boys Max and Alex MacSharry."



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FAST COUNTY SAN DIFGO POTLUCK





Participants shared many delicious Wise Traditions foods at a summer potluck held in Alpine, California.

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Hilda Labrada Gore (Wise Traditions Podcast host) and Robin Shirley (Charlottesville, Virginia chapter leader) with her beautiful WAPF baby at the Pasadena chapter meeting in Sierra Madre, summer 2018. The meeting featured a live podcast recording hosted by Hilda featuring Mark McAfee.

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DENVER CHAPTER HOSTS DR. BRUCE FIFE

The Denver, Colorado chapter hosted Dr. Bruce Fife at its July meeting. Known for his work on coconut oil, Dr. Fife spoke on his new book, *Fat Heals, Sugar Kills*. (See review page 72.)

Says chapter leader Sue Ilmberger, "He was very inspiring!"

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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

- Maintain a list of local health care practitioners who support the Foundation's teachings regarding diet and health.
- 2. Represent the Foundation at local conferences and fairs.
- 3. Organize social gatherings, such as support groups and pot luck dinners, to present the Weston A. Price Foundation philosophy and materials.
- 4. Present seminars, workshops and/or cooking classes featuring speakers from the Weston A. Price Foundation, or local speakers who support the Foundation's goals and philosophy.
- 5. Represent the Weston A. Price Foundation philosophy and goals to local media, governments and lawmakers.
- 6. Lobby for the elimination of laws that restrict access to locally produced and processed food (such as pasteurization laws) or that limit health freedoms in any way.
- 7. Publish a simple newsletter containing information and announcements for local chapter members.
- 8. Work with schools to provide curriculum materials and training for classes in physical education, human development and home economics.
- 9. Help the Foundation find outlets for the sale of its quarterly magazine.

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BRASELTON, GEORGIA CHAPTER AT THE PRINCE OF PEACE CATHOLIC CHURCH HEALTH FAIR





Braselton, Georgia, chapter leader Michelle Polk, RN, BSN, MS Ed, HHP, hosted a table at the Prince of Peace Catholic Church Health Fair, where she taught a class on cultured vegetables and beverages. Her display included some live fermented products available in the local grocery store. Michelle taught participants how to read labels to find live cultures and choose good and better products. Says Michelle, "We find that the general population is less resistant to try a product that they can purchase in the grocery store than trying to start with making them. Even the clients in my clinic are that way; they will try a store-bought product first, before going to the co-op and purchasing them, and then they will come to a class to learn to make them."

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2018 GEORGIA FERMENTATION FESTIVAL

Amy Herr, Decatur, Georgia chapter leader along with Marina Peck, Dunwoody/Perimeter, Georgia chapter leader co-exhibited at the 2018 Atlanta, Georgia Fermentation Festival. Pictured here, Amy Herr with a table of informative WAPF literature.

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CHAPTER RESOURCES

Resources for chapter leaders can be accessed at westonaprice.org/local-chapters/chapter-resources, including our trifold brochures in Word format, chapter handbook and PowerPoint presentations.

LOCAL CHAPTER LISTSERVE

Thank you to Maureen Diaz, a chapter leader in Virginia, for administering the local chapter chat group. New chapter leaders can sign up at groups.yahoo.com/group/wapfchapterleaders/.

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REEDSBURG, WISCONSIN FOOD VENDOR FAIR

Sauk County chapter leaders Vicki and Rich Braun with their three grandchildren at the table of WAPF literature at the Reedsburg, Wisconsin Food Vendor Fair. Over two hundred fifty people attended the event, which allowed the Brauns to hand out many of our flyers to potential members.

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Kitchener, Waterloo, Cambridge: Ulymar Rocha (519) 579-1747 uly@stonebridgeimports.com

SK

Regina: Sandra Brandt (306) 359-1732 brandt.s@sasktel.net WAPFRegina.wordpress.com

SW Saskatchewan: Pamela Wolanski (306) 560-3258 pjg59@hotmail.com

COSTA RICA

San Jose: Gina Baker +(506)2289 8806 gmuschler@gmail.com

CROATIA (HRVATSKA)

Samobor: Domagoj Dzojic (00) 385-9556 info@mudrepredaje.com & Josipa Dzojic mudrepredaje.com, skype: dzojiczgcro

CZECH REPUBLIC

Prague: Jakub and Zaneta Kremsa +420603101807 zaneta.kremsa@zivakultura.cz zanetakremsa.cz

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Quito: Javier Carrera 59 3996 4688 29, info@redsemillas.org

FRANCE

Provence Cote d'Azur: Beatrice Levinson +1 33494840503 BeatriceLevinson@gmail.com Beatrice-levinson-gaps.com,

facebook.com/BeatriceLevinsonNaturopath/

Charente: Berenice Weihl +33517206592 berenice@saintalfonsos.com saintalfonsos.com

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HUNGARY

Budapest: Katalin Kokaveczne Nagypal katalin@medkozpont.hu chapters.westonaprice.org/budapesthungary/

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NEW ZEALAND

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Auckland, North & West: Alison Ellett +09 420-8548 alison@wapf-auckland.co.nz wapf-auckland.co.nz/

Christchurch/Lincoln: Tane Patten Webster 64 2208 20300, wapfgreaterchristchurcharea@gmail.com

Coromandel Peninsula: Caroline Marshall (027) 438-4654 whitiangawellness@gmail.com & Carl Storey 027 355-1701, carlstorey@xtra.co.nz

Gisborne East Coast: Bridget Scully kiwilampo@gmail.com bridgetscully@gmail.com & William Lane kiwilampo@gmail.com

Palmerston North: Susan Galea (646) 324-8586 dekmatt@ihug.co.nz realmilk.co.nz

Northland: Janie Cinzori (09) 601 1110, janiecinzori@gmail.com

South Canterbury: Carol Keelty +03 6866 277 bckeelty@outlook.com & Inez Wilson inezmwilson@xtra.co.nz

NZ Resource List: Deb Gully deb@frot.co.nz, diet.net.nz

NORWAY

Hedmark (Stange): Sindre Vaernes sindre.vaernes@gmail.com & Tom Olsen 4847 1030

International Chapters

PERL

Lima: Verónica Belli Obando 511 994 960330, veronicabelli90@gmail.com

PHILIPPINES

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Banska Bystrica: Matej Svorad Sabo vyziva@nazemi

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Staffordshire: Cara Tissandier +447968056466 caratiss@gmail.com

2019 SWISS TRIP





LEFT: Tour participants: Lorraine Carlstrom, Cynthia Larson, Jeri Gros, Cecelia Zachar, Patricia Sandbakken, Kay Hackl, Adrienne and Trevor Owen, Cathleen Bull. Not pictured are Roxanne Stone and Kohl Harrington. RIGHT: Bread making in Erschmatt. Lorraine Carlstrom watches as the baker, Kobi Tscherry, puts bread in the oven. He is in charge of firing up the oven and making sure it is ready just when it needs to be, so the breads bake to perfection.

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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 Grassfed. 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. Pickup locations along the Front Range and NOW shipping in CO. (719) 541-1002, rafterwranch.net

FL

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IΔ

Washington, Iowa. Harmony Farm SOY FREE WHEAT FREE chicken and duck eggs. Pastured on 40 acres. Fed Organic grains from local mill. \$4.00/dozen chicken eggs and \$7.00/dozen duck eggs. Farm pickup and delivery from Iowa City to Fairfield. (319) 653-9109 harmony4healthiskey@gmail.com.

IN

100% grass-fed raw butter, cheese, and other dairy products, **will ship.** Also available in Indiana only: 100% grass-fed beef, veal and whey/skim fed pork. Check out our online store for other local products available at https://thefarmconnection.grazecart.com. Alan & Mary Yegerlehner, Clay City, Indiana (812) 939-3027.

Spring River Dairy (Fry Farms Co-op) has raw milk and milk products including 5 raw milk cheeses from healthy Jersey cows grazed on organically managed pasture and hay. Available to herd-share members. Delivery to Fort Wayne and Columbia City. Fry Farms Co-op (260) 704-0132.

MA

Health Hero Farm on the agricultural island of South Hero, VT, delivers high-

quality 100% grass-fed beef to the Boston area. Our farm is certified humane and our pastures are certified organic. See our video at https://HealthHeroFarm.com/video

Many Hands Organic Farm in Barre, MA. All products certified organic and free range. Lard, pork, chicken and turkey stocks, pork, chicken, turkey and 26 weeks of CSA. No till, nutrient dense. mhof. net; (978) 355-2853; farm@mhof.net.

MD

100% soy-free chicken, eggs, pork and beef. Chicken livers, chicken feet and heads. Bacon and sausage. Raw pet milk. Raw milk blue and cheddar cheese by cheesemaker Sally Fallon Morell. **Will ship** whole cheese wheels. Southern Maryland, within 1 hour of downtown Annapolis and Washington, DC. Saturday farm tours. Store open Thursday to Saturday 10-6 or by appointment. P. A. Bowen Farmstead, 15701 Doctor Bowen Road, Brandywine, MD. (301) 579-2727, pabowenfarmstead.com.

Nick's Organic Farm. Grass-fed beef (no grain ever), free range eggs, pastured chicken and turkey. Liver, organ meats, and bones. Organic poultry feed. Pick up in Potomac or Buckeystown. Our livestock are rotated to fresh pastures on our fertile organic soils and receive organic feed, no hormones, antibiotics, or animal parts. We raise our cows 100% grass-fed. We raise our hay, raise and grind our own grain into poultry feed and process our poultry. Quality organic products since 1979. (301) 983-2167, nicksorganicfarm@comcast.net, nicksorganicfarm.com.

MN

Farm On Wheels offers animals raised green grass-fed & certified organic. Nutrient-dense beef, lamb, chicken, eggs, turkey, goose, duck, and pork, No corn or soy. Farmers Market year around in St. Paul, Prior Lake, Northfield. Linda (507) 789-6679, farmonwheels.net, farm_on_wheels@live.com.

MC

Fruitful Hills. Grass-fed raw milk, cheese, butter, etc. Raw goat's milk. Pastured pork, chicken, turkey and eggs. Grass-fed beef. Local raw honey. Fermented veggies. Our summer and winter CSA offers fresh organically raised vegetables. Dropsites in select areas. (660) 938-4291.

NY

Raw milk, cheese, butter, etc. from 100% grass-fed Jersey cows. 100% grass-fed beef

and lamb. Pastured pork, chicken and turkey (soy-free options available). Fermented veggies and more! Have dropsites in select areas or **can ship**. Call for details. Pleasant Pastures (717) 768-3437.

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 in fo@dutchmeadowsfarm.com — DutchMeadowsFarm.com.

OH

Certified organic fresh picked garden peas. Pastured, soy free, organically fed, chicken eggs. Fresh maple syrup, certified organic rye seed, transition rye seed, certified organic fresh cracked corn. Call (330) 939-5980. Address is 10148 Eby Rd, Sterling, Ohio 44276.

Heritage Devon beef, 100% grass-fed, no antibiotics, no growth hormones. Selling full cow, 1/2 cow or individual cuts from my ranch in St. Leon, Indiana (5 miles off I-74) or at "Lettuce Eat Well Farmers Market" in Cheviot, Ohio (western suburb of Cincinnati, OH – lewfm.org) first Friday of every month. Also pastured pork, 100% antibiotic free, fed minimum amount of non-GMO grain, 100% outdoors on pasture and woods. Pigs use small huts for shelter and farrowing. All meats USDA inspected. To see how we raise our beef and pork plus important health links visit our website abundantgreenpastures. com. For more information call Mike at (812) 637-3090.

Sugartree Ridge Grassfed Herdshare/PMA, located 60 miles east of Cincinnati in Highland County. We deliver 100% grassfed milk, optional A2-A2 milk and many other products to twelve delivery sites in Cincinnati. Farm and contact address is: 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.

PA

Dutch Meadows brings you the finest in high quality grass-fed meats and organic dairy products, raised in harmony with

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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@dutchmeadows farm.com – DutchMeadowsFarm.com.

RAW CHEESES made from milk from our herd of 100% grass-fed cows on our organically managed farms. Prices start at \$5.25/lb. **WE SHIP**. Oberholtzer at Hilltop Meadow Farm. (570) 345-3305.

Thousand Hills Grazing (in Central PA) is taking orders for nutrient dense pastured poultry (soy free and non-GMO) and 100% grass-fed beef moved daily to fresh pasture. Contact Ben and Cassie Seppanen at (717) 636-0299 or visit thousandhillsgrazing. com for more information.

Raw milk cheese from our grass-fed Jerseys, made on our family farm with Celtic sea salt. No grain feed. Also grass-fed beef and pastured chickens, turkeys and eggs. All soy-free, no hormones or synthetics. On-farm sales, **will ship cheese**. Wil-Ar Farm, Newville, PA (717) 776-6552.

VA

Salatin family's Polyface Farm has salad bar beef, pigaerator pork, pastured chickens, turkeys and eggs, and forage-based rabbits. Near Staunton. Some delivery available. Call (540) 885-3590 or (540) 887-8194.

Raw milk, cheese, butter, etc. from 100% grass-fed Jersey cows. 100% grass-fed beef and lamb. Pastured pork, chicken and turkey (soy-free options available). Fermented veggies and more! Have dropsites in select areas or **can ship**. Call for details. Pleasant Pastures (717) 768-3437.

VT

Health Hero Farm delivers high-quality 100% grass-fed beef within a wide radius of Burlington, VT. Our farm is certified humane and our pastures are certified organic. Our cattle breeds finish well on only grass. See our video at https://HealthHeroFarm.com/video

WY

Diamond S Ranch specializes in raw A2 milk from our 100% grassfed Jersey & Brown Swiss cows. Also offers grassfed beef, free range eggs, kombucha, sourdough bread, fermented veggies & more. For more information and check what's available at diamondsretreat. com. Wyoming delivery (307) 272-5334, text only.

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!

HEALTHY PRODUCTS

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/waterliberty * 70% of Americans are fluoridated. JOIN IN THE EFFORT TO END FLUORIDATION - You have the right to safe drinking water.

FRONTYARD FARM'S FARM-INSPIRED SOAPS. Connecting you with Virginia's pasture-raised farms through our lard and tallow soaps. Scented with essential oils. Absolutely no synthetic colorants, fragrances, soy, or palm. Great for gifts and everyday use. frontyardfarmva.com, frontyardfarm. etsy.com, and @frontyardfarm_va!

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BEES ARE BEAUTIFUL T-SHIRT Available on Amazon for \$19.99. Are you a beekeeper or just love honey bees? Show your love with this t-shirt! Clink on the link at: linktr.ee/simplevirginialife

DVDS

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!

EMPLOYMENT OPPORTUNITIES

GRASS VALLEY DAIRY is seeking a motivated website coordinator to manage online marketing of farm fresh food. Secluded log cabin house on 6 acre wooded lot ajoining farm available for rent to qualified party. Also delivery driver wanted 2-3 days of week. Call Mel at (610) 593 2811.

PERMACULTURE FARM near Tampa FL seeking farming partners. We grow vegetables (in dirt), perennials, and manage a small herd of water buffalo for milk and meat. 54 acres with wetlands and pasture, small orchard, building, equipment, solar systems, housing, and our interests are community, sustainable living, promoting the Weston A. Price Foundation, regenerative farming, ecology, social activism, etc. We are a older couple that want to continue farming. Contact Jon at (813) 708-3179 or e-mail ecofarmfl@yahoo.com.

HEALING ARTS

DIAGNOSIS+NUTRITION HEALTH COACH TRAINING for health care professionals and the general public; this "no pressures" integrative program is available online and in-person. Learn diagnosis techniques to create the best diet/lifestyle program for yourself and others. John Kozinski MEA, (413) 623-5925 macrobiotoic.com.

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S&S HOMESTEAD FARM, sshomestead. org, on Lopez Island, Washington has a 50-year biodynamic history. Please contact Dr. Roy Ozanne at (206) 914-3810 to help secure additional acreage already managed by S&S by January, before this pristine land with rich soils is converted to a solar panel field. See sshomestead.org.

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NEW FILM

AUTOIMMUNE DOCUMENTARY in post production seeks funding or investors. This film tells the stories of those who kept searching for an answer to their challenge and are now

lighting the path of healing for others. Contact: Gabe (310) 779-2816 goldenfilmproductions.com/in-production.

Diana Rodgers is a real food nutritionist living on a working farm making a documentary called Kale vs. Cow that will defend the nutritional, environmental and ethical case for better meat. Endorsed by WAPF, Savory Institute, Animal Welfare Approved. Contributions are tax-deductible. Sustainabledish.com/film.

WAPF RESEARCH

ONGOING PROJECTS SHARING THE BENEFITS OF A WAPF DIET FOR GROW-ING CHILDREN: Johanna Keefe, PhD, RN, GAPS/P, has completed her doctoral research through the California Institute of Integral Studies (CIIS) revealing, though in-depth interviews, the lived experience of mothers as they describe their lifestyle following a real food diet based on the principles of the WAPF. Please consider contributing to her post-doctoral project to collect a more robust sample of mothers who are finding positive outcomes over time for their children and teenagers on a traditional diet. You can begin by offering your story to the research blog growingsuccessstories.org, which may serve to seed other doctoral studies, and also contribute to her forthcoming project: a published photo-essay leading to an uplifting film to inform and inspire our next generation of parents. If you would like to find out how to contribute to these projects, please contact Johanna through email at imkeefe@endicott.edu or by phone at (978) 290-0266.

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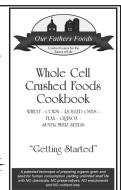
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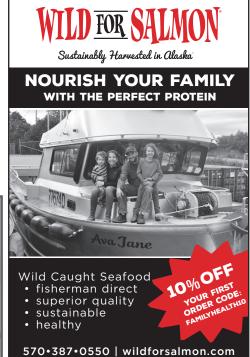




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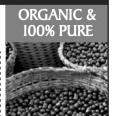
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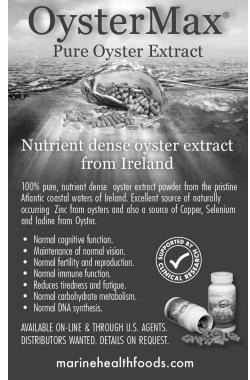


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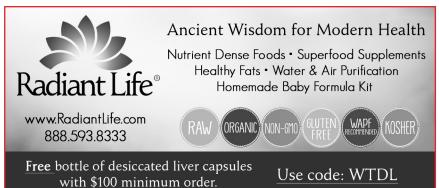
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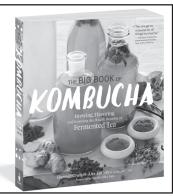
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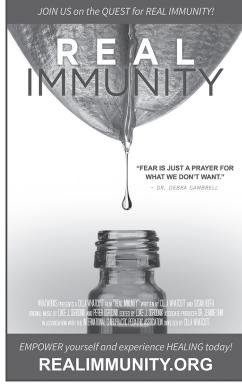
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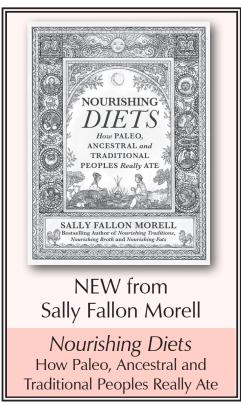




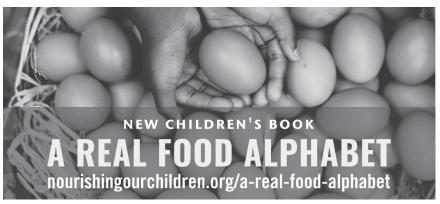


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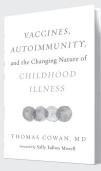


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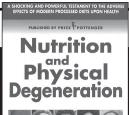
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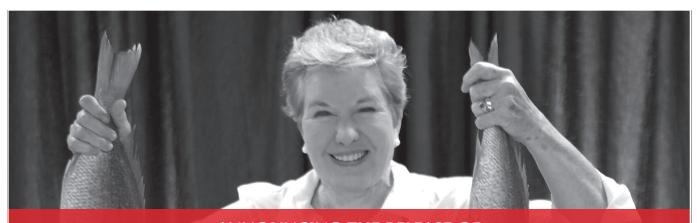
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- **Nov 2-3 Washington, DC:** Take Back Your Health Conference featuring Sally Fallon Morell, Ty Bollinger, Robyn Shirley, Vani Hari and Sylvie Beljanski. **Contact:** takebackyourhealthdc.com
- **Nov 20-24 Lake George, NY:** Biodynamic Conference featuring Sally Fallon Morell, Stephanie Morningstar, Çaca Yvaire and many others. **Contact:** biodynamics.com/conference

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